

Life is a Verb

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A review of *From Being to Doing* by Humberto Maturana and Bernhard Poerksen. Published in 2004 by Carl Auer. 208 pp. ISBN 3896704486, \$34.95.

Bernhard Poerksen is rapidly becoming the Boswell of the collective of thinkers pursuing the courses of constructivism and second order cybernetics. A couple of years back his interview book with Heinz von Foerster *Understanding Systems* appeared in English translation. A year or so later came a collection of shorter interviews, *The Certainty of Uncertainty*. Then, last year, we were treated to the latest book, *From Being to Doing*, an interview book between himself and Humberto Maturana. I have already reviewed *Understanding Systems* (von Foerster and Poerksen 2002) for this Journal (Glanville, 2003), and Ole Thyssen (2004) reviewed *The Certainty of Uncertainty* (Poerksen, 2004). Now it is my turn to review *From Being to Doing*.²

The book's subject and co-author is a Chilean neuro-biologist, best known for (and possibly somewhat trapped by) the invention of the concept and mechanism of *autopoiesis*. Maturana has an interesting pedigree, having worked with a number of greats. For instance, he worked with Jerry Lettvin, a member of the McCulloch/Pitts group at MIT (and, like McCulloch and Pitts, an early cybernetician), where he was principle author of the classic paper "What the Frog's Eye tells the Frog's Brain," (Lettvin et al., 1959/1965) and then with Heinz von Foerster at the Biological Computer Laboratory (BCL) where he finalised the notions of self-generative autonomy that became autopoiesis. In developing a way of presenting autopoiesis, he worked with Francisco Varela, with whom he also continued to develop the idea until their ways parted, since when Maturana has continued the reflective and experimental study that has explored the consequence of such ideas, alone.

If Ashby's Law of Requisite Variety is, as is claimed on the Principia Cybernetics web site, the only Law of cybernetics and systems agreed on and accepted by all adherents, it is, I suspect, similarly true that the only widely known concept of second-order cybernetics is autopoiesis. The idea has enormous appeal, and has been applied in all sorts of situations most of which, as is made clear in the book, Maturana does not approve of.

In effect, Maturana's working life can be understood as composed of two halves: a slow build up of the notions necessary for him to understand the essential concepts that lead to autopoiesis, and, since the formulation of the autopoiesis (first published

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2. The sequence I give here is not correct in every aspect. The publication dates and sequence in German are different.

in 1974: see Varela, Maturana and Uribe), work exploring the understandings that are somehow exemplified in that concept.

From Being to Doing is in four sections. The first, “The cosmos: an explanation of observing...” is made up of seven sub-sections covering the ground for which Maturana is primarily admired and valued—autopoiesis, its origins in the biology of cognition and its extension into what looks suspiciously like a philosophy as well as a theory. Constituting more than half the book, it is a masterly presentation of all those familiar wordings—linguaging, multiverse, closure, structural coupling, observer, experience—for which we have to be enormously grateful not only to Maturana but equally his collaborator, Bernhard Poerksen. For, without Poerksen having set up the project, done all the preparation, evolved the interviewing and interaction techniques that allow this conversation to develop, found the questions and then organised and edited the resulting material, we would not have this account. Indeed, it is Poerksen’s finely honed skills that creates the project. It is Poerksen who sets the framework that allows Maturana’s oeuvre to shine as it does here, to appear in such a comprehensible, comprehensive and yet straightforward manner. In reviewing Poerksen’s earlier book (with von Foerster) I remarked on the importance of his modest, supportive and discrete contribution. In this book I think his contribution is even greater.

The second section, made up of two sub-sections, is “Application of a theory...” The sub-sections will, I think, be familiar to those many people who have attended Maturana’s workshops in the contexts of therapy and education—the areas addressed in the sub-sections. I think much of Maturana’s popular success and reputation have come from the arguments he puts forward in these areas and for me, not having experienced him talking about these areas myself, this is an intriguing section. But there is something just a little strange: is there a double standard that allows Maturana to apply a theory but allows him to discourage others (as I’ll recount below) in their applications?

The third section is “History of a theory...” Here there are four sub-sections. This is the most explicitly historico-cultural and biographical part of the book and is full of the richness that helps us not only understand who Maturana is, but which also tells us of the context and some of the surrounding events in his life. Two of the sub-sections are specifically concerned with events in Chile, which as we know had a profound effect not only on the unfortunate citizens of that country, but also on a number of cyberneticians and even the path cybernetics took.

Finally, there is a section with only one sub-section, “Ethics of a theory...” Subtitled “The biology of love.” It seems to me to be the most personal and most intimate section in which it is possible to see into the heart of Maturana, to see his belief systems. It’s not that he hasn’t mentioned much of this earlier: but here it is put together to make a world view, a philosophy that I find deeply appealing most of all for the ethical considerations it raises. As I have argued in this journal (Glanville, 2004), second order cybernetics (of which, as I indicated earlier, autopoiesis is perhaps the best known exemplar) offers us a way of understanding being human in our worlds in a manner that appeals to what we think of as the very best in being

human. It is good to see Maturana's position and arguments here: the more we have of this the better!

Why should we be interested in a book culled from interviews?

The primary reason concerns both comprehensibility and availability. Those who have searched for Maturana's work will know that much of it is indeed difficult to locate. Taking, for example, the key monograph "The Biology of Cognition"³ (written during a stay at the BCL), republished in 1980; I could not even find second hand copies in a recent web search. People who have managed to buy second hand copies have told me of prices in the hundreds of dollars. Fortunately, Randall Whittaker has placed an electronic version of this long paper on the web at:

<http://www.enolagaia.com/M70-80BoC.html>

thus not only making the work itself available, but also allowing the unfamiliar reader to sample Maturana's highly individual written expression.

Those who have read Maturana's writings will know just how entangling they can be! The incantatory, reflexive style of his mantras reflect in form the content expressed, and so are particularly appropriate. The exclusive inward-turned-ness—found also in what one colleague and Maturana fan has expressed to me as Maturana's exclusively self-referential referencing—and the interwoven complex threads and strands, give a feel for the ideas, perhaps creating more of the experience Maturana claims we live in (and I agree with him) than the somewhat removed world of description and narration that is the norm in our post-rationalist world. Yet, while to have the experience is to understand in one way, Maturana's intention is not to be an artist but a scientist whose job is to help us understand the world through making descriptions that can be used in communication: and here his texts that reflect in their form the content he wishes to express are not always helpful because they are hard to grasp hold of (the logic of autopoiesis is not the logic of narration, as Varela (1975) pointed out to us, although there are viable metaphors that link the two). Bernhard Poerksen admitted when I asked him that he, too, finds many of Maturana's texts difficult to understand: even *The Tree of Knowledge* (Maturana & Varela, 1991) meant for a more popular audience, is not at all easy.

I don't for a second mean that it is not worth reading the original texts. Although there are now many experts promoting their own "authoritative" interpretations, what is special about this book is that the (more straightforward) introductions to the key

3. The importance of this monograph, the well spring of autopoiesis, can be indicated not only by how Maturana refers to it, but also by von Foerster's and Pask's responses when I asked where I could learn more about autopoiesis. I was amongst the first to hear Maturana introduce the topic in a memorable and bedazzling presentation to Pask's students at Brunel University in the early 1970s (in a double act where von Foerster presented his "Notes on an Epistemology for Living Things" (von Foerster, 1972 republished 2003)) and wanted to follow this up. They directed me to "The Biology of Cognition" in its original BCL version. Maturana's presentation was not the first time I heard of systems that behaved in what appeared to me as similar ways: most of what Pask was exploring at that time was centred on such systems. Maturana's version was just that much more elegant and seductive through its incantations. These ideas demanded attention and had great currency.

ideas are made by the author of those ideas, in response to Poerksen's provocative and sensitive questioning. Sometimes reading is easier when some of the ideas being dealt with are more familiar, and I am very glad to have this simplified version for my own use!

I should add that the extra introductory essay written by Maturana for the English edition of the book (the German original was published in 2002) brings a really welcome touch of his way of writing: I specially enjoyed this essay just because I could hear that voice which so bewitches the listener in his presence. For those who have not heard him, this essay is a special bonus. But it also, I think, reminds us that what works in the presence of performance does not necessarily work when recorded and played back.

A secondary reason is the commentary Maturana provides, and the biographical and historico-cultural material. Because of what autopoiesis is, Humberto Maturana's work cannot be divorced from who he is. The stories in this book, both the strictly biographical and the historico-cultural, form a complementary pair with the commentary Maturana offers Poerksen of his own life-travels. I have found this material fascinating and illuminating: not in the naïve manner of discovering a simple and magical key that reveals the work in the person, but of seeing a more impressive and richer whole. It is not just the story of childhood thoughts (I, equally, have childhood questions, approaches, epiphanies, ideas and visions and so on, as I am sure all readers have): it is the way that these questions can be seen, by Maturana himself, to drive his curiosity and insight throughout his life: which might be understood as the forming of an autopoietic whole. And there are those other moments of commentary which perhaps tell us little about Maturana but a lot about the world we live in, such as his account of affairs surrounding and following the CIA's intervention (tellingly, on 1973's September 11) in the Chilean world of Allende, and Pinochet's consequent reign of terror.

There are, too, important asides concerning Maturana's work. One that comes to mind is when Poerksen directs him towards the appropriation of the concept of autopoiesis in fields other than biology. Maturana retells the story of getting down on his knees in a restaurant to beg Erich Jantsch not to do this (Jantsch paid no attention and made himself a reputation), and then comments on how, although he was promoted and sponsored by Niklas Luhmann he really wished Luhmann had not tried to apply autopoiesis to the design and understanding of social systems.

There has been a certain amount of disagreement (I would say unpleasantness) concerning who was responsible for what in "Maturana's" oeuvre. Some of this concerns conventions of naming in scientific authorship (why is Lettvin positioned as first author of "The Frog's Eye..." when Maturana claims right as first author; and, 6 years after its original publication, the paper is reprinted in a collection of McCulloch's papers), other ambiguities remain. For instance, the cyclostyled draft I have of the original autopoiesis paper names 3 authors: and while Maturana tells Poerksen why and how Varela was secondary, the third author (Ricardo Uribe who

built, as I understand it, the computer simulation) as usual remains obscured. As for the disagreement with Varela, it is worth noting that none of the grand old men of second order cybernetics were particularly generous in acknowledging others and promoting their younger successors (or passing the baton), and it is very difficult indeed for a brilliant student of a brilliant master to be acknowledged in his or her own right; just as it is difficult for that brilliant student not to pose a threat to the master: perhaps another important double-bind that is re-inforced in this book. Nevertheless, while the current book in no way resolves the issues, it does give Maturana a sympathetic and important opportunity to express his view.

All of this goes to make a most fascinating and valuable book. Fascinating and valuable to whom? In my opinion, anyone who is interested. I believe this is a book in which even the expert on Maturana will find insights, and, particularly, ways of saying things that bring more into focus, shed more light. I am reminded of a quote from the Italian designer Bruno Munari painted on the walls of the Design Museum in London: "Progress means simplifying, not complicating." I am not arguing for over-simplification, but for saying what has to be said in as simple a way as possible for the purpose and audience concerned. In my experience, that often comes with time and practice, as I try over time to explain and then to explain again. I believe that Poerksen has managed to help Maturana find a simpler way by which we can gain insight and understanding into his extraordinary inventions, while doing no disservice to what he has to tell us. When I am asked to explain the heart of what Maturana has done, I said he has changed the study of life into the study of living: he has turned life into a verb again. In this book, and with the expert coaching of Poerksen, he shows us how he has done this.

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