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Robert Oppenheim
*Anthropological Theory* 2007; 7; 471
DOI: 10.1177/1463499607083430

The online version of this article can be found at: http://ant.sagepub.com/cgi/content/abstract/7/4/471
Actor-network theory and anthropology after science, technology, and society

Robert Oppenheim
University of Texas at Austin, USA

Abstract
This essay makes a case for the value of actor-network theory (ANT) to anthropology beyond its most usual deployment in studies of science, technology, and society (STS). Through a review of two recent ANT works against both the longer-term development of the approach and common patterns of anthropological appropriation and critique over the past several years, it argues that ‘about-ANT’ and ‘across-ANT’ understandings that emphasize an applicability to technoscience or situations of hybridity should give way to ‘among-ANT’ readings that highlight its quality as a domain-independent ontology of association. Most centrally, it offers a reading of the constitutive spatialities of ANT itself and of spatiality as an important ANT concern, with the suggestion that a greater appreciation for this dimension of the literature might form the basis of broader and more varied anthropological engagements.

Key Words
actor-network theory (ANT) • Bruno Latour • John Law • science, technology and society (STS) • space and place • spatiality

This essay offers both a review and a reading of recent works by two authors commonly associated with the foundations of actor-network theory (hereafter ANT), Bruno Latour’s Reassembling the Social: An Introduction to Actor-Network-Theory (2005) and John Law’s After Method: Mess in Social Science Research (2004).¹ It seeks to provide a commentary on and critique of anthropological appropriation of this literature and to suggest a direction towards which the dialogue might turn by foregrounding and expanding upon a relatively latent aspect of the ANT apparatus, namely the constitutive spatialities that Latour and Law deploy. Like other attempts at theoretical exegesis, this article thus intends both fidelity to an internal logic of its focal texts, albeit one of several potentially available, and an engagement with the routinized habits of a
historically-specific readership. By reading across the grain of such habits and highlighting the internal architecture of ANT concepts, I hope to suggest a greater and more variegated value of the ‘new ANT’ for anthropologies of different sorts.

The reception of ANT within anthropology over the past decade or so has, for the most part, come through a burgeoning anthropology of science and its own engagement with the interdisciplinary formation known as science, technology, and society studies (hereafter STS), within which ANT is often considered one approach or ‘school’. Certainly the sociotechnical remains a recurrent illustrative focus of both recent books considered here. Yet each text also represents a summation of some ANT developments over roughly the same decade and a milestone of explicitness in a process of decentering any topical definition of what ANT is or should be as circumscribed by an interest in science or technology. Read on their own terms, both books are addressed to sociology and the social sciences more broadly as charters for their remaking. As its title suggests, After Method takes as its foil the ‘methods course’ of many graduate social scientific curricula and method itself as ‘a system for offering more or less bankable guarantees’ (Law, 2004: 9), a focus born of Law’s open frustration that insights developed through STS work ‘have not been more important in social science and its thinking about method and methodology’ (13).2 Reassembling the Social redoubles Law’s concern with theoretical reification, most amusingly in a transitional dialogic interlude between a graduate advisor and a student who wishes to ‘apply ANT’ that is somewhere between Socratic and Three Stooge-ish in its overall tenor, but Latour takes as his more basic opponent ‘the social’ as a name for a ‘type of material’ (2005: 1), a kind of matrix (‘context’) in which much else is immersed, or a ‘distinct domain of reality’ (4). He thus contrasts actor-network theory (rescued from the erasure under which it was placed in Latour, 1999b) with a ‘sociology of the social’ conceptualized as a Durkheimian sui generis force and even more with any critical sociology that relies on the social as a solvent to derealize and expose power backstage.

The ‘after’ of my title is thus meant to indicate the goal of staging a broader anthropological encounter with ANT’s own reinscription. Rather than standing pat with what might be called an ‘about-ANT’ understanding that takes ANT as a topically-defined instrument for doing ‘science studies’, or even an ‘across-ANT’ attuned to the hyphenate borderlands of the sociotechnical, cultural-natural, or political-material – zones where hybrids proliferate but which are defined by prior, coherent, disparate domains brought together – I propose to follow Latour and Law’s movement to an ‘among-ANT’: a domain-independent ontology of association.3 Yet this essay also attempts to develop a more specific and novel way of reading. Beyond technoscience as a topic and the question of hybrids, American anthropologists have taken up ANT (often equated with Latour) to discuss, notably, non-human agency and material efficacy (e.g. Rose, 1994; Abu El-Haj, 2001; Holland and Leander, 2004), the constitution of the modern through acts of purification (e.g. Zaloom, 2003: 270; Briggs, 2004; Myers, 2004), questions of recursion in the entanglement of anthropology in fields of study that themselves performatively circulate familiar frames of understanding (e.g. Maurer, 2005: 2; cf. Riles, 2000, 2004) and the alignment of interests in projects of force assemblage (e.g. Kaplan and Kelly, 1999). Some of these employments have in turn generated partial or fundamental critiques of ANT, to the effect that it demonstrates an affinity for demiurgic, agonistically self-constituting entrepreneurial selves (see Star, 1991; Clarke and

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Casper, 1996: 602; Haraway, 1997: 34, 279–80n1; Briggs, 2004: 174), that it procedurally assumes an initial equality of strength or weakness among actors (Abraham, 1998: 61–3; Kaplan and Kelly, 1999: 845), or that, relative to other pioneering work in science studies such as that of Sharon Traweek (1988), it is unconcerned with actors’ subjectivities (Fortun and Fortun, 2005: 44). In few of these appropriations or critiques, however, has either ANT’s spatial articulation of concepts or its spatial imagination of associational ontology been centrally considered (for exceptions see Raffles, 1999, 2002; Escobar, 2001; Hatfield, 2002; Briggs, 2004; in sociology Molotch et al., 2000). I aim to do both here. One might appropriately detect in this move echoes of attempts in the anthropology and social theory of the 1990s to formulate categories of space and place as basic and not epiphenomenal or subordinate to some more foundational aspect of sociocultural process (Soja, 1989; Lefebvre, 1991; Casey, 1993, 1997; Gupta and Ferguson, 1997).

In the sections that follow, I thus consider first Latour’s and then Law’s book in order to draw out a series of spatial issues. Initially, I examine how the signature ANT concept of symmetry, basic to many understandings of what ANT is and what it is good for, has been recast with a more general theoretical hostility to domain spatialities. This is fundamental towards distinguishing ‘among-ANT’ from ‘about’ and ‘across’ readings, for grasping that ANT need not be concerned with STS. I then turn to the spatial complexity of the actor-network figure, newly prominent in these recent writings. To date, anthropological consideration of ANT’s ontologies of connection, translation, and alignment has marshaled less attention to its complementary treatment of what, with Donald J. Hatfield (2002), we might call distributedness or disposition. The metaphorical ‘flatness’ of networks similarly exists alongside a complex ANT treatment of emergent dimensionality. I argue that the overall character of actor-network operations as envisioned by ANT authors gives the literature a spatial aspect as something akin to a ‘distributed phenomenology’ – though the term is imperfect and might well be rejected by Law or Latour. Finally, focusing on the topological contouring of reality arrangements that is the most distinctive aspect of Law’s work, I consider how ANT uniformitarianism of actants and agency coexists, at least in one version, with an admission of the question of qualitatively different spatial kinds.

I think the payoff for anthropology in reading recent ANT through spatiality is fourfold. First, especially if ANT is understood as a dialogue that extends beyond Latour as its most famous representative, such a reading helps encapsulate some important directions in this literature over the past decade – that is, after the anthropological appropriation and canonization of Latour’s Science in Action (1987), The Pasteurization of France (1988), and We Have Never Been Modern (1993), texts that still comprise the ‘standard version’ of ANT for many in the discipline. Second, in ANT’s spatialities lie many of its responses to the sorts of criticism made by anthropologists and others – this is worth seeing, whether or not one judges these responses adequate. Third, although I will not review the anthropological literature much more than I already have, various anthropological translations of ANT have their own spatial infralogics that might, in the service of mutual critique, usefully be placed in juxtaposition. And fourth, I would contend that such a spatialized reading might be productive of new anthropological engagements with ANT, of which a recasting of questions of space and place is only the most glaring: candidates for an among-anthropology after the ANT=STS equation.
RE-GENERALIZED SYMMETRY

Reassembling the Social stems most directly from Latour’s 2002 Clarendon Lectures in Management Studies at Oxford University’s Saïd Business School, and its subtitle promises an expository character as an introduction to ANT that might befit such a setting. It is, in fact, introductory in the sense that it offers the most systematic English-language unfolding of Latour’s positions from axiomatic first principles (which take up half the book) and guide for potential ANT practitioners since at least Science in Action (1987) and possibly to date. Due to this very program, however, it is also quite abstract and indeed is premised on the necessity of sociology becoming more abstract (2005: 23) so that it might be more open-ended in its ‘relativistic’ refusal to avoid foreclosing the range of connections actors make. Those who wish to introduce students or colleagues to ANT via an extended, concrete exemplification will continue to prefer The Pasteurization of France (1988) or perhaps especially Aramis (1996a).

The clearest antecedent of Reassembling the Social is Latour’s (1986) essay ‘The Powers of Association’. The ANT presented in both is the Oedipal descendant of Durkheimian sociology, in open revolt against ‘the social’ as a sui generis kind and as a prior explanatory resource rather than an achievement to be explained, and the new text adopts as grandfather and inter-generational ally Gabriel Tarde, the vanquished inheritor of a pre-19th-century tradition (evident, for example, in Diderot and Montesquieu) of reckoning the assembly of force through heterogeneous connection (2005: 14–16, 129–30).5 For reasons not entirely clear, Latour rejects his previous neologism, ‘associology’, as name for this Tardean alternative to the sociology of the social in favor of the term ‘sociology of association’ (9). By either name the approach seeks to track ‘the social not as a special domain, a specific realm, or a particular sort of thing, but only as a very peculiar movement of reassociation and reassembling’ (7) – or as it is later put more pithily, not as an aisle in a supermarket alongside others holding the natural, the material, or the religious, but as the flash of emergent arrangement in ‘the organization of all the goods’ (65). The first half of the book offers a series of five de-ontologizing propositions, described as ‘uncertainties’, that aim to latch ANT’s sociology to the openness of associative process rather than any prior social.6 Four of these look towards the second half of the body of the text, where actors’ settlement of their worlds is brought to the foreground; the fifth feeds more directly into a conclusion in which the critical and political status of ANT as a performative participant in such assemblies is explored.

Latour begins the discussion in an apparently familiar place, with a focus on the analysis of categories or disputes that, in earlier ANT writings topically directed at STS, had motivated a preferential attention to ‘science in the making’ rather than settled, ‘ready-made science’ (Latour, 1987: 13). Sociologists of associations are advised to ‘feed off’ (2005: 21) such situations in which actors ‘unfold their own differing cosmos’ (23) rather than imposing an architecture of cosmos and society from above. The first four uncertainties, about the nature of groups, of actions, of objects and of facts (22), present interlocking trails to follow in tracing such controversies. Instead of relying on sociological groupings (class, ethnicity and so on) analytically imposed as independent variables, would-be ANT practitioners are advised to consider how actors are ‘made to fit’ (28) in groups that are never without spokespersons and that are defined against other groupings (32–3). The connection and maintenance of groups can potentially take place through both ‘intermediaries’,7 which faithfully transmit the force of cohesive action,
and ‘mediators’, which ‘transform, translate, distort, and modify the meaning or the elements they are supposed to carry’ (39). Action itself is likewise ‘conglomerate’; actors, as ‘concatenations of mediators’ who import capacities, are ‘overtaken’ and ‘made to act’ by others (44–6, 59). Furthermore, in probably the most famous ANT point, insofar as objects mediate, making others act in certain ways, they must be regarded as among the array of performative agents that potentially come to bear as associations are made and remade (63, 107). Finally, facts, as themselves objects, do not come prepackaged as a static and wholesale natural order, an always already coherent reality that other actors may only confront as a unity. As ‘matters of concern’ in controversies, real but not indisputable, facts are ‘interesting’ in both the qualitative and the active verbal sense of Michel Callon’s interessement as a process of enrolling and making others do (111, 114; Callon, 1986). They draw actors into complicities with the world and one another.

So far, so good for readers familiar with Latour’s other writings: humans and non-humans act, action and agency are composed through translation, and the facts of nature are complexly interactive, neither sufficiently determinative nor ‘socially constructed’ (88; Latour and Woolgar, 1986: 281; Hacking, 1999). The dissolution of the social as a homogenous and self-originating kind follows well-worn ANT pathways. Yet the security in familiar ANT practice and dialectics that Latour proffers with one hand he takes away with the other, for the challenge to the domain social that Reassembling represents is followed through to a more general antagonism towards domain spatialities, a priori enclosures of coherence, including those routinized in the translations I have called about-ANT and across-ANT. There is a hint of this antagonism in a slight surprise of the conceptual exposition quite early on. Is ANT meant to be topically defined even in an abstract sense as a set of tools or a cunning for writing about controversies, associations ‘in the making’, for ‘hot’ kinds of relations in something like Lévi-Strauss’s old sense (1966)? The surety of even this domain logic of focus is undermined by Latour’s suggestion that the uncertainties themselves are controversies; the ‘weak allusion to the “uncertainty principle”’, he adds in a footnote, is made ‘because it remains impossible to decide whether it resides in the observer or in the phenomenon observed’ (21–2). But the generality of the rejection of domain spaces as a fundamental basis for Latour’s reassessment of ‘the social’ as a coherent kind becomes most explicit in his revisitation of the foundational ANT issue of symmetry.

ANT’s own historical narrative, as articulated by Latour, Callon, Law and others, commonly both acknowledges a debt to and claims a transcendence of the principle of symmetry as originally formulated by the ‘strong program’ of the sociology of scientific knowledge; precisely this point has been a central bone of contention between the two approaches (Latour, 2005: 97; Collins and Yearly, 1992; Callon and Latour, 1992; Bloor, 1999; Latour, 1999a). This maxim of the strong program, reinscribed by ANT authors as the ‘first principle of symmetry’, was anti-Whiggish and anti-Mertonian in its thrust: social causes were to be sought behind the epistemologies of both good and bad science, truth and error. In writings published in English in the late 1980s and early 1990s – still among those most apt to be read into anthropology as representative of ANT – Latour and ANT colleagues described their own (second) ‘generalized principle of symmetry’. This displaced social causation and tried instead ‘to obtain nature and society as twin results of another activity’ and thus to explain each in the same terms, with their sorting as big-N Natural and big-S Social the further specific result of ‘modernist’ processes of
purification (Callon and Latour, 1992: 348; Latour, 1993: 94–6; cf. Callon, 1986). By the late 1990s, however, the principle and the mirror-image diagrams of natural-social co-generation it had engendered had also come under erasure in Latour’s writings (1999a: 128; 1999c) because they were susceptible to flattening as a concern for hybrids *between* volumetric spaces that were thus rendered prior – lost or at least submerged in translation was the more forceful ontological claim that ‘what there is and how it is divided up should not be assumed beforehand’ (Law, 2004: 102). Thus, in *Reassembling the Social*, Latour writes:

There is no empirical case where the existence of *two* coherent and homogenous aggregates, for instance technology ‘and’ society, could make any sense. ANT is not, I repeat is not, the establishment of some absurd ‘symmetry between humans and non-humans’. To be symmetric, for us, simply means *not* to impose a priori some spurious *asymmetry* among human intentional action and a material world of causal relations. There are divisions one should never try to bypass, to go beyond, to try to overcome dialectically. They should rather be ignored and left to their own devices, like a once formidable castle now in ruins. (76)

In a footnote to the passage, he adds:

This is the reason why I have abandoned most of the geometrical metaphor about the ‘principle of symmetry’ when I realized that readers concluded from it that nature and society had to be ‘maintained together’ so as to study ‘symmetrically’ ‘objects’ and ‘subjects’, ‘non-humans’ and ‘humans’. But what I had in mind was not *and*, but *neither*: a joint dissolution of both collectors. The last thing I wanted was to give nature and society a new lease on life through ‘symmetry’. (76)

However productive it may have been as a charter for topically-defined STS, hyphenate symmetry in the sociology of associations is strictly *proscriptive* against the foreclosure of domains of relevance, while ‘hybridity’ is warded against the familiar danger of reifying its antecedents into purity.

Similar conceptual domain spatialities, zones of ostensible self-coherence, including many basic to common versions of what ANT is, are challenged throughout *Reassembling*, recast as not one. Is ANT an extension of sociology to the domain of the sociotechnical? No, the sociotechnical is the pathway through which ANT historically passed to the realization that social theory has failed everywhere (94). Is ANT concerned with materiality? Perhaps, sometimes, but, as with facts, material objects are not ‘simply connected to one another so as to form a homogenous layer . . . objects are never assembled together to form some other realm anyhow’ (84–5). ‘The “matter” of most self-proclaimed materialists’, Latour adds (76), ‘. . . is a highly politicized interpretation of causality’; ANT recourse to matter must be inextricable from the process of mattering that disrupts the domain singularity of the category and allows the thingness of things its open variety of roles. Is ANT about networks? Not if a ‘network’ is understood as a kind of shape in the world – different, say, than a rigid organization. ‘Network’, Latour insists, is a deliberately weak term like others in the ANT lexicon, infralinguistic rather than metalinguistic in character, primarily a quality check on accounts that
asks simply if relations between actors and mediators have been fully allowed to exist (30, 129).9

If symmetry remains as a charter principle of the ANT of *Reassembling the Social*, it is thus similarly infratheoretical, similarly a tracing among difference and heterogeneity allowed to exist rather than a movement between prior differences or heterogeneities. This yet-more-generalized symmetry of ANT removed from STS bounds is one of distribution and stabilization.

**DISTRIBUTEDNESS AND DIMENSIONALITY**

ANT’s tendencies and limitations as an approach have often been read through its metaphors of realized creation and teleological singularity: words like making, construction (with a particular sense), alignment, and of course assembly itself as applied to the endpoints of scientific and other projects. Yet as a ‘very special brand of active and distributed materialism’, the ANT of *Reassembling* turns equally on a treatment of the spatiotemporal distributedness of ontological relations and the consequent dislocation of action. ‘Action’, Latour writes, ‘is borrowed, distributed, suggested, influenced, dominated, betrayed, translated’ (46). While this is not in fact a new claim relative to prior ANT texts and instantiations of the sociology of association or translation, the foregrounding of this ‘distributional’ moment of ANT in *Reassembling* extends its antagonism to domain logics of categories to the ‘actor-network’ figure itself. The ‘actor-network’ is not the encounter of two different kinds of entities or spatialities, unitary ‘actors’ with ‘networks’. Rather, actors are actor-networks, which thus extend all the way down (46, 217). All loci of action are ‘knots’ (44), nodes, or nexuses – ‘star-shaped’ spatialities, as Latour writes late in the book (e.g. 177). Actors, as themselves mediators, are entities that are not one (39).

This distributional emphasis is furthermore the basis of responses Latour offers to major strands of criticism directed at ANT by anthropologists and others.10 The apparent focus on entrepreneurial science and the martial metaphors (‘war and peace of microbes’) of such works as *Science in Action* and *The Pasteurization of France* led to a critique of the implied strategizing, competitive, self-aggrandizing, capitalist, probably male subject and associated bias towards ‘victory narratives’ of successful socio-technoscientific assemblage. This critique, offered most prominently by authors writing from the tradition of feminist technoscience (Haraway, 1997), significantly mediated the early reception of ANT by the emergent anthropology of science of the mid-1990s (e.g. Martin, 1996: 101). In *Reassembling*, however, the dislocality of action is more clearly set at the center of its theorization, with the result that the self-coherence of even ostensibly entrepreneurial action is destabilized. Latour’s emphasis on the ‘under-determination of action’ effectively establishes an internal symmetry to the category: in the general case of action, when actors act as mediators and not as transparent intermediaries, action is additive to the world,11 but at the same time actors are those which are ‘made to act by many others’ (45–6). Analytical tracing (‘following the actors’) might move in either direction, towards composition or decomposition; concretely, when later in the text Latour sets down some examples of ANT fieldwork, sociologies of innovation (which perhaps tend towards an entrepreneurial narrative character) are balanced against sociologies of failure and of objects dislocated in space and time (80–1).12 Distribution is also the answer given to criticism that ANT deals poorly with situations
of inequality, insofar as it does not admit strength and weakness or differentials of ‘power’ as prior coordinates for study (cf. Latour, 1988: 7). The insistence, in Reassembling, is upon locating the mediators ‘through which inertia, durability, asymmetry, extension, [and] domination [are] produced’ rather than taking positioned actors and objects as conduits for a power behind (85). Thus the point is only that strength and weakness are not a priori inherent in some ‘ether’, impinging upon actors from some contextual domain that they are ‘in’, sovereign to them with a different sort of (radiant, homogeneous) spatial quality, or aspects of an all-constitutive subjectification. Power differentials exist, and are held together, rather via a logically a forteriori spatiotemporal alreadyness of things in distribution – that is, in ‘terrains’ of mediating entities (63; cf. Kaplan and Kelly, 1999: 857 citing Asad, 1993: 273).

This distributional focus has its own complement in Part II of Reassembling, in which Latour turns from the ‘deployment of controversies’ to the ‘moves’ through which they are stabilized and thus through which force and interest ontologies come into being (16). His own first move is again a refusal of a priori domain-logics of scale that theorize the ‘in-ness’ of action – the ‘global context’ that (somehow) contains and affects or is instantiated in ‘local interaction’, or the ‘system’ in which ‘actors’ exist – as well as any solution that simply conceptualizes a dialectical relatedness of these poles (165, 170). He identifies as the weakness of theories bound to such ‘three-dimensional images’ their tendency to pre-specify the emplacement of action and thus to occlude ‘from inquiry the main phenomenon of social science: the very production of place, size, and scale’ (171). To disable the urge to volumetric inclusion (and the associated need to conceptualize the interaction or ‘jump’ between levels), Latour offers what he calls a series of ‘clamps’ designed ‘to keep the social flat’ – the sense is of a complex but two-dimensional topography rather than a plane (172–4). Other sites are simply other, and that includes the loci of the global, of capitalism and the like; scale is emergent in the way star-shaped entities are connected and enfolded rather than coming in nested hierarchies right out of the box.

As was the case earlier in the book, the ‘clamps’ themselves are infratheoretical concerns, mediating entities that direct attention to the spatialities of action assemblage. ‘Oligoptica’ and ‘panoramas’ describe mediations in a summation of ‘other places, times, and agencies through which a local site is made to do something’ (173); the task of tracing these is alternative to contextualization as an analytical operation. Oligoptica are connected narrowly but well to other sites along two-way conduits and include the prototypical ANT centers of calculation: laboratories, bureaucratic or academic offices and so on. Panoramas, meanwhile, are representations or stagings of totality that comprise actors’ own attempts to contextualize, to find the ‘Big Picture’. Though not inherently forceful, as oligoptica along their limited and tenuous links are, panoramas may be connected just as other sites to form templates for coherent action (175–90). If with this first pair of terms Latour offers tools to describe ‘the many local places where the global, the structural, and the total [are] assembled’, with another pair he shifts focus to how ‘locals are localized’ and ‘places are placed’ (191, 195) through new summations of force. As names for mediating agencies in these operations, ‘articulators’ and ‘localizers’ focus description on the concentration of dislocation that forms the local and the mosaic of otherness imbedded in direct interaction. Emplacement, thus, occurs through ‘the assemblage of all the other local interactions’ that brings about the ‘transported
presence of places into other ones’ (194). In a concluding overview, Latour presents a series of negative propositions. Local interaction is neither ‘isotopic’, nor ‘synchronic’, nor ‘synoptic’, nor ‘homogenous’, nor ‘isobaric’. That is, it imports elements from other places and times that are never fully visible to analyst or actors, that have different material qualities (without ‘material’, itself, being understood as a unitary domain) and that, especially as mediators versus intermediaries, exert different pressures on the interaction (199–202). With this focus on the localized dislocality of action in the first two chapters of Part II, Latour squares the circle between distribution and stabilization and between the conceptually dispersive moment of the ‘uncertainties’ prescribed in the first half of the book and the (re)assemblage moment of the ‘moves’ of its latter sections.

The final such ‘move’ of the last of Part II’s three sections builds on the first two to arrive at an overall understanding of stabilization via circulation through distributed mediating entities. It is in this chapter, also, that dimensionality as a constituent aspect of Reassembling’s version of ANT spatiality, as a shorthand for the infrastructure of a stability not built on stasis, becomes most explicit. Latour (220) writes:

[what circulates, so to speak, ‘inside’ the conduits are the very acts of giving something a dimension. Whenever a locus wishes to act on another locus, it has to go through some medium, transporting something all the way; to go on acting, it has to maintain some sort of more or less durable connection.

The ‘flattening’ that began Part II, he goes on to suggest, now assumes its full infra-theoretical role as merely a check on three-dimensional sociologies’ tendency to foreclose a tracing of emergence in actors’ own multifarious dimensioning moves (220). The point here is a familiar ANT point, generalized. Durability of effect not as an inertial property but as a stabilization achieved via a shift through a medium of another quality was basic to such classic examples as the speed bump as ‘sleeping policeman’ that makes one slow down, the heavy brass fob attached to a hotel room key that reminds one to leave it at the front desk, or the maxim ‘technology is society made durable’ (Latour, 1991, 1999c: 186–7). In Reassembling, Latour simply extracts the argument from the domain-logics of ‘the technical’, ‘the material’, and ‘the social’ that such examples seem to invite and the across-ANT they thus seem to license. For the among-ANT at the fore in the book, the dimensionality that is the durable quality of stability and the efficacy of emplace-ment upon action or being inhere rather in an open connection among mediating elements that are performatively accessed precisely in their difference, distance, and incommensurability, without reference to any necessary coordinates of this difference (74–8). Things, subjects, nodes and sites are ‘gatherings’ (144). In recent anthropological writing, similar arguments are made, for example, by Timothy K. Choy’s (2005: 12) reading together of an ANT-derived concept of ‘translation’ with ‘articulation’ to discuss an event ‘productive of difference, even as it builds a putative sameness across that difference’, and by Dorothy Holland and Kevin Leander’s (2004) metaphor of ‘lamination’ to describe subjectivities formed in the relation of multiple heterogeneous (and perhaps asynchronous) layers.

If this view on the n-dimensional association of entities accessed in their difference represents the first sense of dimensionality in Reassembling, there is another kind of dimensional relation introduced in the final pages of Part II that pertains to the issue of
the ‘vast outside’ of the actor-network (245). Such connectivist spatialities, as Latour emphasizes throughout the book, are not to be seen as imbedded ‘in’ any volumetric domain, society or context. But the network metaphor suggests another sort of negative space, the ‘in between’ of those sites, actors and concerns that are ‘simply unconnected’, which is always infinitely more inclusive than the narrow tendrils of any given stabilized formation (242, 244). Yet this is not simply a figure–ground relationship, seen as it were from the perspective of an external observer, for Latour is at pains to describe this negative dimension in its actual and potential, spatiotemporal and ontological relatio-
ality to the positive connections of an association. He offers as a term for the ‘missing masses’ of the unconnected the word ‘plasma’, emphasizing the qualitative being of its occupants as the not yet: ‘that which is not yet formatted, not yet measured, not yet socialized, not yet engaged in metrological chains, and not yet covered, surveyed, mobilized, or subjectified’ (241, 244). For a network, for a given assemblage, this plasma ‘resembles a vast hinterland providing the resources for every single course of action to be fulfilled’ (244). Beyond stabilizing dimensionality lies the secondary dimensional relation to this undetermined outside.

This double dimensionality gives the ANT of Reassembling a profoundly phenomeno-
logical – and perhaps especially Heideggerian – cast in its spatiality if not in its other assumptions or issues. The spatial (or, better, ‘platial’) ontology of situatedness in Heidegger’s early work is at odds with both the universal, objective, transcendent co-or-
dinates of Cartesian space and the categories of domain-like ‘territories’ negatively defined at ‘boundaries’ that, owing notably to a long dialogue with (post-)structuralism, tend to be prominent in anthropological thinking on space and place. Heidegger’s phenomenology of being in place relies rather on orientation and ‘aroundness’ as its basic coordinates; the two combine most famously in a distinction between objects ‘ready-to-hand’ and those only ‘present-at-hand’ that turns on Dasein’s own attention and directedness (Heidegger, 1962: 103). The dimensional relations in Latour’s version of ANT space are similarly coordinated by directionality and a non-proximally-defined ‘aroundness’. Reassembling’s stabilizing dimensionality recalls a Heideggerian relation of equipmentality or environmentality with entities whose quality is to exist for one (Heidegger, 1962: 91–148), while its concept of a ‘plasma’ as the unformatted great outside that is also always a potential resource for network extension underscores the quality of this extension as de-severant accession in Heideggerian terms, an orienting and ‘oriented bringing-close’ of that which is already there (Casey, 1997: 250). Thus closeness, in Latour as in Heidegger, does not come without directionality, because to be formatted is to exist for an association. Understanding ANT in these spatial terms is another way to understand why and how Latour rejects all variations on subject/object dialectics to explain what ANT is about and refuses to be trapped into Humeian/ Kantian/Science Wars’ questions about whether external reality exists – none of these ways of posing the question have any genuine place for the irreducible categories of being-in-place that are constitutive of ANT spatiality.

A number of objections might be raised to this translation. The early Heidegger of Being and Time is prima facie ‘temporalist’; here, I simply refer the reader to Edward S. Casey’s unpacking of the role of place in this and other works (1997: 243–84). Heideggerian thought has also not often drawn a great deal of acclaim from anthropologists, for a variety of very good reasons, among which a tendency towards universalist
framings is one of the more obvious – Latour (1999c: 176) himself, writing elsewhere about Heideggerian ‘Man’, quips that ‘there is no Woman in Heidegger’, and the point applies mutatis mutandis to other categories of difference. Anthropologists aiming for a phenomenological edge have more commonly relied on the work of Merleau-Ponty (2002) for the emphasis on embodiment that it brings, but Heidegger’s non-reliance on the body as the ‘royal road’ to place is precisely what makes him more useful in drawing out the spatial ontologies of relations between human and non-human actors (Casey, 1997: 243). Perhaps the most apparent basis to object is that Latour, at various junctures in Reassembling, is no less harsh towards phenomenology than he is towards Durkheim or Kant (e.g. 60–2, 244).17 Latour (61, 244; cf. 1999c: 176, 183), no doubt like many coming out of STS, objects to the opposition of the human and the objective or technological (an opposition at high tide in Heideggerian concerns for authenticity; see 1997), and to the restriction of interpretive agency to humans. Yet at the same time he adds that ‘this does not mean that we should deprive ourselves of the rich descriptive vocabulary of phenomenology, simply that we have to extend it to “non-intentional” entities’ (61 n. 67), and the elements of this ‘vocabulary’ that echo most prominently in Reassembling are indeed dimensional terms like ‘equipment’ and ‘gathering’. To make my own distinction, I would argue that Latour’s ANT, while rejecting the various locations of phenomenology, reinforces many of its qualitative interspatialities. If something like a ‘(multi-)nodal phenomenology’ can be imagined, this may be it.

One additional consequence of grasping the articulation of ANT and phenomenology via the conduit of spatiality is help in understanding ANT’s ethics of knowledge and scholarship, the focus in Reassembling of the final ‘uncertainty’ of Part I as well as the conclusion to the book as a whole and yet one of the less-discussed aspects of ANT in anthropological secondary literature. Phenomenological space is ethnically stratiﬁed. If Heideggerian wordplay is notorious and if Anglo-German meanings seem a solidly ethnocentric ground on which to build broad understandings of being in the world, Heideggerian readings of terms like ‘closeness’ (a current quality of my keyboard, and also my spouse), ‘concern’, and ‘care’ serve at least as negative checks upon assuming disconnection in understanding such categories solely in terms of proximity or cold network relationality (Heidegger, 1962: 83, 237; cf. Fortun and Fortun, 2005: 47). The ethics of ANT in Reassembling, meanwhile, is similarly itself an ethics of extension that Latour arrives at in part through an encounter with the work of Isabelle Stengers (1997). Such an ethics takes the risk of an account as a desideratum, demands that it might fail, asks whether an account extends an accounting of mediators provisionally, fragiley, a little bit further, and how it is vulnerably extended in the process (128, 133). Politically, such an account adds to the visibility of connections, and thus makes more possible as a distinct separate step the more participatory collection of the world as a ‘livable whole’, while rejecting the premature closure of political questions through recourse to those domain spaces – for example ‘the (properly) social’, ‘the natural’, or ‘the scientiﬁc’ – that always perfectly delimit the horizon of relevance (247, 259). ‘Bluntly’, Latour (250) writes towards the end of the book, ‘if there is a society, then no politics is possible’.

FRACTIONALITY, FLUIDITY, AND TOPOLOGY

Law’s After Method (2004) is not a book about actor-network theory – the term appears in only a handful of places in the text – but rather one devoted more generally to the
possibility of a more open and permissive social science practice. Yet in recent years, Law, among ANT’s founders, has been deeply involved in dialogues that have expanded its constituent concerns and even sought to give shape to a ‘post-ANT’, with all the usual ambivalence over continuity and disjuncture with respect to a classical past (see especially Law and Hassard, 1999). More specifically, largely in collaboration with Annemarie Mol, Law has played a leading role in setting spatiality and the spatial ontology of objects at the center of ANT and allied debates through such definitive concerns as topology and fractionality (Law 1986, 1999, 2002; Mol and Law, 1994; Mol, 1999, 2002). In Deleuzean jest, or at least with an ironic sense of the melodrama of the formulation, it was Law and Mol who referred to ANT as ‘a machine for waging war on Euclideanism’ – on volumes or domains as ways of conceiving ontology (Law, 1999: 7). While After Method has a different explicit purpose, it remains significantly informed by this spatial articulation of ANT logics. With respect to Latour’s Reassembling, it is more attuned to the partiality of some stabilizations – or, better, coherencies – and ultimately to the analysis of local relations not just of difference but of incommensurability.

Law’s point of departure is the proposition that ‘methods’, which at various junctures in the book indicate the familiar fetish of introductory social science courses, the techniques of laboratory biology, the organization of various medical interventions, religious practice, and even the cultural articulation of landscape, ‘not only describe but also help to produce the reality that they understand’ (2004: 5). If we rigorously accept this claim (basic to ANT as well as many other theories of practice, though of course many other theories of practice stop when they run up against the physical or ‘natural’ world), then several assumptions of what Law describes as standard western metaphysics fail to hold or become only situationally applicable. Law teases apart five such assumptions and retains a commitment only to what he calls primitive ‘out-thereness’ – an understanding of a reality external to our practice – while rejecting the usual coordinate presumptions that this reality is universally independent of action or perception, anterior to this action, singular and definite in its form and internal relations (24–5, 31–2). Methods are thus enactments of the form of realities in a world grasped as ‘an unformed but generative flux of forces and relations’, or more imaginatively, ‘as a maelstrom or a tide-rip’ (7). Most of After Method is devoted to exploring different possible qualities of these enactments, as well as what good social scientific accounts and politics might look like if its methods too are understood in this fashion.

These issues are developed towards an unveiling of the most central conceptual unit of After Method, what Law calls the ‘method assemblage’, through a rereading of Latour and Steve Woolgar’s foundational Laboratory Life (1986). In the constructivist argument of that book, Law writes, scientific realities come into being through the ‘manipulation of inscriptions and statements’ (27). These include the chain-like, material relations of the traces produced by scientific apparatus and the numerical values, tables, graphs and texts into which they may be transformed, as well as the array of other scientific statements in the literature. Manipulation, thus, is in part an operation of assembly and disassembly upon objects, apparatus, claims and skills routinized or ‘reified’ in other times and settings (Latour and Woolgar, 1986: 66). Law emphasizes the circumstantial spatiality of this set of the already-made-made-available in referring to it as part of a vast ‘hinterland’ that ‘defines an overall geography – a topography of reality-possibilities’ (34). Part of what Law aims to grasp with ‘method assemblage’ is hence what, with respect to
Latour's *Reassembling*, I have glossed as distributedness: as an operation of assemblage or gathering, method is neither isotopic nor synchronic, never simply located within the time-space of the laboratory or other site of crafting (41, recall Latour, 2005: 199–202). But Law more strongly foregrounds the shape of the arrangement or assembly that is consequent to this process. In Latour and Woolgar’s original discussion, realities and the statements about these realities that are scientific ‘results’ were made together, but what allowed the self-accounting of scientific practice as ‘discovery’ was a secondary process through which the intervening traces were deleted, bracketed or made invisible (36–8). In the language of high school mathematics assignments, the capacity of scientific practice to sustain all the assumptions Law identifies with western metaphysics was based precisely on a refusal to ‘show all work’ equally. Based upon this example, Law gives an initial definition of method assemblage as an arrangement that crafts, articulates and distinguishes three aspects or locations: the ‘in-here’ of ‘statements, data or depictions’, the ‘out-there’ of the ‘realities’ these statements reflect, and the ‘endless ramification of processes and contexts “out-there” that are both necessary to what is “in-here” and invisible to it’ (42). Generalizing throughout the book from the specific case of scientific representation to, among other things, the making of objects and experience, and adopting a post-structuralist vocabulary, Law redefines this triadic arrangement of method assemblage as ‘the enactment of *presence, manifest absence, and absence as Otherness*’: the here, that elsewhere that is manifestly relevant to the here, and the relevant but invisible (84). With respect to the flux of a world that is not *a priori* definite in form, the whole pattern of a method assemblage has the character of a determinate ‘resonance’ that ‘works by *detecting and creating periodicities*’ (144).

The sum of the estrangement from conventional methodology produced by all this neologism and definitional fireworks is considerable. Yet if units make arguments, Law’s decision to hold the complex, non-binary19 articulateness of the method assemblage as his most basic unit throughout *After Method* has important positive consequences as well. As a sort of contour traced through the extendedness of reality arrangements (45), it packages and highlights the distributional and dimensional focus of among-ANT. In the process, Law makes explicit a third layer of dimensionality between Latour’s stabilizers and the vast unconnected of plasma or flux: that which is Othered in articulation. As a treatment of ontological positioning, the method assemblage thus looks as much towards Freud as Heidegger: there is room in the out there not just for the unknown or unconnected but for the unconscious or repressed. Moreover, relative to the Latour of earlier writings (e.g. 1996a) and even now, Law’s analysis is less clearly coordinated with stabilization or its failure, and more attentive to the gray states that populate the range of possible enactments.

Having worked through *Laboratory Life* for his exposition of metaphysical assumptions and of the method assemblage, Law (32) himself adopts as a foil for the rest of *After Method* the ‘singularity’ of a stabilized laboratory product that, while not an assumed property of a unitary prior reality, is the ideal ‘end point’ (achieved or not) in Latour and Woolgar’s account of scientific process. His second reading is of a much more recent book, written by his main collaborator in generating a yet more complexly spatialized ‘after-ANT’ in recent years, Annemarie Mol’s *The Body Multiple* (2002). Mol writes about a medical object, lower-limb atherosclerosis, as it is enacted in a variety of sites or contexts: the examination room, the radiology lab, the pathology department and so on...
In Law’s language of method assemblage, shifted here away from the case of scientific representation, atherosclerosis is the in-here object given form by a variety of manifest out-there objects or realities, for example a patient’s (narrative of) pain, a microscope slide or an operative treatment (55). As suggested by her title, Mol’s ontological point is that atherosclerosis, the object itself, is multiple in both its in-here and out-there locations (57); Law notes that ‘at least half a dozen different method assemblages are implicated’ (55). Yet it is multiple in such a way that its singularity can remain also an object of faith to its medical practitioners. It ‘hangs together’ as, in a phrase both Law and Mol use, ‘more than one but less than many’, multiple but not plural, or, in the word Law prefers, as a ‘fractional’ object (59–62; Mol, 2002: 55; cf. Law, 2002). It is not an object relationally fixed by a single method assemblage, however internally complex, but an ‘overlap’ and interference pattern of objects and assemblages in which some relations are coordinated and some policed through Othering or deferral (61).

Law, with Mol at hand, is writing about objects, but he is also doing so in harmony with a set of spatial concerns that both have highlighted in recent years. He is, as the subtitle of another of his recent monographs reads, ‘decentering the object’; spatiality and ontology are thoroughly intertwined (Law, 2002). In Latour’s *Reassembling*, actors, objects, and all the rest are relational and (I have argued) n-dimensional in their distributed being – ‘star-shaped’ in Latour’s (177) metaphor. But Law, with fractionality, is painting a different picture, not of subjectifiers or objectifiers in star-like intersection but rather of a fuzzy zone of density produced by loosely overlapping lines as the configuration of fractional objects (cf. Raffles, 1999: 324). And it is in this that the always-already extensive quality of the method assemblage as the basic unit forwarded by *After Method*, its quality as a contour, bears fruit. Method assemblages are dimensional in their internal arrangement of in-here and out-there; the pathology lab’s atherosclerosis is objectified in the inscription formed by cross-sectioning an artery on a slide (47). But a different sort of dimensionality comes out of their interference and oscillation as units, in the practice of coherence in the absence of consistency (99) – a dimensionality that is based on the interaction of method assemblages as contours that are ‘topologically non-conformable’ (Law, 1999: 7). ‘Within’ the fractional object, as an interference pattern of method assemblages, is a micrological set of another class of dimensional interactions that in Mol and Law’s (1994: 650) most germinal collaboration were called ‘inter-topological effect[s]’.

In that earlier article, Mol and Law (1994: 643, 661) were furthermore at pains to distinguish between different kinds of spatial topology – between regions as boundarized clusters, networks as ontologies based on connection rather than proximity, and fluids that flow viscously without either boundaries or the more structural and obligatory relations of co-productive force that the network metaphor suggests. In the interaction and enfolding of these topological kinds, they furthermore found another set of more macrological inter-topological effects, including both emplacement and action at a distance (Mol and Law, 1994: 650). *After Method* follows the progression of that earlier article in continuing its treatment of the ‘problem of difference’ by scaling up from multiplicity to indefinite contours, fluid objects within a method assemblage that change their form and shape both in-here and out-there simultaneously (70, 81). Drawing on ethnographic work with Vicky Singleton, Law uses as his example alcoholic liver disease, which, as it traveled between its sites of treatment, shifted between a medical condition
('addiction'), an abuse syndrome and a problem of social alienation, all of course pointing to different (if limited) possibilities for intervention (77–8). While *After Method* does not explicitly take up the issue of the interaction of topological kinds, it points to the difference in kind of a sort of spatial ontology in which coherence and definiteness, the ‘immutability’ of any single given relation (Latour, 1987: 287ff.), are not correlated.

If we hold ANT as itself a fluid object, Latour’s *Reassembling* and Law’s *After Method* both tend in the same rough direction, towards a post-STS ontological ‘sociology’ embodied in an openness of ‘method’, outlined by Latour in a playful series of maxims designed to be liberating and humbling at the same time and by Law in a recursive polemic that, consciously or not, redoubles Paul Feyerabend’s *Against Method* (1993) with attention to objects: ‘anything goes’ becomes ‘anything is’. Read through spatiality, and in the shadow of concern surrounding the reification of ANT as a plug-and-chug ‘theory’ at the end of the 1990s (cf. Law and Hassard, 1999), however, they get there along different paths with significantly different implications. Latour, once an advocate of ‘recalling ANT’ (Latour, 1999b), is now willing to give each term his blessing, provided that each be understood as infratheoretical and not substantive. It is not about a thing called a network; ANT is, in words we might borrow from Law (157), ‘a sensibility to materiality, relationality, and process’ for monads in dimensional connection. Latour is uniformitarian at a high level of abstraction. While Law would naturally agree on the primacy of this sensibility, and while certainly abstract enough himself, his solution tends instead to substantive multiplication. There is a topology called a network in the world, a genre of method assemblage of objects and persons and practices. It is just that there are other substantive kinds of topology also, and potentially incomensurable non-conformable contours within each kind, all of which might interfere with one another. Law’s own metaphysics and vocabulary lead to a much greater qualitative logical variety of spatial interactions and dimensional relations. Politically, finally, if for both authors ANT or ‘post-method’ social science might begin by helping us to, per Law (151), ‘escape the brute singularity of the world, the sense that reality is destiny’, this moment feels closer to the substantive end of one program than the other: Law’s equivalent of Latour’s re-collection of a ‘livable whole’ is social scientific participation in the ongoing interweaving of fractionalities.

**CONCLUSION**

In an essay devoted to destabilizing the notion of a ‘Great Divide’ between Chinese and western science as a starting point for comparative studies, historian Roger Hart (1999: 197) remarks that, ‘in a deflationary view’ – that is, stripped of its address to ‘Western reason’ – Foucault’s *Madness and Civilization* ‘becomes no more than a genealogy of psychiatric practices traced to eighteenth-century moral therapies’. Hart (1999: 196–7) challenges the Latour of *We Have Never Been Modern* on the grounds that it perpetuates the same divide, and we might well wonder along similar lines when Law, at the end of *After Method* (122–39), scales up again to contrast Euro-American and Australian Aboriginal ‘modes’ of method assemblage (though he admits he ‘flattens differences’ [123] in doing so). But more than Hart’s specific critique, the metric is the point. The anthropological appropriation of ANT has often focused on its larger order historic concerns with non-human agency, hybrids, sociotechnical borderlands or amodernity.
These are the stock in trade of about-ANT and across-ANT readings, in turn the ‘out there’ of an appropriable STS resonating with the ‘in here’ of an anthropology of science and technology increasingly productive and far-reaching over the past two decades (cf. Franklin, 1995; Martin, 1996). Yet I would argue that, in Hart’s ‘deflationary view’, as among-ANT, this literature ultimately becomes more and not less interesting for anthropology. Such a direction, in any case, is where ANT writing is independently tending, somewhat unnoticed by its anthropological users.

De-substantivized and detached from the sociotechnical and other determinate topics, ANT becomes an overture to a shape of concepts and an intrinsically spatial treatment of ontological action. Distributedness offers the counterpoint to treatments of assembly through alignment and enrolment that have struck many anthropologists as overly triumphalist and voluntaristic, but it also, to take an obvious example, pushes anthropological understandings of place, locality and subjectivity away from the sufficiency of structuralist notions of negative or contrastive definition. A place is not (only) because of what it is not, through the work of boundaries, but in its gathering and collusion of othernesses and spatiotemporal elsewheres – in Callon and Law’s (2004) terms, its fine internal array of presences and absences. The same emphasis, transposed into the anthropology of history and memory, refuses the common ‘past remade in the present’ centering of the compositional force of historical order in present-time action in favor of a call to re-theorize the durative and its stabilization – the ‘action at a distance’ problem translated into time (Law, 1986). Meanwhile, dimensionality and the ‘phenomenological’ treatment of the situatedness of actor-nodes as mutually coordinated in terms of orientation and circumspектив (rather than passive) ‘aroundness’, in which to exist as formatted is to exist for one another, admit poesis to the den of physics after all (cf. Heidegger, 1997). With just a twist, the cold categories of power, translation and assemblage that mark much ANT writing and much anthropological appropriation of ANT take on a hue of ethical and emotional involvement. Networks are woven of concern. In forwarding the ‘method assemblage’ as a basic unit, finally, Law is even more strongly refusing Cartesian subjects and objects as a starting point in favor of irreducibly path-dependent realities that extend via all such elements. Different contours are blazed through the world, and these may or may not overlap and conform, which invites specific attention to secondary effects of coordination and interference, and to ‘inter-topological’ chords and discord. Law and Mol’s interests in multiplicity, fractionality, and ‘mess’ meanwhile bracket the very bias towards ontological coherence (and often consistency) inherent in the institutionalized act of studying some-thing. In any case, I have suggested that the question of what anthropology might ‘do with ANT’ deserves to be reopened in the wake of ANT’s step back from reification and what is coming to seem our own full circle of disciplinary interest and disinterest. The contour of transdisciplinary relations might take a different course in the aftermath.

**Acknowledgements**

I would like to thank Heather Hindman for repeated readings of this essay along with John Kelly, *Anthropological Theory* editors Joel Robbins and Jonathan Friedman, and two anonymous reviewers.
Notes
1 The most usual citational pattern to English-language touchstones is to Law (1986), Callon (1986), and Latour (1987, 1988), with Latour and Woolgar (1986, originally published 1979) thus rendered as a quasi-continuous precursor if also as a historical exemplar of laboratory ethnography. Michel Callon’s own recent writing on economics and economy (e.g. 1998a, 1998b) has been drawn into dialogue with anthropologists working in those fields, but particularly those concerned with problematics of recursion and the collapse of ethnographic distance (Maurer, 2003; Miyazaki, 2003; Levine, 2004; Riles, 2004).
2 Here and throughout this article, where the source is clear, I cite Law (2004) and Latour (2005) by page number only. Except as noted words italicized in quotations are italicized in original.
3 Whether ANT authors reciprocally construe anthropology too narrowly is an interesting question but one I leave to others.
4 Unsurprisingly to the reader, I am sure, this is a project I undertake elsewhere (see Oppenheim, in press).
5 From the earlier essay, Latour (38) repeats his citation of the section of The Elementary Forms of the Religious Life in which the material durability of the totemic emblem seems to exert force to maintain the social group, threatening Durkheim’s overall attempt to isolate a generative social force – with the section now entitled ‘Durkheim Having a Tardian Moment’ (see Durkheim, 1915: 262–3, 265). On Tarde, Latour cites in English Latour (2002) and Tarde (1969). Beyond those texts most commonly read by anthropologists, Durkheim’s own reckoning with his past is evident in Durkheim (1960).
6 On ‘openness’ in historical anthropology, see Kelly and Kaplan (2001: 6).
7 Without noting I am doing so on each individual occasion, I omit Latour’s italics from this and several other single word quotations where the italics in the original are simply indicate a keyword or neologism.
8 For a consideration of ANT co-founder Michel Callon’s recent writings that, using the same Lévi-Straussian metaphor, likewise argues against a ‘domain definition’ of Callon’s work and instead takes it as nothing more than conveniently or contingently about the controversial, emergent or conflictual, see Slater (2002: 241).
9 It can be argued that attempts to draw the ‘network’ of ANT into a problematic of analytical recursion, as in Riles (2000), depend on first substantivizing the term or rendering it meta- rather than infratheoretical.
10 Besides those I discuss here, and the counter-critique of ANT as a regression to scientism and positivism sometimes offered by proponents of the sociology of scientific knowledge’s ‘strong program’, which, as discussed earlier in this article, often turns around conceptions of symmetry, Science Warriors of the 1990s criticized ANT and/or Latour (along with other science studies authors) as idealist, social constructivist, irrationalist, and thus as ‘anti-science’. The hoax article successfully implanted by physicist Alan Sokal in the journal Social Text became the most famous scandal and thus occasion for this sort of critique (see Sokal and Bricmont, 1998). With a few notable exceptions (Alland, 1998), most anthropologists did not adopt the position of Sokal and his allies (see Fujimura, 1998), and thus the ANT response to this line of critique is less central to my concerns here. Latour’s Pandora’s Hope
(1999c) was centrally framed around the Science Wars challenge (‘do you believe in reality?’), while in Reassembling, the response recurs in the decoupling of ‘reality’ from the prior assumption of the necessary ‘indisputability’ and ‘unity’ of a reality (116).

11 This sub-point, of course, is directed against a sociology of the social that treats action as ‘reflective’ or ‘expressive’ of other forces.

12 I am agnostic on the question of whether this ANT ‘balancing act’ represents a historical shift in Latour’s position. In Reassembling, the distributional moment of ANT tends to be treated as if it were always already of equal weight with the centrality of projects more visible in earlier texts. Signs of dialogue perhaps resulting in some ‘mutual translation’, as evident between Latour and Donna Haraway in texts of the late 1990s (Haraway, 1997; Latour, 1999c), are not made prominent here.

13 A footnote (86 n. 106) on Foucault valorizes the theorist of the micrological composition of power through ‘tiny ingredients’ against the ‘transatlantic’ Foucault of the capillary omnipresence of social, discursive or epistemic power singularly constituted in originary conditions (see Kaplan and Kelly, 1999).

14 ‘Articulation’, taken by Choy from Laclau (1979) and Laclau and Mouffe (1985), serves also a larger purpose of arguing for a conceptualization of hegemony. With respect, however, to the issue of access in difference that is central here, following classic ANT writings Choy (2005: 17) takes translation as ‘enrolment’, calling to mind both Callon’s (1986, 1991) linearizing vector algebra diagrams and the more singularizing process they seem to represent, and thus takes articulation as a necessary addendum. I would be inclined to argue that, at least in Reassembling, something like the process Choy wishes to conceptualize via this combination is already accounted for.

15 Such a treatment is hinted at even in Latour’s earliest work. In Laboratory Life (Latour and Woolgar, 1986: 239), the ‘circumstantial’ character of science is advanced not only as a claim of the contingency and locatedness of scientific making in general but with reference to a more literal notion of circumstances, drawn from Michel Serres, as ‘that which stands around’.

16 Of course, Heidegger’s relationship with National Socialism is much discussed, and for many authors this overshadows the entirety of his thought (Adorno, 1973; Ott, 1993). For Casey (1997: 262–4), Heidegger’s closest approach to National Socialism in the 1930s is co-constitutive with a specific shift and internal confusion in his thinking about place, such that the signature of politics may be read in a disturbance or crisis in intellectual logic and not simply in the essential character of that logic itself.

17 Latour (61 n. 67) furthermore rejects other attempts ‘to [partially] reconcile ANT and phenomenology’, for example by Don Ihde (2003). Ihde, for Latour, does not fully allow an among-symmetry of actants insofar as he centers intentionality as a bridge that non-humans cannot cross and, perhaps also, privileges embodiment and thus face-to-face interactions. I have no desire to adjudicate this dispute; my own partial mediation in the main text follows a different route, and mine also is an interested translation towards a certain set of questions of space and place.

18 By way of illustration, Law associates this with both ‘Albertian perspectivalism’ – the presumptions informing the Renaissance invention of linear perspective as a means
to present the world just as it appears – and scientists’ own self-account of what occurs in the course of scientific discovery (22–3, 25–7). What is being discussed, of course, is the assumption that ‘representation’ and ‘reality’ are separated by a universal line of demarcation, with the latter prior and the former more or less adequately descriptive (cf. Hacking, 1983).

19 This is, of course, a famous genre of move, for example in the Lacanian triad or Henri Lefebvre’s (1991: 39) ‘three elements and not two’ of space as ‘the perceived, the conceived, and the lived’, advanced as an antidote to Cartesian, structuralist, and (more sotto voce) dialectical dualisms. Law’s method assemblage does not map articulation qualitatively in the same way, however, and the comparison should not be pushed very far.


21 Even before the late 1990s crisis, it was possible to contrast, for example, Mol and Law’s (1994) contrast of networks and regions with Latour’s (1996b) tack of figuring region as a special case of connection.

References


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ROBERT OPPENHEIM is an Assistant Professor in the Department of Asian Studies at the University of Texas at Austin. His forthcoming book, *Kyŏngju Things: Assembling Place*, treats the ontological politics of place in a Korean historic city between the authoritarian 1970s and the democratizing 1990s. His other work has appeared in the *Journal of Asian Studies*, *Histories of Anthropology Annual*, and the forthcoming collection *Sittings: Critical Approaches to Korean Geography*. Address: Department of Asian Studies, 1 University Station G9300, Austin, TX 78712, USA. [email: rmo@mail.utexas.edu]