

Review: Design, the User, and Klaus Krippendorff's "The Semantic Turn"¹

Ranulph Glanville

I wrote recently about the way that cybernetics had been developed and applied silently and invisibly by workers in other fields (Glanville 2006). I pointed, in particular, to two books from architecture and urban design. So it is interesting to further develop the relationship between cybernetics and design, especially through with reference to Klaus Krippendorff's recent book "The Semantic Turn". In this review, I will consider Krippendorff's book, specially his interest in the user, against the background of a more general discussion of (human centred) design, and the user.

Anyone who has written for publication will be familiar with the problem of the reader.² When you submit a book proposal to a publisher, the first question asked is "Who constitutes the readership?" This may be a difficult question. In traditional scientific publishing, for instance, we pretend we know who the reader is and we perform to a set of conventions—only the conventions we actually perform to turn out to be quite different to those we say and believe we are performing to. Some time ago, I persuaded two applied linguists from Hong Kong Polytechnic University to join me writing about the extraordinary results the analysis of the words and word strings used in scientific writing show us (Glanville, Sengupta and Forey 1998): if we are to believe their words, scientists actually write to join peer groups, not to report new scientific knowledge. Apparently, even the supposedly unambiguous scientific reader is not so clearly defined.

Consider, in the light of this, the designer. Most designers/design teams are creating objects with an intended usership of at least thousands. A reader is, of course, a type of user. Cars and computers go out in millions, as do pens and newspapers and bottles and pills. Even architects, perhaps still the most generally craft based and bespoke designers, deal with large numbers of users when they design office blocks, parks, factories, city quarters, apartments and social housing: and few buildings are not in some way experienced by a great number of people. Who are these users and what to they make of what they see? Demographics can give us a statistical picture, but this is bland and inadequate: it's hard to create something for a statistic. Yet the user is crucial, for, without the user there would be no reason for designers to design.³ (This is one way in which design differs from art.) Thus, the question of the user, just

¹ Krippendorff, K (2006) *The Semantic Turn*, Boca Raton FL, CRC Press, the Taylor and Francis Group.

² I understand that the problem of the reader is an important part of current theory relating to literature.

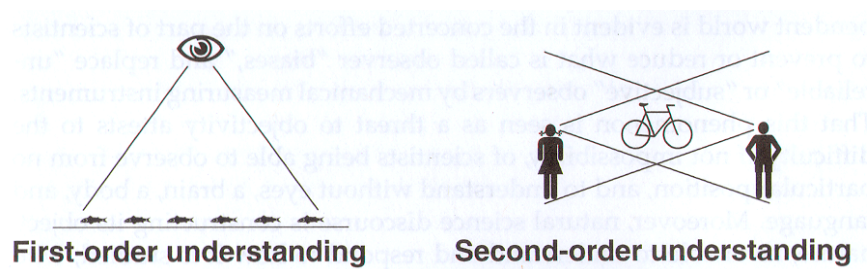
³ The sense of design I am using here is the sense of the professional designer, particularly product and industrial designers. It is not the more general use that allows almost anything to be considered designed.

as the question of the reader, is both difficult and important. And its importance is general, not just a question for designers and writers.

A discussion and model of the user is, to my mind, the most valuable contribution of Klaus Krippendorff's recent book on Design, "The Semantic Turn." Krippendorff should be well known to readers of this journal, for he is on the editorial board. He was educated in the 1950s in Germany as a designer at the famous Hochschule für Gestaltung in Ulm. HfG Ulm was the most influential school in design thinking at that time, and the staff still have very considerable reputations in fields of design research and thinking. It was strongly associated with the product range produced by Braun AG. One of its leaders was Horst Rittel, who eventually went to Berkeley and who many readers of this review will know for the elaboration of "wicked problems" (Rittel and Webber, 1984). Krippendorff, in the '60s, went to the USA where he designed robots. He studied for his PhD with Ross Ashby. If I remember right, he was Ashby's last pupil. His cybernetic pedigree is, thus, flawless: studying with one of the original masters and working across fields. Later, Krippendorff (1979) edited a book in which von Foerster presented his essay "Cybernetics of Cybernetics" (not to be confused with the large reader von Foerster and his students from the BCL assembled under the same title (von Foerster et al 1974)). Krippendorff can thus claim a relatively early involvement in second order cybernetics.

He can also claim an interest in semantics and semiotics. Somewhere in the backwaters of my memory I harbour recollections of an article he wrote (in the mid 80s?) about the semantics of the Mac computer. Semantics was, at the time, big in design, and was presented under the title of "product semantics"—the idea that meaning was in (designed) objects (rather as we so easily and commonly believe that meaning is in words). This concept spawned powerful ideas, many of which survive today. For instance, the notion of objects instructing users in how to use them—at least as commonly considered—belongs here. This notion goes back at least to modernism in architecture, with the idea that the organisation and use of a building should be transparently apparent from the building's appearance—in particular, its elevations. For all that this may seem absurd nowadays to this readership (but have I understood your understanding?), it was a formative idea with wide currency that drove many design. It persists, at least to some extent, in the concept of the manual-less computer.

It is now becoming more and more recognised, especially in university design programmes, that this semantic notion of meaning is too simple, particularly in how it fails to take into account the user, or, to be more precise, the individuality and difference in each user's (way of) understanding, and therefore the multiplicity and variety of meanings users have when confronted with designed objects. It is the recognition of this that places the criticism in the realm of second order cybernetics. In "The Semantic Turn", Krippendorff illustrates it thus:



figure(s) 1

The difference between the second order cybernetic involvement of participating, and the first order view of the omnipotent observer, is expressed in these two diagrams.

Let me at this point return to a more direct consideration of Krippendorff’s book. It is a dense and rich book, and one that has too many streams to cover in one review. I said earlier that one of the most important contributions it makes, to my mind, is its examination of the user. I will return to the user shortly. For the moment, let us consider where the user fits in to Krippendorff’s wider concerns.

The book has as its central notion “human centred design”. Krippendorff characterises what he sees as important in human centred design thus:

“artifacts must make sense to most, ideally to all of those who have a stake in them.”⁴

The reader will immediately see how an understanding of the user is crucial to this position, and how it relates to (develops from) product semantics. The unstated assumption in human centred design is that the designer needs either to know, or to model, the user—as the writer needs to know or model the reader. Seemingly obvious, this is in fact a far from universally held position: for many designers, there has been a strong belief in an almost Platonically ideal form that any particular artifact should take, and the designer’s task is to seek to create this form.⁵ Krippendorff is taking a humbler position as a designer: the designer as serving the user. In his book he models the user (or rather, the designer’s understanding of the user) thus:

⁴ I use Krippendorff’s preferred (American) spelling, artifact.

⁵ I am being intentionally generous and abstract here: for some of these designers the form is revealed, for others it is a matter of will, and for yet others there should be some precise method that will lead only to the perfect form (this is, as it happens, also a hidden assumption in product semantics).

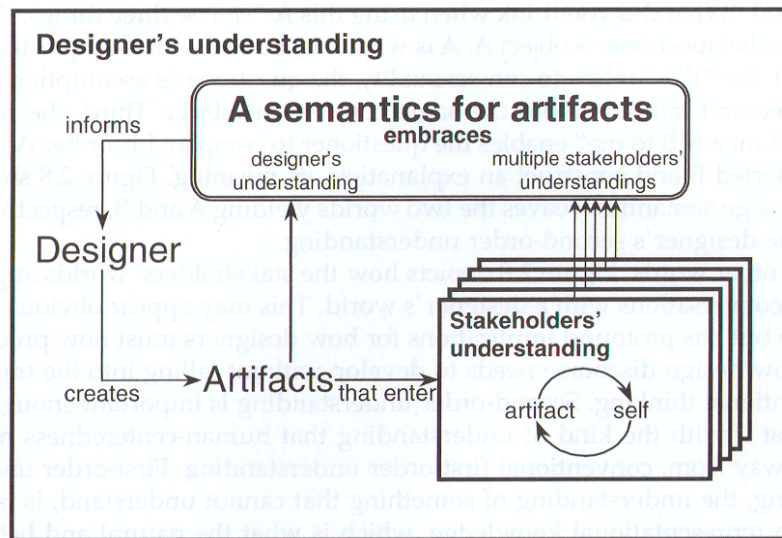


figure 2

The reader will notice that, in this diagram, artifacts do not have meaning in themselves: it is the user who, by individually developing his understanding, gives them the meaning that each particular user gives. Meaning, in Krippendorff's way of working, is the opposite of dictionary meaning and, in terms of much recent design theory, it is radical. Of course, in terms of second order cybernetics (see especially Pask and Maturana), it is the bread and butter of thinking within the subject. Krippendorff's discussion of meaning is, therefore, an extension of the range of application of the familiar, to the (second order) cybernetician. I suspect it is the same to the semiotician: that is, to the indicated readership of this journal.

Having designed his user, Krippendorff argues for its relevance throughout the main body of the book, in his chapters on the Meaning of artifacts in use and language; and Meaning in the lives and in an ecology of artifacts. He develops a profound positioning of design in research and science (Design methods, research and a science for design) and distances design as an activity from several other fields which have often been taken as synonyms for design (semiotics; cognitivism; ergonomics; aesthetics; functionalism; marketing and textualism). He concludes with a touching return, reflecting on his own starting point, re-examining the "Roots in the Ulm School of Design". The reader will enjoy reading this material and will forgive me for not elaborating these headings further in this review.

I hope I have by now argued convincingly that Krippendorff has a powerful and worthwhile contribution to our consideration of design, one that is both relevant and important to readers of this journal. I often read Krippendorff's voice extending his arguments on the PhD by design list (PHD-DESIGN@JISCMAIL.AC.UK). Here he occupies a somewhat lonely

position:⁶ in this list I have found him making most of the main points that are argued and emphasised in “The Semantic Turn”. Krippendorff argues design is an activity which we do (it is a verb, rather than a noun): that design is concerned with acting to create the new (changing what is) whereas science is concerned with recording the old, the already existing (from which we may postulate a yet-to-be-discovered), requiring two completely different epistemologies. Designing is (at least a form of) research. To do design research is to design design, and the designer is always in the system. Ways of assessing the outcome of design processes are a completely different type of research which is research on design, rather than in or through design—as I discussed when writing about the importance of prepositions in English (Glanville 2005, preceded by Frayling 1993).

Those who wish to make design scientific (in the conventional sense) miss the point: design is not science, nor should it be. To try to turn design into science, to try to get from it the certainty we hope for in science, is to try to turn wine into water. There is no design without the designer (just as there is no design without the user): design is inherently a second order cybernetic activity. Krippendorff has recently contributed to a double issue of *Kybernetes* on the theme of “Cybernetics and Design” (edited by myself (Glanville 2007)) in which I argue that at the centre of design is a circular, conversational process where the conversation is held with oneself, with other group members (in a design team) as well as with the client (often the user) and the manufacturer, etc and where the construction of the conversation itself inevitably leads to the generation of novelty and the extension of original ideas into the unexpected and, usually, better; a position very close to Krippendorff’s. This position can be extended, as both Krippendorff (in this book and elsewhere) and I have argued, so that science can be understood as a special form of design. In this manner, also, Krippendorff’s book has not just specific but also general interest to cyberneticians (and, I believe, semioticians). It is a deeply significant book.

I cannot end, however, without raising a point of contention. Amongst the pantheon of thinkers about epistemology, semiotics, semantics, communication and cybernetics Krippendorff cites there is, for me, one glaring omission: Gordon Pask. I find it difficult to see how Krippendorff, developing the model of the user and, particularly, the user’s understanding that he does, can do so without acknowledging Pask’s work. After all, it is not as though they did not know each other. I can only explain this as some sort of blindness, possibly arising in terminological differences. For while Pask did not use exactly the same terms (I am unaware of him talking specifically about understandings of understandings, though he did talk of my understanding of your understanding of my understanding, which is certainly a second order understanding), he was clearly an earlier visitor to the same ball park. In *Conversation Theory*, Pask talked of how each individual’s understanding is

⁶ Although it is a position I share. This may not be remarkable, given the amount of background we share, so it will not surprise the reader that I have also published on the same list, on many of the points Krippendorff makes. But this is a review of his book, not of my work!

different, of how in a conversation we build understandings of the understandings of others which we take to be operationally equivalent to (but not the same as) ours, and of how this is recursive. He talked of those things that we might learn to understand through this recursive process (Pask, G, Kallikourdis D and Scott BCE 1975), and he describes an understanding of the views of different observers of the same topic in a manner well illustrated by the first Krippendorff figure I have quoted. He is, in effect, talking of a recursive process of communication, through which we can, recursively, construct understandings (of understandings) (and hence personal meanings) which we can communicate to others not so that they receive our meanings but so that they can build their own operational equivalents, a conceptualisation Maturana also seems to have borrowed from Pask. These conversations can even be thought of as forming models of users (where the other in the conversation is a user of our own understandings).

Furthermore, it was Pask (1969) who, in the run up to the development of Conversation Theory, wrote of conversational communication between architect and client, to improve the architect's ability to understand and hence satisfy the user's requests—and to convince the user of the value of his (the architect's) own contribution and vision: for, in the words of the architect Denys Lasdun, “Our job is to give the client not what he wanted, but what he never knew he wanted till he saw it.”

There is a development that will help with this downplaying of Pask's work. The arrival of Pask's archive in Vienna (formally announced in November 2007) will make his often difficult work more readily available.⁷ It is to be hoped that the significance of Pask's work to design will become clearer, and the full breadth of second order cybernetic antecedents that lie behind Klaus Krippendorff's work will be better recognised. This will strengthen not only the bond between Cybernetics and Design, but the background within which Krippendorff works.

Acknowledgement

The figures are taken from Krippendorff's book, “The Semantic Turn”, for the purposes of this review.

⁷ To mark this event, an introductory book is being published (Glanville and Mueller 2007). Together with the other main authors (Graham Barnes, Paul Pangaro and Bernard Scott) I am developing an annotated Pask Reader.

References

Foerster, H von et al (1974) *The Cybernetics of Cybernetics*, Champaign-Urbana, Biological Computer Laboratory, University of Illinois. Republished as Foerster, H von, et al (eds.) (1995). *Cybernetics of Cybernetics or the Control of Control and the Communication of Communication*, second edition, Minneapolis, Future Systems, Inc.

Foerster, H von (1979) *Cybernetics of cybernetics* in Krippendorff, K (ed) (1979)

Frayling, C (1993) *Research in Art and Design*, Royal College of Art Research Papers, vol A 1, no 1

Glanville, R (2005) *Certain Propositions about Prepositions, Cybernetics and Human Knowing* vol 12, nos 1–2

Glanville, R (2006) *Invisibility and Silence, Cybernetics and Human Knowing* vol 13 no 1

Glanville, R (2007) (ed) *Cybernetics and Design*, special double issue of *Kybernetes*, vol 36, nos 7–8.

Glanville, R, Sengupta, S and Forey, G (1998) *Language and Science in the Language of Science, Cybernetics and Human Knowing*, vol 5 no 4

Glanville, R and Mueller, KH (2007) *Gordon Pask, Philosopher Mechanic: and Introduction to the Cybernetician's Cybernetician*, Vienna, edition echoraum

Krippendorff (1979) (ed) *Communication and Control*, New York, Gordon and Breach

Pask, G (1969) *The Architectural Relevance of Cybernetics*, *Architectural Design* no 9

Pask, G, Kallikourdis D and Scott BCE (1975) *The Representation of Knowables*, *International Journal of Man Machine Studies*, vol. 7

Rittel, H and Webber, K (1984) *Planning problems are wicked problems*, in Cross, N (ed) *Developments in design methodology*, New York, Wiley