

Book Reviews

Karin Boklund-Lagopoulou

Cobley, Paul 2016. *Cultural Implications of Biosemiotics*. Dordrecht: Springer, 139 pp. ISBN 978-94-024-0857-7, ISBN (eBook) 978-94-024-0858-4.

Paul Cobley's book is designed as a layperson's introduction to biosemiotics. It combines a roughly historical overview of the development of the field with a series of chapters on what the author argues are the main implications of biosemiotics for the study of culture.

The central argument of the book, the continuity (or synechism, as Cobley calls it) between nature and culture, is in itself scarcely new, 160 years after Darwin published *The Origin of Species*. The difference is that biosemiotics makes the argument in terms of the processes of semiosis, which it sees as continuous, though increasingly complex, from the simplest living organisms up to humans, their societies and cultures.

It is clear why biosemiotics finds its preferred semiotic theory in Peirce. Much of the argument hinges on the nature of the sign, how it is constituted and how it functions. However, the crucial moment in the development of the field seems to have been the discovery, by Thomas Sebeok, of the work of the early 20th-century Estonian-German biologist Jakob von Uexküll.

Uexküll was interested in how living beings perceive their environment. He argued that an organism experiences living in terms of a species-specific spatiotemporal reference frame that he called *Umwelt*. The *Umwelt* is not simply what a human observer would perceive as that organism's external surroundings, but is composed of its self-oriented *Innenwelt* (inner world) and the information on the external world conveyed by its senses (its sensorium). This is where semiotics comes into the picture, because the organism 'interprets' this sensory input, distinguishing what is positive (+) – ie., food, warmth – from what is negative (-) – ie., danger – and ignores what is simply irrelevant to its interests (0).

Human beings also live in their own *Umwelt*. But since humans are a very small part of all the living organisms on the planet, and the specifically human semiotic activities known as culture are a small part even of the semiosis that humans are engaged in, the peculiar forms of semiotic activity typical of culture (notably the production and consumption of texts of all kinds) are of very limited interest to biosemioticians. Like many biosemioticians before

him, Copley has a tendency to point this out in unnecessarily aggressive tones, which mars the style of the book.

The pivot of the book is chapter 3, 'Difference in kind or difference of degree?', which takes up the issue of human exceptionalism. The introduction of the concept of *Umwelt* allows biosemiotics to speak of the organism's cognitive capacity to differentiate objects within its *Umwelt* as a rudimentary form of modelling. Somewhere in the course of prehistory, the human species begins to co-evolve with language. For biosemiotics, verbal speech is only a late development of the capacity for non-verbal communication, or 'language'. Copley, citing other researchers, dates the appearance of this capacity to perhaps as far as 2 million years ago, whereas verbal speech only came into use some 300,000 years ago. Primary modelling involves the ability to differentiate. Verbal language is a secondary modelling system, able to cognize and express relations between things (Peirce's 'Secondness'). Tertiary modelling is what develops out of this: 'the extension, through inevitable mutation in social exchange, of primary and secondary modelling to produce cultural forms' which 'partake of the lower strata of modelling but also feed back to them' (p. 35). The development of verbal language thus involves a drastic step in the complexity of the human *Umwelt*. 'This is where language defines what it is to be human; and this is where sociality – the interconnectedness of signs that humans are able to apprehend – is crucial to the process' (p. 36). Language is thus, for humans, a difference of degree in their ability to carry out semiosis – and that difference of degree becomes a difference in kind, as culture, language and brain co-evolve.

Significant in this development is the concept of 'nesting'. Copley argues that more complex forms of semiosis grow out of, and incorporate, more rudimentary forms, but the rudimentary forms do not disappear in the process; instead, earlier and simpler forms of semiosis can be found 'nested' inside even the most complex kinds of sign processes in human culture. This seems to be crucial to the difference in perspective between Darwinian evolution and biosemiotics: 'Biosemiotics, particularly on the question of language, sees the genetic inheritance not as a matter of periodic mutations but as a development involving nesting and embedding' (p. 43). Evolution thus conceived becomes less a process of accidental genetic jumps and more an ongoing process of adaptation (or, as Copley prefers to call it, exaptation).

After this, Copley's argument becomes more philosophical. The book gradually focuses more on the issue of realism (on which he often cites the work of John Deely) and how the concept of *Umwelt* allows for a qualified kind of realism which Copley contrasts with the post-modern insistence on our entrapment in discourse. Chapter 4 is concerned with the development of subjectivity, which he approaches in a rather interesting way through the concept of *Umwelt*. The *Umwelt* is not objective reality (the 'real world'). It is our perception and construction (our model) of reality as we perceive it through our sensorium and our experience (including all the social and cultural information carried by language). Like any organism, we sort our experience into positive, negative and indifferent, and that which we categorize as

indifferent we essentially do not perceive at all. Our *Umwelt* is, in other words, a kind of collective bubble. But if that collective bubble is too far from the objective world that we live in, it won't work, and we as individuals and as a species will not survive. The resistance of what is 'out there' is what we experience as 'otherness', and the sense of self is developed out of the encounter with the 'other'.

Chapter 5 deals with ethics. This part of the argument, in my opinion, does not work. Much of the chapter is a presentation of the work of Susan Petrilli and Augusto Ponzio. The argument seems to be that, as the only self-aware semiotic animal, humans have a responsibility to protect and preserve the global web of natural/cultural semiosis that we are a part of. But since most of this global web of semiosis would go on quite happily without us, can that argument really be used to support action in any specific way? Dead bodies are just as much a scene of trillions of bacteria engaged in semiosis as are living ones. Unless we succeed in eliminating absolutely all traces of life on earth down to the bacterial level, through nuclear catastrophe or disastrous climate change, the global semiotic web seems pretty indifferent to what humans do.

Higher mammals perhaps provide a better analogy for a biosemiotic ethics. But even this will need some work. Animals parent their offspring, as Copley points out, but they frequently kill the offspring of other members of their own species to increase the chances of perpetuating their own genes. Groups of wild chimpanzees go to war against other chimpanzee groups over territory and resources. A natural ethics could probably be made to cover behaviour conducive to the survival of the group rather than the individual (ie. the concept of self-sacrifice). Perhaps we could stretch it to the survival of the species, or even of the planet, if we can be persuaded to accept a wide enough meaning of 'group'. But that is really only an ethics of enlightened self-interest (which, to the extent that self-preservation is part of our biosemiotic nature, I suppose would be a bio-ethics). It would work as an argument against environmental destruction, but it won't help much against murder, war or genocide.

Chapters 6 and 7 have to do with determinism and freedom, though I found them less clear than the preceding chapters. The discussion of codes in chapter 6 seems driven mainly by the need to distinguish between strong codes (such as the genetic code) and weak codes (which involve interpretation, agency and choice – ie. 'meaning'). The point seems to be that semiosis is not just a matter of mechanical coding. Chapter 7 starts with an argument for taking a 'wider' biosemiotic approach to cultural issues, using the semiotics of vision as an example (and including an ungenerous and misunderstood account of Michel Foucault, Fredric Jameson, ocularcentrism and the 'masochism of French theory', p. 95). It then moves on to a discussion of 'constraints' that is closely related to long-standing Marxist debates on determinism, and indeed, here and in previous chapters, Copley refers to a number of Marxist theoreticians, notably Althusser.

The argument comes to a head in chapter 8, 'Humanities are natural', a defence of the humanities from an anti-humanist, non-individualistic perspective. This is where the book has

been going. The tone also becomes much more conciliatory, actually recognizing the trans-disciplinary contribution of Saussurean semiotics (and the concept of *text* introduced independently by Roland Barthes and Yuri Lotman), as this ‘shifting the focus from the “good” to the “analytic” is the defining feature of contemporary humanities’ (p. 113). The chapter of course argues for mind-matter continuity, for culture as part of nature, for agency as inhabiting *Umwelt*, and there is nothing wrong with that, though it is unlikely to help save the humanities from the onslaught of late-capitalist instrumentalism.

However, the most interesting part of the chapter is the argument, based on suggestions in the late work of Sebeok, that animal semiosis might develop into ‘aesthetic behaviour’.

Cobley argues that ‘[a]esthetic behaviour, as formulated here, heightens cognitive differentiation. It is a form of modelling with its own specific procedures, practices and rewards’ (p. 121). In an *Umwelt* that includes (and is partly constructed by) human language, this modelling is ‘the anticipation and creation of possible worlds’ (p. 121) in art, fiction, philosophy or science. Independently of whether aesthetic behaviour exists among animals, such an approach to the humanities raises some interesting possibilities. It suggests that there is an unexpected use value to what we loosely define as the ‘arts’. The use value of the arts would be as a kind of cognitive gymnastics or fitness exercises. Cognitive ability is obviously good for survival. Aesthetic behaviour keeps it on its toes. It provides a form of play-as-cognitive-practice.

This, then, goes on to a defence of the need for humanities as the disciplines that analyze and cultivate such cognitive skills. It is formulated as a defence of art and philosophy, but it could easily be extended to all the human sciences, including history, sociology, psychology and anthropology. There is an interesting echo, once again, of the arguments made by Marxist theoreticians of culture, such as Georg Lukács in his defence of the novel as a manifestation of collective consciousness, or Raymond Williams arguing for a view of cultural texts as ways of imagining ourselves, our world and our possibilities for action in it.

Cobley’s book has not really answered the original question it posed of ‘How could natural history become cultural history?’ (p. 2), and it would clearly be unfair to expect it to do so in 140 pages. We can assert that there is a continuum of nature and culture (something which we really should have digested by now), and we can suggest that a semiotically informed understanding of cognition provides a possible bridge for linking up the pieces of this continuum, but beyond that, we simply do not know enough – about either nature or culture – to be able to say anything very specific. And at this point, this ignorance is an invitation for speculation that can get pretty wild.

Thus, I am not really convinced that biosemiotics as it currently stands has many implications for culture. I am pretty certain that it will not help me to understand medieval literature or to analyze the narrative structure of television serials. But it is a *bona fide* development of Peirce’s theory of semiosis and provides interesting feedback to that theory from empirical

research. Cobby's book brings to the forefront a number of interesting connections on a philosophical and theoretical level, and gives the reader a good introduction to what biosemiotics is all about.

Karin Boklund-Lagopoulou is Professor Emerita of English Literature at the Aristotle University of Thessaloniki, Greece.

Email: boklund@enl.auth.gr