

and to what he calls technocognitive and sociogenetic processes. However, it needs some elaboration according to some of the ideas entertained here.

James D. Faubion

Department of Anthropology, MS 20, Rice University, P.O. Box 1892, Houston, Texas 77251-1892, U.S.A. (jdf@rice.edu). 19 III 11

Peirce meets systems theory in this wildly ambitious and often brilliant essay. I have recently delivered a polemic in favor of an anthropological return to programmatic inquiry (Faubion 2011), which the author turns out to have heeded predelivery. I thus cheer him on. In the course of that polemic, I distinguish among four prominent sorts of conceptual apparatuses: referential (which proceeds inductively from empirical tokens to abstract types); diagnostic (which is preoccupied with part-whole, text-context relations); tendential (which highlights intrasystemic tendencies); and model theoretic (which is concerned with the logic of a system as a totality). The author seems congenially disposed to all of these, but—at least in the essay under review and the Nietzschean caveat notwithstanding—plainly embraces the model theoretic as his apparatus of choice. Here, again, I approve. When well wrought and well deployed, model-theoretic apparatus can be singularly conceptually robust. Even the polemicist has to admit, however, that detractors are likely to doubt their reliability. To put much the same point differently, I need only twist slightly the words of system-theoretic fellow traveler Niklas Luhmann (1989): “such an apparatus can be a far-reaching, elegant and economical instrument” of elucidation and explanation, but “whether it is correct is an entirely different question” (35).

The author claims that his essay began as a “squib.” He offers his construction of a “general theory of meaning” as an “ideal type” and the ideal type as “that last refuge of the scoundrel,” indeed, as the uniform felicity of the illustrative examples provided attest. The monkeys always seem to recognize bears for precisely what they are. An even wilier dimension of the construct is its closure, its definability, its determinacy. Among the entailments of such closure—the same point can be made of Luhmann’s system theory, and in fact Luhmann insists on it—is that the “envorganism” is a creature fundamentally divided. It consists of an environment on the one hand and a system on the other. The causal interaction between the two must in every case be mediated—or “channeled,” as the author seems to prefer. Otherwise, the system itself would suffer a breach and the theoretical modeling of it would thus have to be systemically open. The elegance of semiosis would thus be bound to suffer. Not just ideal typology but genuine idealism enters the author’s model at this juncture. Nowhere is this more evident than in his parsing of Peirce’s notion of the immediate object as an object

“that signs represent (*and hence that exist because the sign brought some interpreter’s attention to [it]*)” (my emphasis). The idealism at issue does not sit easily with the author’s late salvo against the irreducibility of the contrast between natural and artificial selection.

As it turns out, however, this is a bit of a squib. If one tracks down the “evil twin” of the essay under review, one encounters an extended acknowledgment and analysis of a variety of circumstances in which the systematicity of semiosis is disrupted, goes afoul, crumbles into the asymmetrical seriality of unmitigated historicity (Kockelman 2010a). This is fine and well in the end, and hardly evil at all. The evil of the twin instead lies elsewhere. It may also cast its malignancy back on its putatively more virtuous sibling—unless the author can assure us of the contrary. The twin pronounces that “with Kripke and Putnam . . . we learn that all words are a little bit like proper names” (2010a:414). No, actually, we do not. Though he is not the first to do so, Kripke famously argues that proper names do not at all function like signs. They function ostensively; they designate, they have a direct casual link to their designees, but they do not “stand for” them in the manner of the Kockelmanean sign. Now, one might seek to refute Kripke, prove the proper name to be a sign, and preserve one’s general theory of meaning intact. Alternatively, one might follow Kripke and resign oneself to banishing proper names from the general universe of semiosis. The twin makes no effort to refute Kripke but simply proceeds to treat the proper name as a sign (2010a:416). This looks very much like wanting to have one’s cake and eat it, too.

A final (mean-spirited) note. I very much doubt that the author’s pointing out that biologists, archaeologists, linguists, and interpretive anthropologists are engaged in the “humanistic” enterprise of the analysis of part-whole relations is going to lead to any peace treaties being signed in anything like the near future.

Stefan Helmreich

Anthropology, Massachusetts Institute of Technology, Room 16-267, 77 Massachusetts Avenue, Cambridge, Massachusetts 02139, U.S.A. (sgh2@mit.edu). 27 II 11

Once upon a time, David Schneider called culture “a system of symbols and meanings” (1968:8). After the critiques of the 1980s and 1990s, however, anthropologists came to think of “culture” as less systemic, less whole. In the wake of post-structuralism, they also came to think of “meaning” as elusive—if not as an ideological placeholder for universalist metaphysics.

Against this history, Kockelman offers “a general theory of meaning.” This time out, however, it is not “culture” that grounds meaning but rather an expanded sense of the “biological”—the biological not as a foundational or fixed “na-

ture” to “culture” but as an organic assemblage of apparatuses of selection and signification: the biosemiotic.

Biosemiotics has been much in the philosophical and anthropological literature lately, from Giorgio Agamben’s (2002) retrieval of biologist Jakob von Uexküll’s early twentieth-century notion of the *Umwelt* (a being’s sensorial world), to Eduardo Kohn’s 2007 use of *Umwelten* to speak of human-dog relations for the Amazonian Runa, to Jussi Parikka’s *Insect Media* (2010), to Thierry Bardini’s *Junkware* (2011). What those works have in common is concern with the unstable mix of commensurability and incommensurability—the multiplicity—that characterizes human/nonhuman agencies, sensoria, and relations. Insofar as Kockelman employs the notion of the “multiverse,” his theory is in dialogue with this work. By and large, though, Kockelman takes a different tack, seeking a unifying material semiotics of relationality. His multiverse is epistemological, and not ontological.

At the center of Kockelman’s analysis is “relations between relations”—and there are, he writes, many species of these, some structural (Saussure, Marx), some processual (Pierce), and some that fuse these forms (Veblen). In such fusions, relations between relations produce values that generate derivative values that come to stand for the “original” relations, which are then sieved into future relations. That notion of derivation recalls Jane Guyer’s arguments in *Marginal Gains* (2004) about the production of value in Atlantic African exchange; relations and value are always already derivative (see also Lépinay 2011). To put this in the language of evolutionary biology, adaptations always mix with what Stephen Jay Gould and Richard Lewontin (1979) called “exaptations,” ancillary developments of affordances not strictly selected for. All these are connections consistent, I think, with Kockelman’s project.

But, one might also make connections that crinkle the neatness of Kockelman’s model. If Kockelman argues that the key unit in anthropology might be “a relation between two kinds of relations between relations,” he does not do so in dialogue with a major contemporary anthropological thinker on relation: Marilyn Strathern. Her work *The Relation: Issues in Complexity and Scale* (1995) offers critical takes on “relation” as well as “complexity” and “scale,” which, she argues, are reifications with social histories (see also Tsing 2000 on “scale”). Kockelman’s claim that his theory of meaning “foregrounds the environment-organism relation at any level of complexity and with respect to any kind of life form” can be complicated by treating “relation” as a thickly historical term of art.

Each term in the claim might benefit from other worrying, too. As for the environment-organism relation, in *The Mirage of a Space between Nature and Nurture* (2010), Evelyn Fox Keller suggests that attempts to overcome the organism-environment divide often simply reify those poles. As for any level of complexity, beyond historicizing “complexity” itself, one might ask what sort of complexity is at issue; physicist Seth Lloyd (2001) catalogued dozens of measures of complexity. With respect to any kind of life form, do we know

what “life” is or why it takes a “form”? This conjuncture of life and form—which has origins in the German *Lebensform*—is more historical than ontological (Helmreich and Roosth 2010).

In *Trying Leviathan* (Burnett 2007), the historian of science D. Graham Burnett looks at philosopher of biology John Dupré’s (1999) argument that a whale might be considered a fish if one takes seriously ordinary folk taxonomy (of the kind championed by Melville in *Moby-Dick*’s “Cetology” chapter; Melville 2001 [1851]). But Burnett argues that the excommunication of whales from fishes is not a philosophical matter but a historical one. What is called for is not generalization but specification—or, otherwise put, “situated knowledge” (Haraway 1991; feminist critiques of universalism would be intriguing to think with next to Kockelman’s model).

The “diagrammatic generality” sought by Kockelman may be just that, a generality that attaches to the world only if one takes “environment organism,” “level of complexity,” and “life form” as categories that can be extracted from their historical emergence. The model, offered to bring different practitioners into conversation, is, as Kockelman rightly says, an ideal type. But it is also an ideal type that can be examined as a social fact emergent from relations between the relation between history and epistemology, relations we might think through—to join Kockelman in paging back to our disciplinary forebears—using the analytical sieve of Boasian historical particularism.

Olivier Morin and Christophe Heintz

Institut Jean-Nicod, Pavillon Jardin, 29 rue d’Ulm, 75005 Paris; France (olivier@cognitionandculture.net)/Central European University, Department of Cognitive Science, Nador u. 9, 1051 Budapest, Hungary. 7 IV 11

The Specificity of Human Communication Eludes Semiotic Theories

Paul Kockelman’s ambitious paper connects social and cultural anthropology with evolutionary theory on the basis of two assumptions: first, humans are evolved organisms; second, culture itself evolves. These two assumptions have been the starting point of much work in anthropology, connecting the natural sciences with the study of human culture. One reason why mainstream anthropologists (especially when influenced by the interpretive tradition) tend not to be interested in such approaches is the widespread impression that naturalistic accounts of culture do not deal with the meaning of public symbols or put excessive restrictions on talk of meaning and symbols.

There have been, however, many interesting proposals to naturalize the study of signs and their meaning. Kockelman’s