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ARTICLE

Not "multiple ontologies" but ontic capaciousness

Radical alterity after the ontological turn

Chris Vasantkumar, *Macquarie University*

This essay articulates a framework for understanding radical alterity in the aftermath of the abandonment of strong claims about ontological pluralism in recent works by key figures in anthropology's Ontological Turn. Arguing that both ontological anthropologists and their critics have overemphasized the ideational at the expense of material practice, it builds on the insights of STS-influenced work on ontology to develop a materialist case for the continued relevance of radical alterity to the anthropological endeavor. In so doing it advocates replacing a crypto-Protestant emphasis on "strange beliefs" with an attention to the materio-cultural precipitates of successful practical action in the world. In service of this goal, it elaborates a notion of "ontic capaciousness" that attends centrally to practice in a single, yet multiple, world in which multiple modes of successful practical engagement with the unknowable really Real result in the working up of disparate relatively durable and incommensurable actionable reals.

Keywords: ontology, ontological turn, STS, the body, navigation, radical alterity

Introduction: Just taking the (e)piss(temology)?

The Ontological Turn is dead. Or if not dead, quite a lot of air has been let out of its tires. Joost Fontein (2021) articulates the deflationary trajectory of claims made by scholars in the field. Comparing the ambit and ambition of Holbraad and Pedersen's valedictory *The ontological turn: An anthropological exposition* (2017)[1] with its radical, path-breaking, and ever so slightly breathless predecessor *Thinking through things* (Henare, Holbraad, and Wastell 2007), Fontein argues that the more recent work is characterized by a downsizing of ontological anthropology's remit. Previously, its authors and other thinkers allied to the erstwhile Cambridge School of ontological anthropology made almost impossibly broad and boosterish, yet also generative and sometimes deeply inspiring, claims about the existence of multiple noncommensurable worlds, the identity of thought and thing, and the necessity of replacing epistemological questions with questions about the nature of reality itself. Yet, where once these claims were made so fervently that it was impossible to take them as tongue-in-cheek, nowadays Holbraad and Pedersen reveal that they were actually just taking the (e)piss(temology) all along. The OT, it turns out, wasn't really about ontology, radical alterity, or the really Real, rather, it was *methodological*, a bit of "anthropological play" (Pedersen 2012: n.p.).

"All talk of 'other worlds' and 'multiple ontologies' is now out," Fontein tells us, "identified as 'preposterously reifying' ([Holbraad and Pedersen] 2017: 176). Similarly, the over-emphasis on distinguishing epistemology from ontology is transformed into 'a methodological project that poses ontological questions to solve epistemological problems' [Holbraad and Pedersen 2017: 5]" (Fontein 2021: 178–79). While a measure of rhetorical humility

1. Written in the "'hope' that the new book 'might help move the debate . . . away from the divisive and earth-scorching manner characteristic of the 'first generation' discussions about ontology within anthropology, including some of our own writings" (Holbraad and Pedersen 2017: xi).

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is indeed welcome, something important has been lost in the process. Specifically, the prospect of "the possibility of 'radical alterity' accessible only through ontologically-inclined ethnography which fired so much fervour for this particular version of the 'ontological turn'" (Fontein 2021: 177) has been transmuted into a kind of po-faced unwillingness to say anything about "the 'really real' nature of the world or any similar metaphysical quest" (Holbraad and Pedersen 2017: 5, quoted in Fontein 2021: 180).[2] The ontological turn apparently was "always [only] meant to be . . . a technology of description which allows anthropologists to make sense of their ethnographic material in new and experimental ways" (Pedersen 2012: n.p.).

Holbraad and Pedersen, key figures in the field in its radical heyday, have dialed their claims back to an almost shocking extent. "The ontological turn is now, rather straightforwardly: 'about allowing the object of ethnographic analysis to have a transformative effect on the ontological assumptions the anthropologist brings to it, and in that way contribute to setting the terms of the anthropologist's conceptualisation and analysis of it'" (Holbraad and Pedersen 2017: 68, quoted in Fontein 2021: 179). Sorry for any misunderstandings. But what has been lost in the "retreat"[3] from making radical claims about multiplicity? Moreover, is abandoning an insistence on the reality of ontological pluralism tantamount to abandoning the "language of ontology" as a "tactical . . . counter-measure to a derealizing trick frequently played against the native's thinking, which turns this thought into a kind of sustained phantasy, by reducing it to the dimensions of a form of knowledge or representation, that is to an 'epistemology' or a 'worldview'" (Viveiros de Castro 2003: 18)?[4] What space is there now for radical alterity in this newly defanged ontological world?

From this vantage, it appears that the late David Graeber's (2015) critique of the perceived excesses of the Ontological Turn (OT) has carried the day and that he has emerged victorious in his "debate" with Viveiros de Castro in the pages of *HAU* (responding particularly to Viveiros de Castro 2015). The new methodological and intra-anthropological cast of the OT, "sounds much closer to the second (and for many, more palatable) of 'two quite different conceptions of what anthropology is ultimately about' that Graeber (2015: 6) identified in his correspondence with Viveiros de Castro about 'ontology' and 'radical alterity'" (quoted in Fontein 2021: 179). Specifically, Graeber argued that whereas Viveiros de Castro sought to "'unsettle our categories' in order to 'better understand the "radical alterity" of a specific group of people,'" his own goal was "to 'show that . . . such alterity was not quite as radical as we thought,' and to 'put those apparently exotic concepts to work to reexamine our own everyday assumptions and to say something new about human beings in general'" (Fontein 2021: 179).

Graeber grounds his critique of the OT in what he terms an "ontological realism that makes it possible to say some scientific statements are true" and others are false. He starkly contrasts his own "metatheoretical approach" with that of Viveiros de Castro and the OT more broadly. Declaring himself an "ontological realist and a theoretical relativist" he advocates for "the development of a rich diversity of (at least partly) incommensurable theoretical perspectives on a reality that, [he] believe[s], can never be entirely encompassed by any one of them—for the very reason that it is real" (Graeber 2015: 31). Viveiros de Castro, by contrast, he suggests, "takes a very different approach to ontology," eschewing preexisting theoretical approaches insofar as they purport to deal with epistemology (Graeber 2015: 32). Yet

2. Here, even Holbraad, once prone to the wildest flights of fancy or provocation (e.g., 2007), has gotten cold feet: "I do not need to have an opinion on the ultimate principles of reality in order to say that when my informants feed a stone with blood they are feeding something different from what I take the stone to be when I assume it cannot be thirsty or hungry for it" (Alberti et al. 2011: 908).

3. Similarly deflationary are Blaser and de la Cadena (2018: 4), who describe the pluriverse not as a material reality but as an "analytical tool useful for producing ethnographic compositions capable of conceiving ecologies of practices across heterogenous(ly) entangled worlds." Likewise, Kohn (2015: 320–21): "Multinaturalism is not a description of how the world is, or how one kind of person thinks, but a call for a form of thinking, available to anyone, that is able to see possible ways of becoming otherwise."

4. As one of the journal's anonymous referees noted, acutely, the stakes of whether or not ontological anthropology was actually about describing heterogenous reality or just a sort of intellectual game are much higher for those living in "neo-colonial contexts" where the "dismissal of indigenous ways of being is linked with many other forms of denial—of personal worth, justice in the courts, education and employment, and the ability to live by ancestral values and framings," than they are for elite metropolitan academics engaged in tournaments of disciplinary prestige.

despite Graeber's claim that his own materialist and monist critical realism and Viveiros de Castro's apparently pluriontological idealism are opposites, an attentive reading of the latter's comments on the subject reveal a much more closely allied set of approaches.[5]

Compare these two statements on the existence of multiple natures on an *ontic*[6] rather than an ontological level. First Graeber:

> Saying there are "many natures" might seem like a very radical claim. But no one is actually arguing that there are parts of the world where water runs uphill, there are three-headed flying monkeys, or pi calculates to 3.15. They are not even suggesting there are really places where tapirs live in villages—at least, if "really" means it would make sense to say tapirs live in villages even in a world where there had never been Amerindians who said they did. Each different nature, then, can only exist in relation to a specific group of human beings sharing the same Ontology$_2$.[7] (Graeber 2015: 20)

Despite Graeber's insistence that the real is fundamentally unknowable, he is perfectly happy to fall back on the "'intransitive dimension' of reality—i.e., aspects of the world that would remain the same even if science, scientists, or for that matter humans of any sort, were to disappear entirely" (2015: 26–27) as the basis for distinguishing between the truth claims of scientific and nonscientific statements alike. His acknowledgment that "one of the defining qualities of reality [is] that it cannot be completely known"(27) does not stop him from grounding his "ontological realism" in an apparently commonsensical notion of ontic monism to justify his assertion that ultimately ethnographers and their informants are "all in the same boat" (31). Yet isn't this claim just a little presumptuous? Not least because it presumes the existence of an unprovable root monism which appeals to an apparently timeless and placeless common sense in which Western scientific ontologies and the actual nature of the really Real are, conveniently enough, one and the same (cf. Law 2015, and, indeed, Schneider 1984)?

Yet, Viveiros de Castro is fundamentally on the same page. See, for example, his famous discussion of Peter Gow's anecdote concerning a Piro [Indigenous "Amerindian"] woman's assertion vis-à-vis boiled water causing diarrhea for the Piro but not for whites, that "our bodies are different from your bodies" (Viveiros de Castro 2013: 497). Viveiros de Castro terms this a "'natural' rather than a 'cultural' relativism" (2013: 498), yet he refuses for himself the kind of radical claim that Graeber critiques above. "The anecdote on different bodies," he suggests, "raises questions as to the possible world that the Piro woman's judgement might express." Yet this possible world exists on a "conceptual" rather than on an ontic level.[8] This possible world, in which

> human bodies can be different in Lima and in Santa Clara—[is] a world in which it is necessary for white and Amerindian bodies to be different. Now, to define this world we need not invent an imaginary world, a world endowed with a different physics or biology, let us say, where the universe is not isotropic and bodies can behave according to different laws in different places. *That would be (bad) science fiction*. It is rather a matter of finding the real problem that renders possible the world implied in the Piro woman's reply. The argument that "our bodies are different" does not express an alternative, and *naturally erroneous*, biological theory, or an imaginarily nonstandard objective biology. What the Piro argument manifests is a nonbiological *idea of the body, an idea* in which the question of infant diarrhea cannot be treated as the object of a biological theory. The argument affirms that our respective "bodies" are different, by which we should understand that Piro and Western concepts *(rather than "biologies")* of the body are divergent. The Piro water anecdote does not refer to another vision of the same body, but *another concept* of the body—the problem being, precisely, its discrepancy from our own concept, notwithstanding their apparent "homonimy." (Viveiros de Castro 2013: 498–99; my emphases)

5. Moreover, reread in light of Amiria Salmond's (2014) distinction between totalizing "cartographic" and inductive and comparative "recursive" forms of ontological anthropology, Graeber's critique appears to conflate Viveiros de Castro's recursive approach with the early Holbraad's more cartographic approach in precisely the manner Salmond warns against (A. J. M. Salmond 2014: 170).

6. Conceptualized as what actually exists as opposed to human theories about such things.

7. Graeber: "Viveiros de Castro (2015: 10) argues that the rise of the term ontology is due in part 'to the exhaustion of the critical *nomos* that separated the phenomenon from the thing in itself'—apparently, by saying there is no thing in itself and relabeling what Husserl would call phenomenology as 'Ontology$_2$'" (Graeber 2015: 23n29).

8. On concepts see Viveiros de Castro 2013: 484.

Despite the opposition Graeber constructs between his own ontological realism and Viveiros de Castro's apparent flights of fancy, the latter here dismisses the notion that bodies "can behave according to different laws in different places" as "naturally erroneous" and "(bad) science fiction." Moreover, he treats the divergence between Piro and Western bodies as conceptual. We are dealing with non-homonymous *ideas* of the body rather than "imaginarily nonstandard objective biolog[ies]." Water is still resolutely flowing downhill.

The capaciousness of the ontic

Despite Graeber's protestations, *both* he and Viveiros de Castro are mono-ontologists. Both come down on the side of universal science fact rather than "bad [or local] science fiction." Yet, radical alterity—in the sense of otherness that goes beyond the merely cultural doesn't disappear just because we have disavowed ontological pluralism. In what follows, I advocate shifting scholarly attention from questions about the singularity or plurality of the *ontological* to the complex relationship between ultimate, unknowable Reality (the *ontic)* and the multitude of diverse proximate, actionable reals that build up and/or are worked up as the materio-cultural precipitates of historically sedimented patterns of successful practical action in the world.

Ontology here denotes human "ideas" about what really is. The ramshackle process of reification which the term has undergone has resulted in something one can "hold," "share," "dwell in," or "inhabit." (Which would alternately make an ontology something like a set of beliefs [or a scepter], public knowledge, or a house). In the process, per Sergio Sismondo, not only has ontology been "extended from a kind of study to a kind of thing to be studied" Sismondo (2015: 442), it has been increasingly externalized and linked to particular "peoples" in a manner highly reminiscent of the reification of the culture concept in classical anthropology (Trouillot 2003). By contrast, for my purposes, the ontic is conterminous with Ultimate Reality—that which really exists, which may or may not be singular or plural in nature but pushes back unpredictably (and multiply) against human action in what Andrew Pickering has described as a "dance of agency" (2017: 136).

Where Graeber implies that we already know what the "intransitive dimension of reality" comprises, I would suggest that this is anthropocentric hubris and that we would better served by more ontological humility. For, ultimately, we don't know and can't tell whether ultimate Reality is singular or plural (insofar as we don't know the number of physical dimensions in the universe or even whether the current universe is the only one, or one in a sequence, or one in a multiverse, one on a brane, etc., etc.). Given that there are somewhere between several hundred billion and two trillion galaxies in the observable universe and one hundred to four hundred billion stars in our own galaxy, our knowledge of this Reality is somewhat limited and partial. Yet if we shift from the focus on "strange beliefs" that characterized much of the OT to an attention to "differing specific material performances" (Pickering 2010: 188) by moving from what Pickering (2017) terms a "representational" idiom to a "performative" one, I think we can, *pace* Holbraad and Pedersen, still say something about the really Real. In particular we can begin to formulate some answers to the question of "what sort of world, in the singular, could possibly sustain all these different" (Pickering 2017: 139) not so much ontologies in the plural as multiple modes of successful practical action and the incommensurable materio-cultural hybrids that are built up through the processes of "tuning" (Pickering 1993) human agency to the unpredictable pushback of the Real such practical action entails.

In place of idealist visions of ontological plurality, in what follows, I elaborate instead what I term *ontic capaciousness*—the capacity of the Real to accommodate multiple modes of successful practical action and their materio-cultural precipitates. (Examples discussed in the essay's second half include the vestibular and magnetic "oceans" produced by different approaches to navigation at sea and the dissection-based and palpation-based "bodies" of the classical Chinese and modern Western medical traditions). As detailed below, these divergent modes of practical action in turn build up through successful repetition multiple materio-cultural hybrids—proximate or actionable reals, that are profoundly Other to each other in ways that go beyond the cultural, the representational, or the symbolic. Thus, in place of a single nature that can be worked on successfully in only one way we find a capacious Real that can be worked on and worked up in multiple mutually nonreducible manners. Moreover, these multiple modes of working on the "same" materiality produce divergent effective results, for example, multiple sorts of "bodies" whose mutual alterity transcends the ideational.

We are not talking here about "nonbiological ideas" of the body or "an imaginary world, a world endowed with a different . . . biology," as Viveiros de Castro would say, insofar as the latter is conceptualized as entirely separate from the effects of patterned human action. Instead we

are talking about discrepant biological bodies made at least in part *through* patterned human action. This sort of claim is not as controversial as it might sound. Biological anthropologist Clarence Gravlee (2009), for example, critiques received notions of biology in the West similarly. Where anthropologists previously focused on how different cultures put divergent symbolic glosses on a shared underlying biological reality (a dichotomy that Schneider [1984] famously revealed as culturally constructed), Gravlee argues that race *becomes* biology in at least two senses. First, "systemic racism becomes embodied in the biology of racialized groups and individuals, and [second] embodied inequalities reinforce a racialized understanding of human biology" (2009: 54). There is, in other words, a recursive relationship between the "material" and the "cultural" in which the former is not separate from, prior to, and determining of the latter but both shapes and is shaped by it.

This is the sense in which I intend materio-cultural hybrid as the precipitate of patterned human action. And it is in this sense that, quite apart from the radically idealist pronouncements of the OT in its swashbuckling heyday, some anthropologists do indeed posit something akin to the notion that water runs uphill in particular parts of the world or that bodies work according to different laws in different places. For example, Judith Farquhar argues forcefully that

> Qi is real. It is not spirit or abstraction. It is as real as any of the pathogenic entities or organic networks that have been constituted in scientific practice in the short history of modern biomedicine . . . syphilis . . . , the immune response, Tobacco Mosaic Virus . . . but no anatomist, physiologist or biochemist can quite capture qi for structural analysis. Chinese medicine clinicians know, though, that in a qi-driven and qi-configured world, illness emerges in many more forms than the International Classification of Diseases can recognise . . . In a qi-driven and qi-configured world, effective treatments reach far beyond the active components of plants or therapies supported by a statistical evidence base. (Farquhar 2012: 161–62)

How should we think about this vis-à-vis the question of bodies appearing to work by different laws in different places? In regards to qi, "does local mean limited in the scope of its applicability, as in arguments that knowledge about acupuncture or Chinese herbal medicine is true (and, thus, undergirds medical effectiveness) for Chinese people in China, but not otherwise?" Farquhar asks. "Or does local mean that some knowledge is true and the objects it recognises are real for only part of the universe?" Such an approach, she suggests, "would lead us toward a plurality of 'real worlds'" (Farquhar 2012: 155). Yet perhaps "proximate reals" works better here than "worlds" as the former lacks the totalizing and territorializing resonances of the latter.

Farquhar's formulation highlights the lingering residues of a sort of crypto-Protestantism in recent ontological thinking that has tended focus on exclusivist belief rather than multifarious practice. "Why has indigenous knowledge appeared as a threat?" Farquhar asks. "One reason," she suggests, "is that we live a cosmopolitan common sense that . . . has presumed that true knowledge is the foundation of effective action; or, more to the point, only true knowledge can be the basis of effective action. If all action arises from knowledge, if you must know before you can act, you would naturally care about the truthfulness of knowledge representations" (2012: 153). If this presumption, which, I suggest, derives in part from Protestantism's emphasis on the necessity of belief based on true knowledge of a single, authoritative version of Christian doctrine, is accepted, what are we to make of effective action that derives from knowledge that is not scientifically verifiable?

"If this epistemological foundationalism is the common-sense model of knowledge and action we generally work with," writes Farquhar, "alternative and apparently incommensurate representations of the world present a problem." This is because "indigenous knowledges seem to force us to face a hard choice, not only between ways of imagining reality but also between courses of action. In other words, we can be multiculturalists about diverse beliefs, but—insofar as our whole world of action seems to be at stake—we are quick to become dogmatic about knowledge" (Farquhar 2012: 153).[9] Yet despite this folk emphasis on true knowledge as the basis of effective action, in practice, "people act all the time, often effectively and often ethically without having a clue about the facts" (2012: 154). Elsewhere, Farquhar terms attitudes "that only scientific methods . . . can produce true knowledge" scientism. She notes that such scientism has served to denigrate and subordinate non-Western modes of effective action. "'Unscientific' became a derisive label that Chinese medicine has had to bear since the beginning of the twentieth century. However, even for the most virulent scientific critics of Chinese medicine, its usually benign clinical effects remain undeniable" (Wang and Farquhar 2009: 65).

9. Compare Law (2015) on liberal attitudes towards the concept of "fractiverse."

There are obvious parallels between this contemporary secular metaphysics that draws a direct line between true knowledge of reality (in the singular) and effective action and its older Western religious counterparts that privileged belief, abstraction, and doctrinal exclusivity over the action, embeddedness and openness to alternate modes of religious practice that characterize many premodern and/or non-Western contexts (Reader 1991; Daniel 2000). Indeed, the question of irrational beliefs around which much of the OT has been ranged has deep antecedents in the history of anti-Catholic polemic especially as deployed in the production of eighteenth- and nineteenth-century British scholarship about the religions and cultures of its Indian colonies (Almond 1988; Lopez 1995). Laura Harrington describes a "tendency to Catholicize the colonized Other [that] manifested in British writings and policies concerning India and its inhabitants" (2011: 213). In this endeavor, Theravada Buddhism was made analogous to Protestantism in terms of its "accept[ance] of nature and its laws" and its vision of salvation as achieved via "free thought and seeking after truth" (Harrington 2011: 220). Hinduism, by contrast, like Catholicism was said to depend on "priestcraft" and "the archetypal corrosive of Protestant civilization: irrationality" (Harrington 2011: 212). From such ground sprang "'the Enlightenment dream of a world entirely transparent to reason, free of the prejudice, superstition and obscurantism of the *ancien regime*' (Eagleton 1991: 64; quoted in Harrington 2011: 220).

Robert Orsi, in turn, highlights the anti-materialist critique "encoded within the DNA of religion-as-belief" alongside "the memory of early modern violence, in particular the mutual hatred of Protestants and Catholics, and especially, with the development of the study of religion in Protestant or post-Catholic contexts, by a fierce anti-Catholicism" (2011: 12). "'Belief,'" he writes,

> named a way of being religious that was the antithesis of Catholicism, of its hierarchy, its onerous proliferation of rules and sins, its saints, miracles, rituals, gestures, and above all the Catholic experience of the presence of the holy in matter, in things—first of all in the consecrated Host, and also in relics, in features of the natural environment (in grottos, rivers, stones, and trees), in statues, images, in the movements and gestures of bodies, in oils and water. (Orsi 2011: 12–13)

Though we no longer (necessarily) believe in God, as Donald Lopez puts it, "we still believe in belief" (1998: 34). Indeed, anthropological approaches to questions of "strange beliefs" are still commonly structured by a crypto-Protestant insistence on interiority, propositionalism, exclusivity, and doctrine (see Tooker 1992). In many respects, ontology has picked up where culture left off in terms of emphasizing the immaterial and the ideational—over either materiality or practice.

Certainly, ontological anthropologists have tried to get out of belief. Viveiros de Castro writes, "we know the mess anthropology made when it decided to define natives' relationship to their own discourse in terms of belief: culture instantly becomes a kind of dogmatic theology" (2013: 490). Once this happens we are on the terrain of a particular kind of reduction. See also Roy Wagner: "An anthropology that [reduces] meaning to belief, dogma and certainty, is forced into the trap of having to believe either the native meanings or our own" (Wagner 1981: 30; quoted in Viveiros de Castro 2013: 491). Yet even though ontological anthropologists actively seek to decenter belief as a focus of anthropological inquiry, they still tend to focus on "concepts" to the detriment of practice. Further, scholars are still too often forced into a kind of methodological exclusivism, parallel to the thrust of Protestant proselytization that replaced multifarious religious practice with an insistence on conscious adherence to a single creed.

So centrally concerned with the ideational have anthropological versions of the OT been that in the famous 2008 debate about whether "ontology is just another word for culture" (Carrithers et al. 2010), the notion that ontology could be tantamount to *practice* seemed almost absurd. Matei Candea noted at the time, "I was thinking . . . what would this debate sound like if it said 'Ontology is just another Word for Society'? On the face of it, it would be completely nonsensical, which goes some way towards actually making a point, which is that the kind of question we're asking seems to be something different" (Carrithers et al. 2010: 186). Yet Candea didn't dismiss the idea completely. "In some ways," he suggested, "it might not be entirely nonsensical, if ontology is actually something to do with the relations where stuff is made. And then we wouldn't get caught in the whole 'are these valid views or not' if we were talking about societies together, making something" (Carrithers et al. 2010: 186). This latter emphasis on the relations where stuff is made has, in fact, been central to STS variants of the OT.

"Against the lability and treachery of matter"

Woolgar and Lezaun compare the erstwhile turns to ontology in anthropology and STS, noting the difference

between the STS slogan: "'it could be otherwise' and the multi-naturalist motto, 'it actually is otherwise'" (2015: 4). They contrast the deflationary tendencies of STS ontology work with the reifying and inflationary character of ontological anthropology. In anthropology, the OT "has to do with preserving (or creating) a 'strong' notion of alterity. Whereas in the past our analyses would have identified different sets of 'beliefs,' 'cultures' or 'representations,' we now describe those as 'ontologies' and imply by that a higher form of reality but also of difference" (2015: 3). The net result is a "strategy of reification" (2015: 4) which "posits the existence of 'indigenous ontologies,' 'perspectival ontologies,' 'Amerindian ontologies'" (2015: 3), etc. as discrete and coherent entities. By contrast, their elaboration of STS ontological work's "deflationary" (Sismondo 2015) ethos sounds a lot like the revised, dialed-down version of ontological anthropology offered in *The ontological turn: An anthropological exposition* in its general unwillingness to say anything about "the 'really real' nature of the world" (Holbraad and Pedersen 2017: 5). The purpose of the turn to ontology in STS is not to "discover ontologies" or to "[seek] or [produce] greater certainty about the reality of reality," but is instead to "interfere with the assumption of a singular, ordered world" (Woolgar and Lezaun 2013: 323).

A focus on practice characterizes such STS ontological work that seeks to "draw renewed critical attention to objects that might otherwise appear 'finished' or 'ready-made'" (Woolgar and Lezaun 2013: 323). Woolgar and Lezaun foreground the vocabulary of "enactment"[10] that emerged in the work of Annemarie Mol (2001), John Law, and other post-ANT thinkers (see also Vasantkumar 2013) as "emphasiz[ing] the generative power of the practices involved in the constitution of reality" (Woolgar and Lezaun 2015: 324). Yet, while this turn to practice has deflated the totalizing tendencies of ontology-as-culture, its spread has not been without problems. There are three main problems with much of the ANT-influenced STS work on ontology-as-product-of-practice approach. First, it has tended to be focused at the level of "objects," thereby impeding STS scholars' ability to think about human social forms more broadly as the products of situated human practice. We learn much about clafoutis, say, or bush pumps, but not so much about the world(s), in which such things float. By contrast, anthropologist Cecilia McCallum focuses on ontology itself (here in its -as-culture guise) as the product of practice. McCallum suggests that the Indigenous Amazonian Hunikuin ontology "acquires shape and direction" through practice, "because people have positioned themselves within processes of production, as part of a collective struggle against the lability and treachery of matter, in the emotionally laden work of producing and fixing the bodies of real (*kuin*) people (*huni*)" (2014: 506).

Second, STS ontology work has tended to emphasize the fragility and ephemerality of the products of enactment. On the one hand this is a desirable decentering move, which foregrounds the contingency of "entities that a conventional STS analysis would often consider 'black-boxed' and no longer controversial" (Woolgar and Lezaun 2013: 323). Yet, conversely, this focus on fragility has also tended to divert scholarly attention from the role of practice in the production and reproduction of relatively durable social formations. It is not the case that only fragile entities are formed through enactment (Law 2012). Indeed, highly durable-seeming materio-cultural forms (i.e., forms that are more-than-ideational in the commonly understood sense of the latter) are precisely the precipitate of particular patterns of repeated action. Yet this is not to say that practice alone makes nature, which is the third flaw of much of the STS onto-work.

On this front, one can distinguish between two kinds of STS ontology work. The first argues that reality is entirely produced by human practice. The second sees human productive activity as occurring against and in response to the unpredictable pushing back of the not-wholly-knowable substance of the Real, in processes of what Andrew Pickering (1993) terms "material agency." I am content with neither Graeber's faith that we are all in the same boat nor with Law's call to "wash away the assumption that there is a reality out there beyond practice that is independent, definite, singular, coherent, and prior to that practice" (2012: 171). More useful here is Ingold's suggestion that "materials have properties of their own and are not necessarily predisposed to fall into the shapes required of them, let alone to stay in them indefinitely" (2010: 93). Acting in the world in the absence of perfect, infallible, or finished

10. In anthropology, Mario Blaser has attempted with considerable success to combine ontology and enactment. Yet the resulting "pluriverse" of multiple ontologies he describes "is not concerned with presenting itself as a more 'accurate' picture of how things are 'in reality' (a sort of meta-ontology)" but with "the possibilities that this claim may open to address emergent (and urgent) intellectual/political problems" (2013: 554).

knowledge about the latter, is not the same as acting in a vacuum in either a material or a historical sense. We needn't cognize and externalize the Real like good Protestants in order to act successfully within and against it. In a material sense, when we push against the surfaces of the unknowable Real, something pushes back. We do not simply will things into being by thinking them, the farthest flights of Cambridge ontological fancy notwithstanding.

Here Farquhar's concept of *duixiang* is useful to think with as a counterpoint to dichotomous understandings of reality either as singular, external to, and entirely determining of human social and cultural forms, or as plural, internal to, inseparable from, and called into being by human action. Farquhar borrows the concept from Traditional Chinese Medicine (TCM) practitioner Guangxin Lu who, she writes, "acknowledges no separate conceptual domain for theory or even for knowledge," but, "instead . . . insists on learning from the objects of practice, while engaged in practice" (2012: 166). Duixiang literally means "the image we face. It is," Farquhar suggests, "a perceptible element of the manifest world, not necessarily a massy object, and it is irreducibly relational. A *duixiang* exists only in relation to a perceiver or an actor: common translations of the word are 'target' or 'partner'; translation as 'interlocutor' or 'objective' also works in some contexts." Where this gets interesting for our purposes is how "a *duixiang* is a complex entity that emerges from practice, but it does not do so merely as a product of the investigator's imagination: if this object were solely imagined, how could one learn from it" (Farquhar 2012: 166)? It is both more-than-ideational *and* not solely determined by human action.

Moreover, it is "by definition spatiotemporally unique and requires a situated perceiver for its unique existence. From each such located conjuncture we can learn something" (Farquhar 2012: 167). Duixiang entities are built up through situated practice that works with and against the lability and treachery of the unknowable Real. This sort of practice not only builds up "'objects' for clinical and theoretical attention" (2012: 166), it builds up larger bodies of interpretive and productive practice. Such learning may comprise techniques for skilled action, but it also works to configure, at least partly, the proximate reals in which prior instances of this action have been effective. Moreover, patterns of successful action against the Real tend to stabilize, interactively (Pickering 2010: 190), certain kinds of materio-cultural hybrids as amenable to these kinds of intervention—say, for example, a qi-driven and qi-configured body in a qi-driven and qi-configured set of interventions. The effectiveness of such interventions is thus not so much local as it is specific to particular actionable reals.

Farquhar's elaboration of a theoretical language that "incorporates our own perceptual and knowing activity into the very character of things" (Farquhar 2012: 167) is most welcome. Yet rather than focusing primarily on the role of knowing activity in the "character of things," I want to highlight the importance of the pushback of the Real. Here, Pickering's work on the "mangle of practice" (1993, 2010) is particularly generative. Pickering's notion of "tuning" vis-à-vis scientific practice nicely captures the kind of pragmatic choreography of human and material agency involved. I want to especially emphasize the temporal aspects of Pickering's take here, as a bridge to making more explicitly historical claims for his approach. "We can take material agency as seriously as traditional sociology has taken human agency," Pickering writes, "but we can also note that the former is temporally emergent in practice. The contours of material agency are never decisively known in advance, scientists continually have to explore them" (1993: 564).

What could be more banal: the "world" pushes back and "we" adjust to it? Where things get interesting is in the results of such give-and-take. Notions of scientific investigation that posit that it arrives at the single correct understanding[11] of the world against which all other "understandings" can be judged and found lacking are still in the realm of beliefs and concepts where "alternative and apparently incommensurate representations of the world present a problem." Pickering, by contrast, pushes us in a direction more akin to Ingold's (2010: 92) discussion of the ability of craftspeople to find and follow the grain of the world's becoming. But where Ingold talks of grain in the singular, Pickering's approach reveals grains in the plural insofar as there is more than one successful[12] solution to many problems, scientific or otherwise. According to Pickering, the solutions to scientific problems "if they are found at all, take the form, at a minimum, of a kind of delicate material positioning or tuning in the sense of tuning a radio set or car engine, with the caveat that the character of the

11. It is unclear which valence of understanding is or should be primary here: that of perceiving an intended or correct meaning or that of an interpretation or a view.

12. For the purposes of this essay success denotes being able to accomplish a particular task.

'signal' is not known in advance" (1993: 564). The result of this ongoing process is "an evolving field of human and material agencies reciprocally engaged in the play of resistance and accommodation" (1993: 567).

This becomes truly radical insofar as it allows for multiple possible modes of successful practical engagement with the Real, contrasting starkly with the kinds of exclusivist notions of reality that parallel the demands of Protestant belief. Crucial for Pickering is a shift from a "representational idiom for thinking about science to a performative idiom." The former, the "usual way of thinking about science, namely [as] a set of representations of nature . . . makes the idea of different worlds hard to swallow . . . Either our representations are true to nature," he writes, "or they are not; either nature more or less matches our descriptions of it or it does not. Is the world built out of quarks or have the physicists got it wrong?" (Pickering 2017: 136). The underlying assumption is that "different representations cannot all be right." As a result, "the idea that different worlds are genuinely to be found in the history of science must be at best an illusion" (Pickering 2017: 136). By contrast, he argues that a representational idiom is unsuitable for getting "satisfactorily to grips with scientific research practice." Instead, he advocates a performative focus on the "dance of agency" between human and material actors "in which all the partners are unpredictably and emergently transformed" (2017: 136).

Coming to (machinic) grips with the world

On one level it shouldn't be surprising that there is more than one way to tune a cat. But given the crypto-Protestant "epistemological foundationalism" Farquhar places at the center of our commonsense models of knowledge and action (2012: 153), there tends to be significant resistance to the notion that a plurality of modes of successful practical action might be possible. Per Farquhar, "chronic anxieties about instability in the knowledge foundation of action lead to arrogance, dogmatism and blindness to the promise of both new and old resources for thought *and* action. These anxieties, or epistemological panics especially afflict those who are most committed to hegemonic knowledge systems" (2012: 154). In this vein, she notes the "nervous" responses of her "biomedical friends" to her studies of TCM: "they not only think I'm probably deluded, they think I might be dangerous." In critiquing this set of assumptions, I neither want to abandon scientific insight nor claim that all "theories" of reality are equally true. Instead, I want to move away from belief, and the ideational more generally, as necessarily central to how humans engage with the Real. Pickering, for his money, argues that a shift from the representational to the performative moves from emphasizing different theories or understandings of the Real to a focus on different "'machinic grips,' on material reality the existence of which demonstrates, as an empirical discovery, that there is more than one way to 'tune' ourselves performatively into a lively nature" (Pickering 2017: 137).

To touch briefly on an example revisited in more detail below, such a shift allows us to reckon with claims like Shigehisa Kuriyama's that "when we study conceptions of the body we are examining constructions not just in the mind but in the senses. Greek and Chinese doctors grasped the body differently—literally as well as figuratively" (1999: 60) or that "theoretical preconceptions at once shaped and were shaped by the contours of haptic sensation" in historically sedimented modes of practical action that "cradle[d] meaning" not in the mind but "at the wrist" (1999: 37). Kuriyama highlights the "interdependence" between preconceptions and sensations, such that Greek and Chinese doctors both "knew the body differently because they felt it differently" (1999: 55) and "felt it differently because they knew [or, better, *gripped*] it differently" (1999: 60). Such an emphasis accords well with Pickering' suggestion (2010: 188) that the "indefinite variety" of possible "*machinic grips* on the world"[13] allows us to "glimpse the possibility of a form [or forms] of incommensurability that cannot be articulated within the representational idiom": material incommensurabilities not so much of strange beliefs as of strange *actions* and the more-than-cultural hybrids such actions build up as their historical, or at least durational, precipitates.

What do such material incommensurabilities actually look like? The latter need not be so large as to "put our whole world of action at stake" (Farquhar 2012: 153). Rather, the building up of incommensurable actionable realities occurs on multiple scales: from the epoch-defining to the almost imperceptible.[14] An example that illustrates

13. And the resulting "different specific material performances" (Pickering 2010: 188).

14. At the smaller end of the spectrum, consider the divergent projects of recording musical performance encapsulated in the player piano and the record player (Suisman 2010).

how different machinic grips on the world mean we might not all be in the same boat (or, perhaps, better, on the same *ocean*) is the alternative navigational systems of the Western magnetic compass on the one hand and the various noncommensurable schools of traditional navigation of Pacific peoples. Joseph Genz argues that "spatial orientation in Marshallese wave piloting," in particular, "centers on vestibular ways of knowing about the ocean" (2016: 14). Relying on such vestibular engagement, contemporary Marshallese navigators "continuously experience the flow of the waves toward the destination atoll by detecting and following a direct wave path between atolls, gauging the distance traveled on this path through current stream perturbations, and ascertaining the direction and distance toward land, if they do not hit it directly, by sensing wave patterns in particular quadrants surrounding the destination atoll" (Genz 2016: 14–15).

Genz describes Marshallese navigation in terms that are highly evocative of Farquhar's discussion of duixiang, pushing "knowledge" out of the ideational and into the realm of successful practical intervention. "There are very few words in Marshallese to convey the sensations of wave movements," he writes, noting that his "informants emphasize the use of waves even if they have difficulty describing them in . . . language. Knowing how to use the waves" he suggests, derives from "a pragmatic theory of meaning, in which comprehension of the waves is primarily action-oriented" (2016: 10). Acting on this comprehension looks a lot like "learning from the objects of practice, while engaged in practice." Moreover, "with such an emphasis on an environmental feature (waves) that is in constant motion with changing direction, strength, and frequency," he argues, "navigators must orient themselves through the practical activity of sailing out of sight of the home island and sensing the shifting configuration of myriad waves. With such a narrowly focused 'navigational toolkit' . . . the foundation of navigators' knowledge lies in their embeddedness in the voyage, or their complete immersion and practical engagement . . . especially their sensory perceptions of the movement of the ocean itself" (2016: 14).

Here, particular historically sedimented patterns of practical action precipitate a materio-cultural actionable real that highlights the interdependence of machinic grip and material pushback. The ocean in this actionable real can be successfully navigated by a combination of vestibular sensation and "cognitive information" both in human memory and externalized forms of representation. Marshallese stick charts depicting the ways in which islands "disrupt the flows of swells and currents" serve as visual mappings of "core knowledge represented and stored in memory that is used in conjunction with mostly sensory information of wave movements as felt within the body aboard a canoe regarding one's position, motion, and equilibrium" (Genz 2016: 10). Compared to the charts and compasses of Western sailors, they are not merely divergent representations of a single underlying reality, they are material embodiments of another noncommensurable real very different from either the Carolinean star compass (to name just one of the many schools of traditional Pacific navigation) or our own magnetic one.

Consider the difference between both the "different specific material performances" entailed by vestibular and magnetic navigation respectively and the divergent forms of "ocean" as materio-cultural hybrid they precipitate. In the machinic grip of magnetic navigation, the ocean is an almost entirely unmarked and unreadable waste, crossed by reliance on unseen positioning systems that have very little to do with local conditions. Anne Salmond (2005) contrasts eighteenth-century British and Tahitian navigation (the latter based primarily on wind and star compasses). Tahitian navigators relied on "reflexive and embodied" knowledge linked irretrievably to local circumstances. By contrast, "although experienced [British] sailors . . . also acquired an embodied knowledge of the sea, stars and winds, the officers largely guided the ship by the instrumental observation embedded in its daily routines, and by reference to a language of mapping, measurement and calculation" (A. Salmond 2005: 176).

Nowadays, with reliable data on one's position one could navigate across the Pacific looking entirely at a screen. By contrast, in Marshallese practice, grounded in its own dramatically Other set of "interactively stabilized facts" (Pickering 2010: 190) and modes of successful intervention, the ocean is both local and localizable, navigable only via positioning vis-à-vis locally specific embodied interactions between relatively stable features of the environment and the movements of flux. Salmond argues persuasively for the incommensurability of the different "oceans" that result from magnetic-calculative and embedded-embodied processes of tuning. "Although Tahitian navigators crossed the ocean with confidence," she writes, "the seas they traversed were quite different from those sailed by 18th-century Europeans. According to early Tahitian accounts, their ancestors saw the Pacific Ocean as a flat plane, joined around the edges of the horizon by the

great arching bowl of the sky, and crossed by sea-paths between clusters of the known islands. It was also a *marae*, a sacred place where people went to cleanse themselves in times of spiritual trouble" (2005: 169).[15] Clearly, the ocean-as-locality-for-attentive-intervention and ocean-as-abstract-backdrop-to-calculative-processes are not merely different representations of the same entity, they are nonreducibly Other spaces for practical intervention that have been both produced by and are productive of patterned forms of human action.

A further example of the multiplicity of more-than-cultural, non-mutually-reducible actionable reals—the incommensurability of the anatomical body of Western medicine and the qi-configured body of TCM—may present more of a conceptual challenge. A recent review essay (Harris and Robb 2012) illustrates some of the perils to be navigated. In trying to think through the singularity or plurality of the body in ontological terms, the authors epitomize Kuriyama's explication of the radical alterity of ancient Greek and traditional Chinese bodies in "conceptual" terms. "Classical Greek and Chinese medicines," they write, "*understood* the body differently in part because of different techniques for observing it. The body in history, therefore," they suggest, "is the locus of the historically-situated development of a discourse that is at once both social and material" (2012: 674; my emphasis). The authors make a number of salutary moves—foregrounding the co-constitution of the social and material, and moving away from both an exclusivist set of truth claims and a materialist reductionism. Yet at a basic level, even as they attempt to assimilate recent STS insights on the unsuitability of a representational idiom for thinking about variation, they still don't break completely with the ideational. The precipitates of different techniques of observing "the body" remain different "understandings" (or representations) of an underlying material truth.

By contrast, both Kuriyama (1999) and Ari Heinrich (2008) describe materio-cultural alterities that go far beyond the level of representation. Kuriyama contrasts two visual depictions of the human form. The first, Hua Shou's 1341 *Shisijing fahui* illustrates a number of named points and lines of connections on the surface of a male human form. The second, Vesalius's 1543 *Fabrica*, depicts the musculature of a flayed man standing in a ruined landscape. Observed together, each figure betrays the "lacunae" in the other: "in Hua Shou, we miss the muscular detail of the Vesalian man; and, in fact, Chinese doctors lacked even a specific word for 'muscle.' . . . On the other hand, the tracts and points of acupuncture entirely escaped the West's anatomical vision of reality." Kuriyama puzzles over the question of how "perceptions of something as basic and intimate as the body differ so." "The structure and workings of the human body are, we casually assume, everywhere the same," he writes, "a universal reality. But then we look into history and our sense of reality wavers" (1999: 8).

Kuriyama describes the response of seventeenth-century European travelers to the "the astonishing prowess of [Chinese] healers" (1999: 21). While "the uncanny accuracy of their diagnoses bordered on the incredible," how they arrived at such results baffled outside observers. "Chinese [medical] tenets struck" Europeans as "not just mistaken but absurd. They literally made no sense." The "descriptions of the body they encountered" in Chinese medical teachings "struck them as 'phantastical' and 'absurd,' like the tales of an imaginary land." Yet they "got results" (compare A. Salmond 2005: 181 on navigation). It was clear that "Chinese doctors" had access to "authentic truths, but in some unknown, exotic way" (Kuriyama 1999: 63–64). In contrast to Western practices of attending to and building up the body as a materio-cultural hybrid through dissection and the examination of the interior of corpses, Chinese medicine developed for thousands of years by exploring dynamic relations and "the profound meaningfulness of local difference" (Kuriyama 1999: 47) on the surfaces of living people.

In the process, the dissection-body and the palpation-body of the two respective medical traditions were worked up over time as so different as to be mutually unintelligible on not just an ideational level but on a material one.[16] This mutual material alterity is not simply cultural difference made manifest in divergent glosses placed upon a single preexisting underlying natural reality. Instead, we are dealing with the *emergent* alterity of materio-cultural entities that we still lump together

15. Interestingly, Salmond notes the invisibility of ritual and religious practice that past chroniclers described as "superstition" in the contemporary literature on traditional Pacific voyaging.

16. Although I am focusing particularly on the specialist knowledge of medical practitioners here, I follow Barbara Duden (2005: 249) in conceptualizing "theoretical tradition[s] in academic medicine" as reflecting broader "cultural body perception[s] which [shape] custom and norms, gesture, language, and ritual."

under the rubric "bodies" but which have "become structurally different over time"[17] as discrepant machinic grips on material reality have stabilized, interactively, divergent targets for practical intervention. The alterity that results is, thus, not simply a matter of strange beliefs. Instead we are confronted by materio-cultural hybrids keyed to strange *actions* that are just as (if not more) capable of accessing truth as more familiar "specific material performances."[18] Thus, where Viveiros de Castro suggests that material alterity is "bad science fiction," I would argue that it is the outcome of historically sedimented, patterned forms of tuning in Pickering's sense.

In his thought-provoking book, *The afterlife of images*, Heinrich highlights the radical alterity of dissection-bodies and palpation-bodies. Manfred Porkert's *The theoretical foundations of Chinese medicine* (1974), they write, "emphasizes that Chinese medicine's attention to functional understandings of the medical body as opposed to the causal corporeal mode of Western anatomical thinking 'is not the close counterpart of western anatomy but its antithesis'" (2008: 115). For, Porkert argues, "the functional system of traditional Chinese anatomical practice is so divergent from Western counterparts as to be virtually untranslatable, or translatable only with a great caveat: that the translated terms used to describe Chinese 'organs' and corporeal phenomena 'be understood as definitions of effective relations or functions, not simply as expressions of crude anatomical insights'" (Heinrich 2008: 115).

Similarly, premodern visual images of the human form for Chinese medical purposes were more "schematics" than depictions, "more maps *to* the body than pictures *of* the body (or at least make for pictures of a very different 'body'" (Heinrich 2008: 125; my emphasis). The quotes around "body" here are telling insofar as the incommensurability of the images, theoretical frameworks, and modes of successful medical intervention they entail push to the very limit the notion that Western and Chinese medicine are merely divergent representations of an underlying whole. Instead, what Kuriyama terms the "overall organization[s] of life" (1999: 49–50) in the two traditions are enacted, conceptualized, and accessed in such radically different manners that the "interactively stabilized" corporeal entities that result are, as Heinrich suggests (2008: 130), "false cognates." Such alterity is not just, or not even, conceptual. With regard to the divergent visual depictions of human forms in Western and Chinese medical traditions, we are not dealing merely with divergent representations of a unitary Real but with representations that emerge from different specific material performances that over time work up radical alterity on a more-than-cultural[19] level. Not divergent representations of the same underlying Real, but representations keyed to and built up from divergent emergent actionable *reals*.

Islands in the stream?

But how should we understand the relationship between such divergent reals? There are a number of unsatisfactory alternatives in the literature. On the one hand you have the methodological exclusivism of high Cambridge Ontology (Laidlaw 2012). On the other hand, you have a kind of silent mutual co-presence in much of the STS ontological literature. Law and Lien (2013), for example, posit a "sort of co-existence, an adjacency . . . of objects that are perfectly and discretely real" (Woolgar and Lezaun 2013: 325). Pickering, in turn, articulates the concept of "islands of stability" as a means of "tak[ing] seriously the multiplicity of 'found' ontologies" (2017: 134) and "which can serve as a pivot from STS to anthropology" (2017: 137). "The success of science and engineering (and all sorts of other practices)," Pickering writes, "shows us that there are . . . islands of stability in the flux of becoming—configurations, socio-material set-ups—where some sort of reliable regularity in our relations with nature is to be found" (2017: 140).

These islands are potentially limitless in number and exist at some sort of territorial or geographic remove from each other. "We can readily imagine an endless number of different worlds founded on different constellations of islands. Here in the West we live on one set of islands; in the Amazon rainforest the Yanomami live on another" (Pickering 2017: 140). Moreover, as with culture, once upon a time, particular islands are the preserve of particular peoples: "The Yanomami track through the emergent performativity of nature has led

17. I thank Andrew Kipnis for this phrasing.

18. Whether this divergence indicates the existence of "bodies" in the plural or of a single body capaciousness enough to accommodate multiple modes of successful practical engagement, the nonreducibility of the mutual alterity of emergent non-homonymous "bodies" is central to my argument.

19. Insofar as the cultural and the ideational are construed to be one and the same.

them to islands of stability other than ours" (Pickering 2017: 142). While I appreciate the incredibly generative focus on the interplay of human and material agency throughout Pickering's work, this formulation—where instead of all of us being in the same boat, we now occupy our own discrete and blissfully separate islands in the flux's stream—is highly problematic. While this approach helps "us to comprehend that a single nature might sustain many worlds, and to appreciate the possibility of . . . different ways of being in the flow" (Pickering 2017: 142) it also threatens to reproduce the worst reifying and separating tendencies of "cartographic" ontological anthropology (A. J. M. Salmond 2014).[20]

Even "recursive" ontological approaches (A. J. M. Salmond 2014) (which look a lot like the common ground inhabited by Graeber and Viveiros de Castro described above) have, with relatively few exceptions (e.g., Kohn 2007; Blaser 2009, 2013), tended to focus on ontologies as separate or separable from wider global geopolitics. Yet we need a conceptual vocabulary that can reckon with both the capacity of the Real to accommodate radical alterity and the violent and hierarchical interconnections in which such forms have often been caught up in both the contemporary world and the colonial past.[21] Such a vocabulary should both reinflate certain aspects of the OT in anthropology with regard to claims about radical otherness *and* bring it back into contact with the "hard surfaces of life" (Geertz 1973: 30).[22] For the dissection-based "body" and its palpation-based classical Chinese counterpart were not simply two different sets of islands. In the second half of the nineteenth century as detailed in Heinrich's *The afterlife of images*, they came into conflict. The replacement of the qi-configured and qi-driven palpation-body with the anatomy-configured and anatomy-driven dissection-body came to be emblematic of both the British drive for colonial mastery in Asia and modernist Chinese attempts to throw off the backwardness of the Qing imperium.[23]

The notion of translation fails to capture the depth of this struggle and its consequences. Nathan Sivin points us in the right direction, suggesting that "modern scientific medicine replaces part of reality. It creates new facts, and destroys the facticity of the old ones" (1987: 198, quoted in Lin and Law 2014: 813). Such projects required their proponents "to invent not only the language to describe the anatomical body of the West but also the theoretical foundations of the body itself" (Heinrich 2008: 124–25). "Western medical missionaries" Heinrich writes, "introduced dissection-based anatomical practice to China," via the promulgation of "a certain kind of aesthetic vocabulary and conceptual framework for the body—'anatomical aesthetics,'" that in turn became fodder for modernist Chinese writers and intellectuals to "[construct] a new method for describing the human body" (2016: 426). This process introduced not a modified vocabulary and framework for a preexisting body but an entirely new and interactively realized materio-cultural corporeal entity we term and hypostatize as universal but which is actually a particular historical form that other "bodies" exist with regard to in unpredictable mixtures of homonymy and dissonance (Viveiros de Castro 2003).

Replacing one "body" with another (or, indeed, introducing it from square one) is not simply replacing one representation with another but rather replacing practice-derived actionable reals—"replacing part [or, indeed, all] of reality" in Sivin's words. We need an alternative to translation to properly conceptualize this transition. Here, McCallum's adaptation of the concept of "transduction" is most amenable to thinking about

20. Compare with Law (2015: 127–28).

21. While Blaser (2013) foregrounds real world conflicts, he focuses exclusively on the contemporary crisis of modernity as a catalyst for ontological struggles and their associated politics, neglecting the colonial encounter itself as generative of such conflicts.

22. Blaser and de la Cadena's framework of "political ontology" (2018) might seem like it would fit well here, but their emphasis on "credulousness" and refusing "debunking" places their analysis firmly in the realm of the ideational.

23. And while such "islands" may have been separate prior to the reality replacement occasioned by colonial encounters discussed below, nowadays it is certainly true that, as Kipnis (personal communication) puts it, that "both in China and in much of the world, it is possible to see a biomedical doctor one day and an acupuncturist the next." Nonetheless, dissection- and palpation-bodies sit uneasily alongside each other in the contemporary world. The relationship between the two remains hierarchized in a manner that valorizes techno-scientific knowledge (and practice) over its non-Western others (see Lin and Law 2014 for interesting reflections on how to think through this convergence nonhierarchically).

the powered transformation of more-than-cultural entities like bodies (and the patterned ways of working them up of which they are the precipitate). "*Transduction* . . ." she writes, "refers to the insertion or importation of whole elements—such as genes or concepts—into other matter or new domains or to the transformation of one type of energy into another (as in a hydroelectric dam)" (McCallum 2014: 509). Michael Silverstein (2003) used the term in the second sense, "to consider how semiotic processes in one language may (or may not) be transduced into another. But," McCallum continues, "ontological transduction implies a more radical shift than semiotic transduction, since it requires that the very parameters of meaning themselves mutate. It would remit to the first, genetic sense, which implies not just a passage of meanings between disparate contexts but the alteration of the targeted context itself" (2014: 509).

Like Heinrich, McCallum is concerned with a project of body-replacement: "an intensive course in functional anatomy offered to trainee indigenous health agents" in the Brazilian Amazon. She describes the working of this course in this way: "If teachers in the functional anatomy course did indeed pass key biomedical concepts to their students, then the concepts would cross the subjective divide as transduced ontological elements spliced into the students' conceptual schemes yet containing the germ ideas of the scheme of origin. They would act as hyperpowerful 'deictic forms,' not just pointing to their original context (Silverstein 2003) but also dragging it along with them" (2014: 509). Perhaps context is not the right word here—unless the biomedical-body-as-actionable-real counts as a "context." But McCallum is clear that we are dealing with more than the linguistic, the ideational, or the cultural. "For such a process to happen, more than the adoption of new linguistic terms or even entire symbolic systems would be involved. . . . Transduction in the strong sense implies that interpretation of symbols and signs is not what is at stake in interontological dialogues of the type in view here" (2014: 509). This is not about "slipp[ing] contextually in and out of different ontological attitudes" (Harris and Robb 2012: 676), but is about reconfiguring the (proximate, actionable) real itself.

Conclusion: Plural reals, plural realisms

This remaking of reality in turn highlights the intimate relationship between particular reals and particular real*isms* that casts Graeber's remarks from the beginning of this essay in a different light than he perhaps intended. Graeber treats the real as a matter of common sense and realism as unproblematically deriving from this commonsense reality. Yet, per Heinrich, "literary realism . . . is not a methodologically pure and corporeally uninvested aesthetic modality that exists outside of or incidental to the body." Instead, "on the contrary . . . realist aesthetics cannot exist without the body. According to Anderson, the body, and in particular its mortality, is actually the prime number of realism, since realisms always assume the body's materiality as a starting point for descriptions of 'those features of the natural world that invasively trespass' its perceived autonomy" (Heinrich 2016: 425).

While Heinrich focuses specifically on literary realism, I think we can profitably extend their discussion to the ethnographic and "ontological realism" that Graeber espouses. Indeed, Farquhar foregrounds the commonalities between ethnographic and literary realisms. Ultimately, she suggests, both kinds of realism "not only [make] claims about reality, but . . . very often successfully [perform] it." As a result, both simultaneously "[respond] to and [modify] the conditions under which they appear." Yet despite the fact that realism in the broad, Graeberian sense is "the dominant genre of representation in the modern world" it is hardly universal, natural, or ahistorical (Farquhar 2002: 24). Rather, echoing Barthes, Farquhar argues that "cultural rules of representation constrain any text that places 'real referents in collusion with the signifiers of its descriptive language'" (2002: 22). It should not be surprising that given the plurality of proximate, actionable reals from which such "cultures [or, perhaps better, systems] of representation" and their constraints emerge—and to which they are keyed—that the latter are also themselves plural. Thus, the privileging of an unmarked Western mode of realism over others is both a historically specific and power-laden question. Indeed, paralleling Heinrich on literary realism, we can argue that ethnographic and ontological realism "far from [being] objective, [are] in fact . . . heavily ideological representational technolog[ies], the aesthetics of which are deeply and specifically conditioned by questions of corporeality" (Heinrich 2016: 425).

The specificity of realisms to particular reals can help account for the utter bafflement on the part of Western translators of classical Chinese texts describing the practices of palpation which they perceived as "'very obscure' and 'phantastical'" accounts composed

in "the queer perplexing otherness of Chinese 'allegorical' discourse" (Kuriyama 1999: 63).[24] In such a light, Hay's comment that "in the Chinese sphere, when the entire ontology was metaphoric, then individual 'metaphors' were simply realistic" can be read as highlighting the historical and geographical specificity of both realisms and the reals from which they derive (Hay 1994: 61; quoted in Heinrich 2016: 429).

This plurality of reals and realisms, in turn, reveals both Graeber's and Viveiros de Castro's resorting to "commonsense" realism in the face of radical alterity to be thoroughly ideological choices that unduly foreclose an anthropological openness to the capacity of the Real to accommodate multiple actionable realities. By contrast, this essay has attempted to articulate a more-than-cultural approach to material alterity that seeks to move such inquiry off the terrain of the ideational and away from a crypto-Protestant fixation on "strange beliefs." It has done so via series of interconnected moves: first by replacing a focus on ideas and beliefs in an alternately singular or plural cosmos with one on situated patterns of successful practical action with and against the unknowable Real. Second, by teasing apart the texture of ultimate Reality (the ontic) as the thing that pushes back unpredictably against human agency on the one hand from the proximate life-worlds we inhabit on the other, it has argued for the building up (and working up) of multiple proximate actionable reals as the materio-cultural precipitates of different processes of "tuning" and retuning practical human action against the lability, treachery, and durability of material reality.

Building on the insights of Pickering and Farquhar, in particular, I have sought to make the case that the ontic is capacious enough to allow for the building up of many different noncommensurate more-than-cultural proximate reals. In doing so, I advocate for reclaiming some of the more invigorating assertions of high Cambridge Ontology vis-à-vis the existence of radical alterity. Yet I do so from a materialist and historicist, ontically agnostic yet multirealist angle, seeking to reinflate such claims while also grounding them on the hard surfaces of a shared world. The point is not that there are radical others out there in the world independent from human action but that *we make the world multiple* in more-than-cultural ways via concerted forms of successful practical intervention in the Real—one Real (or more than one, we don't, and maybe can't, know), many reals. The ontic is big enough for all of them even if our received metaphysics are not.

24. See also the similar sorts of consternation at descriptions of "sea-marks"—the oceanic equivalent of landmarks in traditional Carolinean navigation in Riesenburg 1972.

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Chris Vasantkumar is a lecturer in anthropology in the School of Social Sciences at Macquarie University in Sydney, Australia. His work has been published in journals such as *Economy and Society, The Journal of Cultural Economy, Theory, Culture & Society, Environment and Planning D: Society and Space*, and *Critique of Anthropology*. His current research interests include the global history of money and metrology, cash and cashlessness, and the relationships between monetary innovation, temporality, and the future in southern Africa. He is currently at work on a manuscript on more-than-human theories of exchange.

Chris Vasantkumar
chris.vasantkumar@mq.edu.au