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Book review: anthropological cosmochemistry

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ANTHROPOLOGICAL COSMOCHEMISTRY

MICHAEL W. SCOTT

Beyond Nature and Culture BY PHILIPPE DESCOLA

‘[W]hy is a particular social fact, belief, or custom present in one place but not in another? ... Why is there no totemic royalty? Why are nonhumans not represented in parliaments on the grounds of their particular qualities? Why does an Inca or a Pharaoh not eat his enemies? Why do Amerindian shamans not make sacrifices?’ (p. 391). If, like me, you agree with Philippe Descola that these are the kinds of questions that ought to matter to anthropologists, then it may surprise you to learn that, like me, you are interested in the anthropology of ontology.

In British anthropology at least, the concept of ontology has often been associated with Eduardo Viveiros de Castro and the self-denominated ‘ontological turn’ that his lectures at Cambridge inspired among students there in the late 1990s (now published; see, Viveiros de Castro 2012).¹ Now, however, Descola’s *Beyond Nature and Culture*, translated at last from the French (*Par-delà nature et culture*, 2005), reveals to the Anglophone world that there has long been a related but different anthropological approach to questions of being, one that even those hitherto sceptical of various appeals to the concept of ontology may find useful. Descola’s project offers resources for an anthropology of ontology that is addressed to historical and ethnographic specifics, constitutively comparative, and unapologetically systematic rather than primarily reflexive and tending towards the prophetic.²

* * *

Descola’s main aim in this book is to identify and describe what he terms four ‘modes of identification’ and six ‘modes of relations’. The four modes of identification are animism, totemism, naturalism, and analogism. These terms all have histories of

¹ For an analytical reading that constructs the anthropology of ontology as broader than the Cambridge-originated turn, see Scott 2014.

² I suspect, however, that Descola might say, ‘My work is not the anthropology of ontology; it’s just anthropology!’

prior usage, of course, but Descola's project is about giving them new analytical definitions. As I will elaborate presently, Descola re-thinks these four -isms conjointly as four possible ways of identifying what kinds of things exist in the cosmos based on whether the 'interiorities' and 'physicalities' of humans and nonhumans are similar to or different from one another. The six modes of relations are somewhat more self-explanatory. They are: exchange, predation, gift, production, protection, and transmission. These, according to Descola, are the six principal ways in which humans can establish connections with one another and with the nonhuman entities they encounter.

Descola makes the bold claim that various combinations of these ten modes 'suffice to explain the principles underlying most known ontologies and cosmologies' (p. 114). He furthermore sets out to show how particular differences, both major and minor, among the various 'known ontologies and cosmologies' of the world may be accounted for as the effects of different modes of relations in compound with different modes of identification. At the close of the work, he likens this project to chemistry. By isolating these ten modes, he suggests, he has laid out a 'table of those elements' (p. 392) that make up the diverse ways in which people experience being in the world and their relations to others, human and nonhuman.

In the form of an invitation to other anthropologists to employ his table of elements in future comparative studies, Descola extends this metaphor between anthropology and chemistry. Anthropologists, he proposes, should look to chemistry as a source of inspiration for their theoretical and methodological models. By this he seems to mean that anthropologists should theorize the lived universes we study in the same way that chemists theorize the stuff of the cosmos, namely as composed of a limited number of fundamental building blocks that bond in a limited variety of ways. We should expect that unprecedented combinations of his ten modes may occur in extraordinary circumstances, and we should allow that new modes may even be generated. But, contrary to 'the apostles of creative action' (p. 392), we should also accept that some combinations, however thinkable, will never be realized. To this one might now add that, contrary to some voices in what has become the broader anthropology of ontology, the possibilities for becoming-other are not infinite.

Apparently treating his modes of identification and modes of relations as two classes of elements that might bond with one another, Descola posits twenty-four

conceivable permutations. This set of theoretical possibilities points to an agenda for what we might call an ‘anthropological cosmochemistry’.³ As will become evident, however, there are more than twenty-four conceivable permutations, because the modes of identification can bond with more than one relational mode at the same time. In so doing, they form what could be characterized as the complex molecules that compose the actual ontology and cosmology prevalent in any given context. The science of mapping these molecular chains, these lived worlds – identifying, through logical as well as historical and ethnographic analyses, which ones are possible and under what conditions they may undergo transformation – is Descola’s vision for anthropology.

* * *

The first thing to appreciate about Descola’s cosmochemistry is that he does not offer the possible combinations of modes of identification and modes of relations simply as patterns of cultural meaning. They are not just types of culture. Rather, his argument is that, as observable cultural forms, they are expressions of certain acquired cognitive schemas that structure how we recognize humans and nonhumans and organize our behaviour towards them.

Acquired cognitive schemas, as Descola explains in Chapter 4, are theoretical models developed to describe precisely those capacities that make the often non-propositional forms of collective knowledge we call culture possible. ‘They may be defined’, Descola tells us, ‘as psychic, sensorimotor and emotional dispositions that are internalized thanks to experience acquired in a given social environment’ (p. 103). They enable us to structure our perceptions, organize our actions, thoughts, and feelings according to relatively stereotyped scenarios, and interpret patterns of behaviour and events in terms of a shared framework.

Cognitive psychology theorizes that we are all equipped to acquire a wide variety of such schemas, but we acquire some as dominant and others as subsidiary owing to our learning experiences and surroundings. Anticipating later discussions of how his various modes may sometimes co-exist, Descola suggests how this comes about: ‘the schemas that should be held to be dominant are those activated in the greatest number of situations in the treatment of both humans and nonhumans

³ The *Oxford English Dictionary* defines cosmochemistry as ‘the study of the chemical properties of the heavenly bodies and of the formation and distribution of elements and compounds in them and in the universe as a whole’.

and that subordinate other schemas to their own logic by stripping them of much of their original orientation' (p. 105).

Within the anthropology of ontology, Descola's constructive engagement with cognitive theory is, in itself, unusual and is furthermore part of his distinctive neo-structuralist and practice orientated approach to ontology. Descola is clearly committed to a Lévi-Straussian search for the 'structural frameworks that can account for the coherence and regularity of the diverse ways in which humans live and perceive their involvement in the world' (p. 91). Rejecting caricatures of structuralism as 'icy objectivism' (p. 91) that robs people of creative agency, he affirms the idea that the practices evident within human collectives are informed by unconscious rules leading to coherent and durable systems. His turn to cognitivism is an effort to revise Lévi-Strauss's Kantian notion of a 'conceptual scheme' and arrive at a scientifically grounded model of what mediates between structure and action.

* * *

Descola theorizes all ten of his modes as acquired cognitive schemas, but gives the modes of identification logical priority over the modes of relations. The former are his starting points for imagining and mapping cosmochemical combinations. But in order to specify the number and nature of these modes of identification, he must go beyond schema theory alone.

Descola reasons that there are only so many ways in which one can schematize, or know non-reflectively, what kinds of things there are in one's world. He speculates, therefore, that there are only a finite number of 'elementary schemas' (p. 98) that enable people to internalize particular shared ways of recognizing and responding to what they encounter. Based on his own intuition, he suggests that these schema organize human experience around the criteria of whether the interiorities and physicalities of humans and nonhumans are similar or different, and that these criteria generate the four possible permutations he calls animism, totemism, naturalism, and analogism.

Right away, Descola has his work cut out for him to clarify what he means by 'interiority' and 'physicality' and to justify making them foundational to his four modes of identification. In order to meet this challenge, he links back, via Edmund Husserl (1859-1938), to the grand tradition in philosophy of beginning with the self. He relies

on his own experience to posit a mythical abstract subject 'upstream' from all the known or observable ways in which people categorize beings and things (p. 115).

A quote from Husserl's *Cartesian Meditations* serves as epigram to Part Two of the book, in which Descola develops this thought experiment:

Whoever truly wishes to become a philosopher will, 'for once in his life', have to fall back on himself and, within himself, try to overturn all the sciences so far accepted and attempt to reconstruct them. (Husserl, quoted on p. 89)

Falling back in this manner on what he describes as his own 'resources' – his 'intentionality' and his 'body' – Descola asks the reader to accept the proposition that 'every human perceives himself or herself as a unit that is a mixture of interiority and physicality' (p. 116). He is quick to enlist the findings of linguistics and developmental psychology, however, to clarify that this premise of a universal dual-aspect-self is not simply an ethnocentric universalization of Western mind/body dualism. Rather, the sense of being two-in-one that he ascribes to the abstract subject is, he suggests, 'an innate characteristic of human beings' (p. 119). It is furthermore what 'modulates' awareness of 'others' (p. 115), moving the abstract subject beyond mere awareness of others to comparison between self and others with respect to interiority and physicality.

The four modes of identification flow from this scenario. When confronted with an unknown other, the intrinsically dual self has four options. If the self posits similarity of interiority but dissimilarity of physicality with the other, then that is the mode of identification Descola calls **animism**. If the self posits similarity of interiority and similarity of physicality with the other *within a limited group or class of beings*, then that is **totemism**.⁴ If the self posits dissimilarity of interiority but similarity of physicality with the other, then that is **naturalism**. But, if the self posits dissimilarity of interiority and dissimilarity of physicality with the other, then that is **analogism**. In short, by falling back on himself, Descola seeks to overturn all previous

⁴ Note that, whereas the other three modes pertain to all that exists, totemism, thus defined, refers only to the scale of each of a plurality of totemic units.

understandings of these four -isms, especially animism and totemism, in order to reconstruct them.⁵

At this juncture, a brief note on Descola's use of the term 'ontology' is in order. Descola refers to these four modes of identification, understood as schemas of practice, as 'the four major types of ontology' (p. 121). He also refers to combinations of any mode of identification with one or more relational mode – such combinations being likewise schemas of practice – as ontologies. He, therefore, additionally uses ontology, often in conjunction with 'cosmology', to refer to actual historical or contemporary expressions of these ontological schemas; ontologies in this latter sense are the lived forms through which the schemas 'come to have a public existence' (p. 247).

I turn now to what I hope is a faithful yet analytical account of each of Descola's four modes of identification. Throughout the book, Descola strives to flesh out his model of four ontological schemas with ample illustrations from the lived ontologies documented in the historical and ethnographic record.⁶ In attempting to summarize and interpret some of his discussion and examples, my aim is, first, to explain the four modes, but also to restate and thus translate them using language now widely encountered in the broader anthropology of ontology. In particular, I suggest ways in which each mode might coincide with concepts such as monism, dualism, pluralism, and relational nondualism. To facilitate this task, I present the four modes in an order different from their order of presentation in the book.

* * *

Naturalism is Descola's term for the mode of identification that has found its fullest and perhaps only expression as Modernity (i.e., in Europe and its cultural

⁵ Later in the book Descola calls his general approach 'relative universalism'. He explains that, '[r]elative universalism takes as its starting point...the relations of continuity and discontinuity, identity and difference, resemblance and dissimilarity that humans everywhere establish between existing beings, using the tools that they have inherited from their phylogenesis: a body, an intentionality, an aptitude for discerning differential gaps, an ability to weave with any human or nonhuman relations of attachment or antagonism, domination or dependence, exchange or appropriation, subjectivization or objectivization' (p. 305).

⁶ In 2010-11 Descola curated a major exhibition entitled 'La Fabrique des images' at the Musée du Quai Branly in Paris, which applied his theory of the four modes of identification to the analysis of figurative image making around the world. The beautifully produced catalogue published to accompany the exhibition (Descola, ed. 2010), with its captivating illustrations and essays by Descola and other scholars, offers an important supplement to *Beyond Nature and Culture* as a visual entrée into the four modes.

outposts since roughly the seventeenth century). Assuming that, like himself, his reader is a modern subject, he refers to this mode as 'our ontology' (p. 174). We Moderns alone, he says, set humans apart from all other entities as uniquely endowed with a kind of interiority we have variously described as 'immortal' or 'rational' soul, spirit, mind, or self-consciousness. At some point in our recent history, we came furthermore to conceptualize this uniquely human interiority (and God) as immaterial and therefore empirically non-falsifiable; but this was clearly not always the case. As Descola notes, even as late as the mid eighteenth century, the French philosopher Étienne Bonnot de Condillac (1714-1780) thought in terms of human and animal souls that were two qualitatively different *substances*. With respect to the extensive, tangible physicality of bodies, however, by the time of René Descartes (1596-1650), and certainly since Charles Darwin (1809-1882), we have assumed the ontological continuity of all things, both biotic and abiotic, as ordinary matter.

This divide between all physicality on the one hand, and human interiority on the other, stands, according to Descola, behind the 'great divide' between the modern concepts of nature and culture (discussed in Chapter 3) and thus also behind the us/them divide between Moderns, as the only people who think of nature and culture as mutually exclusive spheres, and all other humans. Indeed, all of these divides inscribe a major fault line between naturalism and Descola's other three modes of identification. By this reading, the nature/culture divide is not simply an analogue to body/soul (or mind) dualism; there could, after all, be body/soul dualisms that grant both terms to nonhumans. Rather, the nature/culture divide is chiefly an expression of human exceptionalism, of the claim that nothing but unique human interiority – whatever that may be said to be – can produce culture.

But, as Descola explores in Chapter 8, naturalism and its nature/culture divide are currently under significant pressure to transform. In some quarters, the radical dualism between physicality and human interiority that some forms of biblical religion assert has gradually given way to forms of pure physicalism, or material monism. These deny the independent origin of human interiority and place it in continuity with other, less evolved, matter-based animal interiorities. Still, it remains to be seen whether material monism will wholly encompass human interiority or keep chasing it and reinventing it as the elusive immaterial. '[I]t seems', Descola wryly observes,

‘that the mind can still look forward to a number of days of serenity before it unveils its physical nature completely’ (p. 191).

* * *

Animism, as ‘restored’ by Descola (Chapter 6), finds a great variety of expressions. On the basis of comparative ethnography, and in dialogue especially with the work of Viveiros de Castro, Descola theorizes animism as the mode of identification that informs the lived ontologies and cosmologies of the primarily hunting peoples of South and North America, Siberia, and some parts of South-East Asia and Melanesia. Using his own terminology, he reiterates what has often been said about people in these contexts: they ascribe continuity of interiority to a wide diversity of entities – including, sometimes, plants and phenomena such as the sun and the moon, as well as animals – despite the apparent discontinuity of their physicalities. This common interiority is conceptualized indigenously, often in cosmogonic myths, as an original humanity that abides within many different forms as a shared subjectivity. Animists assume that, like themselves, many nonhuman entities are persons, enjoying inner lives replete with self-consciousness, thought, language, and intentionality.

Physicality, in contrast, is that which serves to introduce discontinuity into this otherwise excessive continuity of being. Indigenously conceptualized as clothing or skins, particular kinds of bodies partition common human interiority, which is both antecedent to and different from humanity as a species. But a body is more than a simple barrier against return to primordial lack of differentiation; it is also a distinctive set of ‘anatomical equipment’ (p. 136) that enables each kind of thing, in its own peculiar way, to grow, take nourishment, move, reproduce and generally subsist in a habitat.

Curiously, however, it turns out that, according to animists, all beings who enjoy a human interiority also see themselves and others *of their species* as having a human physicality. Thus, humanity is both a constant and a variable, a common interiority and a multi-form physicality. Every physicality is human physicality, but with some distinguishing diacritical marking. Unmarked interior humanity almost never appears, except perhaps in myth. Jaguars are jaguar-humans; capybaras are capybara-humans. Most importantly, humans are not simply images of unmarked interiority, but are better understood as human-humans. That is, they exhibit a human physicality that is specifically marked as human, just as other forms of human

physicality are specifically marked as jaguar, capybara, and so on. All bodies, therefore, are simply signature varieties of human physicality.

This last point is crucial, as Descola explains, for understanding how non-perspectival or “‘standard’ animism’ works (p. 140). Descola argues that most animisms are not fully perspectival; most, that is to say, do not involve multiple incompatible points of view according to which, for example, peccaries see humans as jaguars but jaguars see humans as peccaries. Most, instead, imply that all nonhumans see humans simply as humans. But this does not mean that the human physicality nonhumans see when they see humans is the same human physicality they see in themselves. Nonhumans see humans as human-humans, that is, as humans whose physicality is as marked and different from their own as the physicalities of other nonhumans.

Human groups, moreover, elaborate this spectrum of human physicality among themselves. They further mark their already marked human bodies by appropriating attributes from other physicalities – by donning fur, feathers, teeth, etc. – in order to appear to one another as compound physicalities: bear-human-humans, eagle-human-humans, jaguar-human-humans, etc.

To risk an interpretation: all of this is to say that (contra Viveiros de Castro) animism, as reconstructed by Descola, is in most, if not all, contexts a monism of the human. In ways that can be confusing to a modern naturalist, ethnographers of animist contexts have often described the human subjectivity animists impute to many nonhuman entities as ‘soul’ or ‘spiritual essence’ (see, for example, Descola’s discussion on pp. 130-131). Such language can lead the modern naturalist reader to presume that this shared interiority is immaterial and thus ontologically antithetical to the bodies said to contain it. But Descola’s animism is not a dualism of the immaterial versus the material. The animist ‘soul’, or interior human, is material without being ‘matter’ as understood by us Moderns. However subtle or light, however capable of evading the senses, it is nonetheless a ‘substance’ (p. 130). And this substance, Descola seems to be saying, is frequently all there is for animists, though they regard it as able to appear as many different forms.

Of course, this is just one possible reading of Descola, and as I indicate below, there are ambiguities in his discussions of animist metamorphosis that may point to ambiguities within or among animisms themselves. It may be that there are some animists who posit discontinuity between shared human interiority (as one kind

of substance) and the many malleable forms of physicality (as another kind of substance). Although dualisms, these two-substance animisms would nevertheless be resistant to the nature/culture divide owing to the shared interiority of humans and nonhumans, all of whom would experience the same predicament of being in, but not of, a body.

Viveiros de Castro (2007) insists on yet a third possible reading of animism, one that identifies it as a relational nondualism. Relational nondualism differs both from monism and from any kind of radical dualism in that it subordinates all entities to the relations inherent within them and in which they inhere (see Scott 2013). Informed by the philosophy of Gilles Deleuze, Viveiros de Castro has argued that animist humanity, also termed personhood, is an infinite fractal multiplicity interior to all its palpable forms as intrinsic self-difference. This means, he emphasizes, that differences do not depend on actualized forms; all possible differences and relations are always already immanent to that which is called shared humanity. Thus there is no original self-same form, not even the human, to which all others could ever return in identity of being.

In contrast, Descola refers repeatedly to human interiority as 'identical' across all physicalities (e.g., p. 134, 135) and suggests that, without bodies, interiorities might return to a state of 'excessive continuity' in which they would be unable to enter into relations (e.g., pp. 131, 136). This leads me to suppose that he understands most animisms to be monistic. It furthermore guides my reading of his arguably confusing treatment of animist accounts of metamorphosis and the overtures of human shamans to nonhumans for trans-species communication.

At points, Descola writes about metamorphosis – 'a classic feature of many animist ontologies' (p. 135) – as though it were a matter of one being 'shedding' its physicality in order to 'reveal' its human interiority to another (pp. 135, 286-287). It is this language that seems to point to the possibility of interiority/physicality two-substance dualism. I would suggest, however, that, despite this language, Descola probably does not mean that metamorphosis normally involves the epiphany of unmarked interior humanity. After all, if inter-species communication demanded the unveiling of unmarked humanity, this would have eschatological implications, according to Descola. To avoid the anti-cosmogonic merging of interiorities, therefore, metamorphosis must involve re-arranging or adorning one's physicality rather than simply shedding it.

Such techniques are ultimately mimetic; they involve attempting to mark one's own physicality with the markings of another in order both to see that other physicality as human and to be seen as human by those who exhibit that physicality. A pig-human male who wishes to seduce a human-human female does not approach her with his unadorned interior humanity; he manipulates the elements of his pig-physicality so as to appear to her as a particular kind of man (see p. 133). The human shaman who wishes to communicate with ravens does not seek recognition as human by unveiling his interiority; he puts on a feather head-dress or cape in order to enter into a raven viewpoint that allows him to see raven-marked physicality as human and to be recognized by ravens as a raven-human himself.⁷ It could be said that such shifts in viewpoint reveal common humanity as the ground of their possibility, but they do not undo differentiation. Given the unity of being as humanity in the animist mode of identification, bodies are necessary paradoxes: they are both excessively effective barriers and eminently malleable means to intersubjective relations.

* * *

Analogism, Descola tells us, is an extremely common mode of identification, being indexed in the ontologies and cosmologies of China, parts of inner and south Asia, Polynesia, West Africa, Mesoamerica, and the Andes. It was also prevalent in Europe, he argues, in antiquity, the Middle Ages, and especially during the Renaissance. Since then it has maintained 'an underground existence' (p. 205) in the great diversity of traditions often analytically collectivized under the rubric of Western esotericism and in such cultural appendices within naturalism as horoscopes, palmistry, New Age religions, and alternative medicines. In all of these contexts, Descola suggests, complex systems of analogical correspondences among things arise from the presupposition that there is discontinuity of interiority and discontinuity of physicality, not only between humans and nonhumans, but across and within all entities in the cosmos.

Over the course of the book, Descola's account of naturalism as the mode of identification unique to Modernity transpires as an historical narrative of transformations leading up to it – a narrative in which, as just indicated, analogism

⁷ Borrowing a concept from the visual arts, Descola (p. 138) suggests that animist metamorphosis is better understood as anamorphosis, the effect produced by an image (or, in this case, a being) that is so made as to be able to appear differently from different angles.

stands as a still evident prior phase. His account of analogism, however, seems to imply an element of diachrony *within* expressions of this mode of identification themselves. They seem to develop, as I will explain, from radical pluralisms into models of ontology that are fundamentally ambiguous, simultaneously construable as monistic, pluralistic, and relational.

Descola's analytical premise is that analogists experience the world as a chaos of isolates, 'an infinite number of different things' (p. 205), each with its own autonomous interiority and physicality. For naturalist moderns, however, it is especially challenging to conceptualize the relationship between interiority and physicality at the level of any given entity in an analogistic system (see pp. 206-207). Interiority and physicality are neither two antithetical components, as in the mind/body dualism of classic naturalism, nor two aspects of one shared substance, as in the human monism of animism.

Arguably, Descola's discussion of analogism would be clearer if he avoided the language of 'immaterial' versus 'material' altogether (e.g., pp. 207, 211, 212, 222). The word 'immaterial', like 'soul' and 'spirit', can miscue the reader into conflating Descola's analytical concepts of interiority and physicality with notions of the immaterial and the material as understood within naturalism. Given his concern to divorce what he means by interiority and physicality from the mind/body dualism of naturalism, I have to conclude that when Descola employs the concept of the immaterial with reference to contexts where the naturalist ontology does not prevail, he intends merely to suggest substances that are ordinarily too subtle for detection by the senses (see also p. 116).

As with animisms, with analogisms there is no such thing as the immaterial in the modern naturalist sense; everything appears to be a substance of one kind or in one state or another. But, whereas with animisms, according to my reading of Descola, there is only one substance (humanity), with analogisms, there are many. Furthermore, every entity is a composite of different substances that either function or dysfunction in relation to one another. In Descola's words:

The dominant feature...of any analogical system...is the grouping within every existing entity of a plurality of aspects the right coordination of which is believed to be necessary for the stabilization of that entity's individual identity,

for the exercise of its faculties and dispositions, and for the development of a mode of being in conformity with its 'nature' (p. 212).

The interiority of such composite entities is therefore de-centred, or multi-centred, distributed among a plurality of what one might term interiority-substances. Hence the multiple 'souls' so often puzzled over in scholarly and ethnographic representations of analogistic contexts. Aspects of interiority, and indeed of vitality, such as self-consciousness, volition, qualities of temperament, affects and passions, etc., simply *are* substances that combine with other kinds of substances to make up particular entities. These latter kinds of substances are relatively, though often not entirely, inert on their own and might be termed physicality-substances. All of these substances tend, furthermore, to be conceptualized as graded terms located somewhere between one or more, often hierarchically valued, sets of gendered oppositions: subtle versus dense, hot versus cold, active versus passive, dry versus wet, etc.

An interesting aspect of Descola's presentation of this mode of identification is his psychologization of it. His language casts the 'dizzying atomistic' (p. 205) prospect of the profusion of entities as unbearable, inducing 'obsessive', 'increasingly manic' (p. 202) attempts to discern links among things and reduce overwhelming multiplicity to manageable alignments, subsets, and patterns.

Descola implies that a cosmos alive with innumerable heterogeneous and opaque intentionalities is too uncertain to tolerate. In response to this uncertainty, he suggests, analogists seek to gain a modicum of practical control through a variety of synthesizing, classifying, and cross-referencing techniques. On the basis of apparent or divined similarities and sympathies, they create elaborate taxonomies, bundling things together and then bundling those bundles into ever higher-order categories.⁸ Tending towards synecdochic self-similarity across all scales, the entities thus categorized and their substantive influences over one another drive the

⁸ Descola makes the compelling observation that these processes of collectivization, which apply to social organization as well as the elaboration of taxonomies, may well have left their mark on British social anthropology owing to their intrinsic 'functionalism' (pp. 401-402). He implies that social anthropologists trained in the United Kingdom identified among the peoples of Africa and India, to whom the British Empire gave them access, a primary concern to promote solidarity because such a concern was really primary for these analogists.

typical concerns of analogists: microcosm/macrocosm homologies and their medicinal uses, geomancy, astrology, computational divination.

The more analogists bind things together, however, the more they undermine the compositional uniqueness and integrity of the entities they bring into relation. Different entities, such as a man and a particular animal, may be found to share a particular interiority-substance or 'soul'. An interiority-substance from one entity can invade another entity as 'possession' (p. 213). And as analogistic cosmologies become more and more synecdochic, entities can lose their boundaries all together: 'their circumference is everywhere, their center nowhere' (p. 299). Entities become increasingly submerged by their intrinsic relations with everything else until, eventually, their intrinsic multiplicity becomes compositionally identical; 'everything is in everything and vice versa' (p. 300). Note how this could be construed as a movement towards the relational nondualism of infinite fractal multiplicity Viveiros de Castro attributes to animism (cf. Viveiros de Castro 2007).

Such changes are what I had in mind when I indicated that Descola imputes a diachronic dimension to this mode of identification. It appears that an initial presumption of atomistic discontinuity and radical particularism reaches a point of development – perhaps only in some contexts and at an uncertain juncture in the process of analogical synthesis – into a presumption of either original wholeness or pre-relatedness that has been fractured.⁹ As Descola puts it, analogists weave 'heterogeneous elements into a web of meaningful affinities and attractions that gives the appearance of constituting a continuity' (p. 202). Beyond this turning point, myths and models that suggest either an underlying unity indicative of holistic monism (as in many Hindu texts), or an unoriginated flux of relations indicative of nondualism (as in many Buddhist texts), can come to inform the techniques devised to detect and manipulate influences and correspondences. Once formulated, furthermore, these myths and models can obscure – both for analogists themselves and for those who study them – the atomistic premises that Descola's unconventional approach to these cosmologies illuminates.

⁹ Although Descola does not cite Michael Puett's *To Become a God: Cosmology, Sacrifice, and Self-Divinization in Early China* (2002), Puett's innovative historical approach to Chinese cosmology could be read as offering striking support for Descola's analysis of analogism. Challenging received sinological representations of Chinese thinking as essentially correlative and indexical of monism, Puett traces a complex history of transformation from presumptions of discontinuity, evident in the Shang period, to highly debated assertions of continuity in the Han period.

The question arises, however, as to whether there are or ever have been analogisms that, as a result of their own efforts to embed entities in relations, have transformed themselves so completely that they now constitute a mode of identification not recognized in Descola's set of four permutations. It is striking, in fact, that Descola's four modes of identification, graphed at intervals throughout the book with increasing elaboration as a grid in four quadrants, does not appear to cognize the possibility of continuity of interiority and continuity of physicality at the scale of an all-inclusive, or indeed, infinite cosmos. In the only mode of identification with double continuity – totemism – this double continuity applies only within each totemic class and not across the totemic system as a whole. Where then might we locate a truly cosmic double continuity on Descola's grid?

* * *

Totemism, as reconstructed by Descola, is best exemplified in Aboriginal Australia, but it also features as what he terms a 'minor mode' (p. 171) in some predominantly animistic native North American contexts (the Algonquin-speaking peoples having given us the term).¹⁰ Descola acknowledges that totemism often involves a special relationship between a human collective and a nonhuman totem, and that it entails, as Lévi-Strauss theorized, a significant preoccupation with classification, but he maintains that totemism is primarily about neither the totem species themselves nor classification. Totemism, he argues, is primarily a mode of identification – an ontology – according to which a plurality of discontinuous, independently arising 'hybrid' collectives, comprising both humans and nonhumans, each shares *within itself* both continuity of interiority and continuity of physicality. Descola refers to these isolates as 'totemic classes'.

One implication of Descola's account of analogism may be that the cosmogonic myths of analogists are not always reliable indices of how analogism works; such myths often seem to present scenarios of original continuity in need of differentiation in ways that obscure rather than reveal the premises of double discontinuity Descola discerns in analogism. This probably accounts for what some readers may find as his surprising lack of reference to cosmogony when analyzing analogism. When analyzing totemism, however, Descola relies heavily on images of

¹⁰ My own research among the Arosi of the island of Makira in Solomon Islands leads me to suggest that parts of Island Melanesia might exhibit versions of totemism as well. Descola refers to totemic classes as 'ontological races' (p. 297), and I have theorized the poly-genetic model of humanity among Arosi as 'poly-ontology' (Scott 2007).

primordially. He seems to take cosmogonic myths that depict the unique origins of each totemic class as clear expressions of the premise of double continuity.

'Australian mythology', he writes,

evokes a process of parthenogenesis unfolding actually within the classes of hybrids already constituted. When this process was complete, each of those classes of existing beings contained a vaster number of species, including varieties of humans who nevertheless remained in conformity with the essential and material particularities of the ontological types peculiar to the subdivision in which they had come to be. (p. 163)

Owing to their common origin, all members of each totem class, both human and nonhuman, share a common physicality and a common interiority. It quickly becomes evident in Descola's discussion, however, that these two aspects cannot be disentangled from one another.

Common physicality resides in a fundamental consubstantiality that makes itself manifest in all tokens of the totem type as shared somatic and behavioural properties, bodily capacities and proclivities correlated with qualities of temperament. The name of a totem group, Descola points out, is often not the name of its totem species but an abstract term meant to identify the group with its most salient overall disposition: 'the watcher', 'the getter', 'malleable', 'gentle' (p. 158). The name denotes 'a quality that identifies both the class and the emblematic (rather than eponymous) species that expresses its organic unity' (p. 160).

Common interiority seems to consist in much the same thing. In fact, Descola's description of totemic unity under the rubric of interiority simply adds to the picture of what this unity is by indicating how it is transmitted to each new generation. During the primordial 'Dreamtime', Aborigines say, generative agents known as Dream-beings gave rise to particular totemic classes by means of their movements and metamorphoses throughout the land. As part of these processes, each totemic class received a stock of souls, deposited at Dreaming sites in what became its territory. Thus, each new token of a totemic type receives a soul derived from this stock. Endowment with such a soul is a 'guarantee of conformity to the eternal ontological paradigm that a Dream-being instituted in the past' (p. 161). Yet

it seems impossible to prioritize souls (as interiority) over corporeal qualities (as physicality) or vice versa; the two appear to be neither quite identical nor dissociable.

Again, to hazard an interpretation: each totemic class appears to be a self-contained relational nondualism. Each is a hybrid entity composed completely of internal relations but presenting itself, paradoxically, as a unique autonomous whole free of all external relations with other such wholes. The totem classes resemble, in other words, the discontinuous unique composite entities of analogism. Descola seems to acknowledge this when he points out that, as a plurality of unique entities, the totemic classes confront the same problem of discontinuity found in the 'initial state' (p. 234) of analogism and must work to integrate themselves into a higher-order system of relations. A key difference between totemic classes and the entities of analogism may be, however, that whereas the latter come to contain everything only when the whole system has moved towards perfect synecdochic part-whole relations, the former always contain everything needed to make a world.

Descola suggests that, given the internal continuity of each totemic class as a unique hybrid, 'the problem that totemism faces' is:

how, without ambiguity, to pick out human from nonhuman individuals, given that they are all fused within a collective; how to separate out existing beings that are amalgamated into a hybrid class as a result of a mode of identification that minimizes discontinuities? (p. 295)

But it seems, by Descola's own account of things, that the Dream-beings have already accomplished the internal differentiation of each totemic class in the process of generating them.

The Dream-beings, who were hybrids themselves from the beginning, disarticulated and distributed the various kinds of things intrinsic to their compositional being. In their wanderings, they incorporated the land into their hybridity and became incorporated as the land, leaving traces of themselves in features such as water sources, rocks and hills, areas of vegetation, and the like. In this way they not only made each totemic class into a distinctively emplaced entity, they also particularized places within each territory. At some of these particularized Dreaming sites, they furthermore deposited pre-differentiated kinds of souls: plant, animal, and human souls for each totemic class in its land.

As Descola observes, the introduction of differentiation among humans within a totemic class is a finer point. Being the ‘incarnation[s]’ of ‘ontologically identical’ (p. 296) child-souls, the humans of a totemic class require some additional criterion of distinction. Especially revealing is Descola’s discussion of how the Aranda of Central Australia solve this problem through their initiation rituals. Each initiate receives the religious object known as a *churinga*, which individuates him or her as a particular segment of the journey of the Dream-being that generated his or her totemic class. In order to capture how this mode of individuation works, Descola resorts to the concept of fractality. He writes that ‘every *churinga* and therefore every human child-soul can be seen as a kind of fractal expression of the general structure of the properties of its totemic class, in that it illustrates a different stage in the conditions of its objectivization’ (p. 296).

This raises the question, are the totemic classes and the Dream-beings from which they proceed best understood, not simply as self-contained relational nondualisms, but more specifically as bounded wholes composed of entities that are so thoroughly pre-related they all contain one another? Are they internally self-similar at every scale and infinitely divisible into parts that, by virtue of their own intrinsic relations to all the other parts, re-instantiate the whole?

If the answer to these questions is yes, then the continuity of being that constitutes a totemic unity is not a monolithic identity but a saturation of delimited pre-relatedness. Within such a paradoxically relational yet autonomous continuity, correspondences based on similarities do not need to be made, as in analogism; they manifest themselves in signs of intrinsic affinities within the class. Corporeal particularities on a person’s skin, for example, such as birth-marks, moles, or beauty spots, may be said to correspond with markings that characterized a Dream-being progenitor; and these may further show how a person is linked to features in the landscape (see p. 293).

In such a world, to be linked to something in this way is not a superficial association; it is to be, as an extension of one’s Dream-being, a disarticulated and distributed yet cohesively self-networked being. This, I suggest, is precisely the kind of close relational continuity Descola is striving to capture when he describes a totemic class as one in which everything is ‘squeezed together in a complex and contradictory *tissue* of affects, interests, and obligations’ (p. 399, emphasis added).

Despite being a vision of ‘excessive proximity’ – of complete and therefore extremely tight intrinsic relations – it is also a vision of ‘ontological enclosure’ (p. 399).

This model of totemic classes as internally self-replicating relational wholes may also help to account for the fact that continuity of interiority in totemism looks nothing like continuity of interiority in animism. Relational continuity does not entail identical interiority. In fact, it implies differences, not of kinds but of degrees. In this respect, totemic classes resemble analogisms that have developed into perfectly synecdochic continuities; or, indeed, such analogisms look like one all-encompassing totemic class. Both are hierarchical chains of being in which continuity is not antithetical to inequality. Some tokens of the totemic type appear to instantiate the whole more fully than others. Thus, humans enjoy a marginal surplus of interiority over the nonhumans in their totemic classes. This surplus appears to be a measure of agency or intentionality that enables humans alone to establish external procreative relations with other totemic classes. There may be no totemic royalty, but human beings form an elite cohort of representatives who, on behalf of their respective categories, ‘declare themselves the principal emissaries of the Dream-beings’ (p. 298), aiding the latter in their apparent desire for relations with one another.

* * *

With the analytical isolation of these modes of identification, the first four elements in Descola’s cosmochemical table are in place.

From the beginning, Descola grants that his efforts to describe what his four schemas look like as lived realities can make each of them seem like a static and free-standing ‘ideal type’ (p. xix). But none of these four elements, I think he would agree, exists in a pure state. The virtue of purifying them for scrutiny is to allow their internal consistencies to come into view as the properties that constitute the key differences among them. This groundwork fills much of the book, and it is not until Part Five, ‘An Ecology of Relations’, that Descola begins the more complex cosmochemistry of exploring how these modes of identification combine with modes of relations. These combinations, he seeks to show, not only account for differences among observable expressions of each mode of identification but also serve as the drivers of historical change.

* * *

Descola divides his six relational modes into two groups of three: gift, predation, and exchange in one group; production, protection, and transmission in the other. As with the modes of identification, but more implicitly, Descola theorizes the relational modes in terms of a hypothetical subject who enters into relations with some kind of other. The distinction between the two sets of relational modes rests on whether this hypothetical subject regards the other party to the relation as equal 'on an ontological level' (p. 310). Thus, Descola defines gift, predation, and exchange as 'reversible' (p. 311) because they involve relations that are potentially two-way between the hypothetical subject and an equal. He furthermore describes gift and predation as 'asymmetrical' (p. 311) because a return is possible but not normally expected; but the expectation of return renders exchange 'symmetrical' (p. 311). Production, protection, and transmission Descola defines as 'univocal' (p. 311) because they involve relations that are strictly one-way between the hypothetical subject and a party who is either hierarchically higher or lower. These three all in some sense entail a dimension of domination.

It will be immediately self-evident that the reversible relational modes are eminently compatible with the animist mode of identification on account of the human subjectivity animists accord to a wide variety of entities. But this does not mean that all animisms exhibit all three of these relational modes in equal measure. Drawing on the ethnography he knows best, in Chapter 14 Descola provides a detailed and fascinating comparative analysis of how three Amazonian groups, the Jivaro, the Tukanos, and the Campas, exhibit three very different animisms owing to the different relational modes that have become dominant among them.

The Jivaro illustrate what predation looks like as a dominant relational mode and how it inflects animism. Whereas virtually all animists engage in predation in the context of hunting animals, Jivaro relate to other human collectives as predator to prey. They are notorious, Descola relates, for their constant wars, vendettas, wife and child stealing, and head-hunting.

The Tukanos exemplify an exchange-based animism characterized by balanced give-and-take between humans and also between humans and nonhumans. All important endeavours are governed by the strict observance of mutual obligations in pursuit of parity and amity.

The Campas, whose neighbours treat them as prey, have rejected this predatory animism and elaborated gift-giving animism to a high degree among

themselves and their relevant nonhuman collectives. Indeed, the dominance of the gift mode of relations among the Campas appears to have inflected their animism with a curiously Manichean dualism; their predatory neighbours and a host of evil spirits are banished to a periphery that is a distinct ontological domain.

It becomes apparent that in the cosmochemical scheme of things, relational modes do not bond with modes of identification in a vacuum based solely on their own properties. Different possible combinations are realized in contexts of contrastive relationship with one another. As Descola puts it: 'each [relational] schema constitutes an indeterminate ethical landscape, a style of mores that one learns to cherish and by which one differentiates oneself from one's neighbors: a style of mores that colors one's daily attachments to beings and things, with underlying nuances' (p. 335).

The univocal relational modes, for their part, bond more readily with those modes of identification that place different entities on different ontological levels. Thus, production is strongly in evidence in naturalism owing to its denial of interiority to all nonhumans. The passive inertness ascribed to most things in naturalism renders them appropriable as raw materials at the disposal of humans, the only entities capable of agency. At the same time, however, the reversible modes of relations are also found in naturalism where human interactions are concerned, and may come to differentiate kinds of humans. In fact, Descola's cosmochemical analysis of naturalism determines that, because of the gulf it imposes between humans and nonhumans, naturalism is unable to form a stable bond with any single dominant relational mode; instead, it forms only weak bonds with different relational modes in different situations. Protection (seen in the domestication of animals or chains of patron-client relations) and transmission (of laws and traditions from elders to juniors, ancestors to descendants, or gods to humans) are the salient relational modes, Descola determines, in analogisms.

It thus emerges that there are more possible cosmochemical bonds than the twenty-four permutations of each relational mode in simple combination with each mode of identification. Each mode of identification is amenable to simultaneous combination with more than one relational mode, and it is the formation of these complex compounds that can lead to further cosmochemical reactions and transformations. If, for some contingent reason, a subsidiary relational mode

becomes more important – attracts more atoms of its own element to the molecule, as it were – things can begin to change dramatically.

Certain ways of treating ‘others’ that are present in a minor form in one mode of identification sometimes come to play a more predominant role that soon renders them incompatible with the ontological regime in which they have developed; and this makes it necessary to alter that ontological regime or transfer to another mode of identification that is better suited to a different way of treating others. (p. 366)

To concretize these dynamics, Descola develops a hypothetical example. Normally, as he shows from Amerindian cases, protection is a minor relational mode among many animists, expressed in the occasional taming of individual orphaned or stray animals. But, the generalization of personhood to many nonhumans makes animism resistant to large-scale domestication of food species. Nevertheless, ethnographic accounts of the Chukchee of northeastern Siberia, who hunt wild reindeer but also tend small herds, suggest to Descola how an increased role for protection may move an animism towards analogism. Small changes to a relational mode – to how one treats a certain set of others – can result eventually in changes to one’s mode of identification – to what kind of interiority and physicality one ascribes to that set of others and thus, potentially, to other sets of others with whom it may be associated.

* * *

With this elementary table of four modes of identification and six modes of relations, Descola addresses a range of highly particular questions and sheds considerable light on many of them. Why have most Amerindians not taken up animal husbandry? Why have the Chinese long practiced *fengshui* geomancy, while the Moderns have largely given up such practices? Why are some Moderns powerfully drawn to such practices? What is the difference between ‘the masters of the animals’ and ‘the spirits of the ancestors’? By what logic can an Australian Aborigine say of a kangaroo that it is ‘just the same’ (p. 242) as himself? But Descola clearly hopes that this is only the beginning. There are many more such questions to be addressed and many highly idiosyncratic lived ontologies and cosmologies to be analyzed in terms of their cosmochemical composition. Descola

offers his table of elements as a preliminary knowledge base, the explanatory power of which he has demonstrated impressively. His anthropological cosmochemistry is a project that deserves to be examined, taken up, and tested.

* * *

A number of important contributions to the anthropology of ontology have led with the thesis that the nature/culture distinction is unique to Western Moderns and is an index of a mind/body dualism that has caused anthropologists to misapprehend non-Western others and struggle to account for their so-called irrational beliefs. As indicated in the discussion of naturalism above, a version of this thesis, with its own particular nuances, is likewise central to Descola's project, hence his title, *Beyond Nature and Culture*. But Descola's approach to the anthropology of ontology also gets us beyond this basic thesis about nature and culture in ways that other approaches do not.

Too often in the anthropology of ontology, there is only one thing to be discovered about non-Westerners: they are not mind/body dualists and therefore do not separate nature and culture. 'Their' ontology is not 'our' ontology, and awareness of this difference is supposed to illuminate everything about 'them' that 'we' are inclined to regard as irrational. This preoccupation with 'us'/'them' alterity has tended to create a theoretical typology of only two great ontologies: Cartesian-Kantian dualism and *not*-Cartesian-Kantian dualism. Increasingly, moreover, diverse theoretical developments, all more or less informed by the philosophy of Deleuze, have converged to cast not-Cartesian-Kantian dualism as always and everywhere the limitless flux of relational nondualism (i.e., infinite fractal multiplicity in which everything contains everything) (Scott 2013a, 2013b).

Some people may not be able to resist the impulse to reanalyze Descola's animism, totemism, and analogism as all ultimately grounded in a default ontology of infinite fractal multiplicity. Some may even seek to dissolve all four modes of identification into this default nondualism. Just as Bruno Latour (1993) has argued that 'we have never been modern', they may wish to argue that animists have never been animists, totemists have never been totemists, and analogists have never been analogists; all these are just so many ways of distributing the default flux of nondualism. Others – particularly those who understand animism itself to be infinite relational nondualism – may achieve the same end by calling them all animism of one kind or another.

In my view, however, the chief merit of Descola's project is precisely its focus on precipitating consequential differences, differences on which an analytically imposed default ontology of infinite relational nondualism offers little or no traction. Even if one is not persuaded by Descola's premise that his modes of identification are acquired cognitive schemas, or that their differences hinge primarily on how they distribute interiority and physicality, or even that there are only four possible elementary ontologies, nevertheless his approach begins to bring into relief how non-Western ontologies differ from one another and how they do so in systematic ways. It helps to move the anthropology of ontology beyond nature and culture as the difference between Moderns and all others and onto the bigger challenge of recognizing and analyzing different differences. To quote Descola out of context: 'For all those weary of an overuniform world, that...is surely cause for a measure of rejoicing' (p. 143).

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