EDUARDO KOHN, *How forests think: toward an anthropology beyond the human*, Berkeley CA: University of California Press 2013, 288 pp.

That humans represent the world symbolically is a fundamental tenet of social anthropology. From Saussure's linguistic signifiers to Geertz's Weberian webs (1973), our understandings of human thought and communication have long been intimately bound up with notions of symbolism and convention. In a ground-breaking new book, Eduardo Kohn presents a theoretical framework that attempts to radically transform semiotics as applied in ecological anthropology. Based on extensive fieldwork with the Quichua-speaking Ávila Runa people of lowland Amazonian Ecuador, the volume constitutes an attempt to rethink the relationships between humans and their living environments at the most fundamental level. His project, which he has previously referred to as an 'anthropology of life' (2007), is largely concerned with the entanglements of human and other-than-human beings that make up the 'open whole' of life in the Amazon rain forest. Kohn intends to expand the ethnographic panorama from the purely human to include the myriad human-animal relationships that constitute life in the sylvan domain of the forest. Drawing on his ethnographic experiences among the Runa, he sketches out a trans-species theoretical framework that audaciously attempts to go *'beyond the human'*. Far from being sensationalist sloganeering, however, this seemingly oxymoronic proposition (anthropology, in name at least, being humanism defined) has a lot of substance to it.

In the sense that it is staunchly against human exceptionalism, Kohn's book has a relatively straightforward post-humanist political agenda. Echoing Haraway (2008), he argues that 'our exceptional status [as humans] is not the walled compound we thought we once inhabited' (42). This is, then, a post-humanistic enterprise. However, rather than submit to the often overly abstract trends of that body of scholarship, Kohn artfully distances himself from it, carving out an unfamiliar and intriguing space of his own. By engaging with, whilst masterfully criticizing, phenomenology-inspired approaches (Ingold 2000), STS and actor network theory (Latour 1993), perspectivism (Viveiros de Castro 1998), and Deleuze-influenced thinking (Haraway 2008, Bennett 2010), Kohn demonstrates how many of these paradigms are still manacled to the persistent Cartesian dualisms of

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culture-nature, human-nonhuman and mind-body. His new theoretical proposal, so he contends, delineates an approach that can finally allow us, as anthropologists, to transcend the trappings of dualistic thinking. For Kohn, this can be achieved through a fundamental reconceptualization of semiotics, one that provincializes language and emphasises other pre-symbolic referential modes that pervade all life.

As the author states early on, his approach is indebted to two of the principal orchestrators of the 'ontological turn' that emerged from Amazonian ethnography in the late nineties, Philippe Descola (1994) and Eduardo Viveiros de Castro (1998). However, Kohn's project is in itself as theoretically radical as the seismic proposals of those two giants of the field. As a consequence of his more fundamental semiotic focus, he refreshingly manages to sidestep the increasingly fetishized and sensationalized question of ontology. Kohn's ideas owe more to a different lineage of thinkers, including the nineteenth-century philosopher Charles Sanders Peirce (1940), Gregory Bateson (1973) and the biological anthropologist Terrence Deacon (1997). Embracing this intellectual etymology, Kohn proposes a framework for a trans-species 'anthropology beyond the human', one that literally contends to makes its object of study the relationships that exist between different kinds of living selves. He is interested not merely in those human-centric symbolic webs of meaning, then, but also in the broader cross-species 'ecological webs in which the Runa are immersed' (13). Although it is about Amazonian signs, this is not symbolic anthropology or straightforward Amazonian ethnography: the author has loftier ambitions that aim to penetrate the very heart of anthropology as a discipline.

Building on the proposals delineated in his influential article on human-dog communication (2007), Kohn details an eco-semiotic framework that is heavily influenced by Peirce's trifold semiotic schema of icon, index and symbol. Unlike Saussurean semiotics, which deals almost exclusively with the symbol, Peirce's formulation incorporates a broader range of signs, including ones that are not unique to the human domain. Rather, as Kohn illustrates with ethnographic material, these more fundamental sign systems are common to life in general. Animals, too, re-present the world. Forms of iconic and indexical semiosis, he argues, pervade all life. They are the currency of communication across species boundaries: 'Life is constitutively semiotic. That is, life is, through and through, the product of semiosis' (9). From hunting dogs and were-jaguars to woolly monkeys and cryptic stick insects, the author artfully conveys how human-animal interrelationships are predicated upon these various interrelating semiotic modes. Kohn invokes the ideophones of onomatopoetic language—the sound of a peccary crashing into a river, the world for a hawk's wings flapping in the undergrowth—as examples of the pre-symbolic sign processes that span the human-animal semiotic divide. He conveys how humans and animals communicate and re-present each other in the experiential milieu of the forest. In doing so, he simultaneously portrays the beauty and poetry of Runa ethnoecology.

How forests think is heavily theoretical. One major criticism that could be levied at the volume is that this theoretical focus comes at the expense of ethnographic description. The reader may occasionally feel that the complexity of Runa ethnography has been reduced to philosophical

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anecdotes (poetic and illuminating ones though they may be) that are used primarily to animate the theoretical framework, rather than the other way around. However, Kohn's brilliance as an ethnographer has been displayed in previous work, notably his doctoral dissertation on Runa ecological aesthetics (2002), in which he describes an exhaustive body of ethnobiological data. How forests think, however, is not an ethnography of the Runa per se. As Kohn states, the book and the ideas in it are the product of 'sylvan thinking': 'the Amazon's many layers of life amplify and make apparent these greater than human webs of semiosis' (42). Through a series of ethnographic vignettes, he illustrates how the poly-ontological world of the forest is inhabited by beings that not only provoke philosophical insight but can even quell human-specific anxieties. However, Kohn's is a universal proposition, one which in theory applies as much to the sterile spaces of hypermodernity as it does to the biodiversity hotspots of the neotropical rain forest: trans-species semiosis pervades and connects all life. Is this, then, 'grand theory'? Yes, but only in the sense that he is searching for 'a way to practice an anthropology that can relate ethnographic particulars to something broader' (67). Kohn's proposal has little in common with those sociological theorists that emerged from structuralism and other twentieth-century grand paradigms. Rather, more in line with Gregory Bateson (1972), he has produced a philosophical treatise on the nature of mind. As the author himself states, 'How forests think is a book, ultimately, about thought' (21).

Throughout the volume, Kohn repeatedly emphasises the dynamic interconnectivity of life forms. It is curious, then, that plants should be all but omitted from the analysis. In his charge against human exceptionalism, Kohn sometimes veers towards human–animal exceptionalism. Although occasionally making reference to plant life, such as a palm crashing down during a monkey hunt or an epiphytic cactus with a leaf that grows out of itself, they are not afforded the same degree of analytical or ontological significance as animals. Although Kohn states that 'plants are also selves' (75), and although this is implicit in his approach, for the most part they feature only as appendages to human activity. Thus, in purporting to explore 'how forests think'—which, in his Peirceian semiotic formulation, is not a metaphor at all—he fails to adequately take into account perhaps the most 'iconic' living selves in the rain forest: plants. This is largely a consequence of focus; Kohn is predominantly interested in animals and hunting. However, there is huge scope for adopting and expanding his approach in order to pay heed to the myriad plant beings that constitute important interlocutors in 'the forest's ecology of selves' (16).

In Chapter one, Kohn further develops the Perceian semiotic framework as first detailed in the introduction. Here, the object of an anthropology beyond the human is sketched out. Chapter two sees the author develop the concept of an 'ecology of selves' whilst dealing with various theoretical themes, including relationality (Strathern 1991), STS (Latour 1993) and perspectivism (Viveiros de Castro 1998). In the following chapter, Kohn assesses death and the nature of the soul in relation to predation, a central value in Runa cosmology. Chapter four, dealing with human–dog entanglements and the interpretation of dreams, introduces the fruitful notion of 'trans-species pidgins'. Like Ingold

(2000), Kohn is interested in *form* and how forms permeate life. This is the topic of Chapter five, in which he conducts an historical study of the rubber boom in nineteenth-century Ecuador and its relationship to Runa understandings of forest master spirits. In Chapter six, the author assesses notions of mortality, death and otherness through a discussion of Christianity, before concluding with an epilogue that neatly bookends the volume. Overall, the reader is left with a vivid impression of an illuminated cosmos of open wholes, living thoughts, blind souls and alter-politics.

An important publication with wide-ranging implications, *How forests think* constitutes a conceptually innovative, highly original, beautifully written step toward 'an ethnography of signs beyond the human' (15), the author's self-identified goal. It will be of interest to a variety of readers, from students of Amazonian ethnography, ecological anthropology, linguistics and semiotics, to those engaging with post-humanism and the ontological turn. Moreover, the philosophical insight, panoramic scope and radical proposals laid out by Kohn should mean that this new volume constitutes required reading for anyone interested in how anthropology as a discipline is unfolding in an age (the so-called Anthropocene) in which the precarious nature of trans-species relationships is becoming ever more apparent. As Kohn immaculately conveys, human thought and action, anything but humanistic in essence, are always the product of a multitude of interacting selves. It is by emphasising this point that he provokes us to think about some of the most fundamental questions of all: who we are, how we think and what is real.

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