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Cite As: Laurier, E 2010, 'Bruno Latour'. in P Hubbard & R Kitchin (eds), *Key Thinkers on Spaces and Place.* 2nd edn, Sage Publications, London, pp. 434-443.

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36. BRUNO LATOUR

Biographical Details and Theoretical Context

Born in 1947, Bruno Latour comes from a well-established wine growing family in Burgundy (*not* Bordeaux, home of 'Chateau Latour'). One of his more unusual ambitions, for an academic, is 'that people would say "I read a Latour 1992" with the same pleasure as they would say "I drank a Latour 1992"' (cited in an interview with Hugh Crawford, 1993: 248). From the outset he took the less travelled path in French intellectual life. He was educated in the provinces of Dijon rather than Paris, and after starting training in the philosophy of religion, in a typical Latourian reversal, acquired his belief in social science and switched to anthropology. His initial anthropological fieldwork was in the Ivory Coast, followed up by what has become recognised as an iconoclastic study of a laboratory in California. For the larger part of his career since then he has, instead of living the lone life of French intellectual, been based in a collective 'laboratory' at the *Ecole Nationale Supérieure des Mines*, collaborated widely with other researchers, policymakers, managers, philosophers and curated two international exhibitions 'Iconoclash' and 'Makings Things Public'. He is most widely recognised for the part he has played alongside Michel Callon and John Law in the initiation and remarkable spread of actor-network theory (ANT). Though firmly based in science studies he and his work have travelled very widely; passing through sociology, art history, law, ecology, public transportation, fiction, geography and primatology amongst other disciplines.

Frequently mistaken for a social constructivist, Latour *is* a constructivist, not a *social* constructivist. This unexpected disavowal of the social is rooted in a reaction to the influential 'strong programme' in the sociology of scientific knowledge which sought to *symmetrically* explain successes *and* failure in scientific progress in terms of social factors (Bloor, 1976). The strong programme accordingly suggested that when certain scientific fields (phrenology versus neuroscience) or certain phenomena (such as X-rays versus N-rays) came to be taken as fact, or conversely, were discredited, this was not a purely scientific victory but was also a victory associated with social and cultural forces. Histories of scientific discoveries and technological breakthroughs had, until Bloor's initiative, tended to act as if scientific disciplines, facts, proofs, the

number ‘zero’, statistics and various technologies existed independently of cultural norms, departmental struggles over funding, state armaments programmes, the cost of equipment, project cancellations, educational institutions, professional regulations and the influence of charismatic figures. Conventionally, each of these was acknowledged as external biases that might delay or disrupt scientific progress, truth though was internal to science, and thus guaranteed to come out and vanquish falsity. In contrast, the so-called symmetrical programme conceived of society as of one of the internal forces that gives science the shape that it has, rather than a force that bent true science or technology out of shape from the outside. Latour took this already remarkable programme a step further. Rather than allowing the social sciences a privileged vantage point he used scientific activity to *symmetrically* explain failures and successes in *society*. In fact, Latour often shows that science is a far better analyser of society than social science; he shows scientists making facts, objects and networks to be, in effect, practical sociologists.

Spatial Contributions.

There are good reasons why Latour has been enthusiastically received in Geography, not least that his work straddles the divide between science and society, a division echoed in the split between physical and human geography. At first taken up for his studies of science in action (Hinchliffe, 1996; Latour, 1987; Whatmore, 1997), Latour gained renown and his widest audience in geography by way of his most polemic book: *We Have Never Been Modern* (Latour, 1993) which argued not just against the existence of post-modernity but against modernity itself as any kind of separate age from the pre-modern (or non-modern).

In Latour’s work geographers have been pleased to find an abiding attention to the connecting up, assembling, centring and distributing of all manner of things in space (Bingham, 1996; Murdoch, 1998). In describing how actor-networks are gradually extended, stabilised and sometime collapsed, Latour radically shifts away from a Euclidean concept of space and time as universal abstract axes which contain and constrain events (Latour, 1997b). For him, as for other researchers in ANT, space and time come about as consequences of the ways in which particular heterogenous elements are related to one another. The term ‘topological’ is therefore used to capture this sense of space as being made out of relations between its parts.

There are many controversial arguments in Latour's delightful books, not least his attribution of social agency to 'actants' which can as easily be nonhuman as human. This democratisation of who can act, away from the anthropocentrism of the social sciences, has raised an awareness of the 'agency of things' previously restricted to debates over animal rights and the nature of artificial intelligence. It is characteristic of the flattening out of subjectivity found elsewhere in post-structural thought which has critiqued the Enlightenment's position of 'man' at a privileged level above all other life forms (or in Latour's case, 'things'). Geographers have been equally inspired and perplexed by Latour's extension of social agency, rights and obligations to automatic door closers, sleeping policemen (Latour, 1992), bacteria (Latour, 1988 (orig. 1984)), public transport systems (Latour, 1997a), sheep dogs and fences (Latour, 1996). Referring to diverse objects and life forms that make up the world, as 'the missing masses' Latour argues that they have been ignored socially, politically and philosophically, even as we clearly attend to, care for and depend on them in our everyday lives. Moreover it is, once again, scientists and engineers who pay special attention to the things of the world, providing extraordinary devices whereby we can listen, look or feel their wants, their characteristics and their actions.

A proverb often recited by historians is that 'there is nothing new under the sun'; for Latour 'there are many things new under the sun' since every once in a while something special happens: new things come to exist in the world. Their existence is in no way *inevitable*, they may perish as quickly as they came to gain a foothold on the earth (Latour, 1997a). Without this historically assembled support of a multitude of perishable things, Latour suggests, we would live in a socially *unstable* world akin to that of baboons where trials of strength have to be resettled daily. In the endless busy proliferation of things as mediators, delegates, boundaries, 'immutable mobiles' we achieve the *complicated* places we live in. Geographers inspired by this attention to lowly devices and the emergence of new socio-technical-scientific agents have investigated the BSE crisis (Hinchliffe, 2001), histories of taxation (Ogborn, 1998), financial systems in the city of London (Thrift, 1996), geographical scale (Collinge, 2006; Marston, J et al, 2005), GM crops (Bingham, 2006), climate change (Demeritt, 2006) political movements (Featherstone, 2007; Routledge, 2008) urban ecologies (Hinchliffe et al, 2007) and high-rise buildings (Jacobs et al, 2007).

Latour is an unusual figure in that cultural geographers of a highly theoretical bent have embraced his work, as have those whose inquiries are based primarily in field studies. It would be hard to imagine this kind of dual popularity for say either Jacques Derrida or Bronislaw Malinowski. Although critical of the reflexive strategies of post-modern anthropologists and textual experimenters like Steve Woolgar (1999) or Malcolm Ashmore (1989), he is nevertheless is similarly creative, humorous and stylised in the construction of his texts. In *Aramis or the love of technology* (Latour, 1997a) he writes polyphonically – mixing together a murder mystery, an ethnographic case study, philosophical reflections and the imagined voices of machines. Hence, just as he crosses the theorist / fieldworker divide, Latour also crosses the conventional / avant garde writing divide in the social sciences and humanities.

Key Advances and Controversies

The longstanding problem of *structure-agency* is one to which Latour offers a novel solution. Where many social theorists, and political philosophers, from Hobbes onwards, set up a binary opposition between social structure and individual agency, Latour pursues impure entities that have characteristics of structure *and* agency. They are, in other words, actors *and* networks or actor-networks. Latour suggests that those who employ an empty gulf between agency and structure do so by ignoring the dark matter of material objects that articulate, embody, coordinate and, even, author actions.

Just as Latour uses the 'actor-network' to fill the gap between agency and structure, so he uses 'hybrids' to refer to the proliferating entities that are made and remade as mixes of culture *and* nature. In doing so he responds to the endless controversies based in culture *versus* nature that have been at their most symptomatic in the 'science wars'. Rather than accepting culture or nature as explanations at face value, Latour, like many others in science and technology studies, turns them over from being explanations to being topics for his inquiries. Where the argument, at its starkest, uses, say 'bacteria' as a source of explanation, Latour makes 'bacteria becoming an explanation for X happening' the topic of his inquiry (Latour, 1988 (orig. 1984)). From his studies what we then find are the connections which associate specific explanations and ensuing courses of action (i.e. building the networks of

pasteurisation, practice of sterilisation in hospitals, changes in food production etc.) with specific kinds of bacteria. His studies convincingly describe a world where there is no pure nature nor pure culture. There are only fibrous webs gradually extending and contracting, erasing one another, copying one another and producing the shape of space and time in doing so. It is in this concern with how different assemblies of actants can connect up that Latourian spaces are often called 'topological'.

As was noted at the outset, Latour's extension of the symmetry principle deprived society from being the explanation of successes and failures in science. *A priori* favourites of the social sciences like class, race, gender and politics cannot be assumed as relevant in scientific and technological events, nor can everyday un-explicated terms like 'hard facts', 'geniuses' nor 'bias', be brought into explain how the world moves or what moves the world. So what does Latour offer us, having denied the traditional explanatory terms for how the pure will of the subject or the blind force of the object gets bent out of shape by other effects? In typically elegant prose Latour delivers his credo of *irreductions*:

> Nothing can be reduced to anything else, nothing can be deduced from anything else, everything may be allied to everything else (Latour, 1988: 163).

To make anything similar to or different from anything else requires translation, deformation, reformation or other forms of alteration. To make one thing identical to another, to make one place the same as another place requires building relations between them 'out of bits and pieces with much toil and sweat' (Latour, 1988: 162). With this leap away from the various reductions of various theories, Latour sets the 'things' free to do what they do, to ally with what they ally. As analysts we can follow their movements as they grow and shrink, associate, locate one another, become aligned, produce insides and outsides, subjectify and objectify. All of which sounds rather abstract but Latour is never far from perspicuous examples:

> We neither think nor reason. Rather, we work on fragile materials –texts, inscriptions, traces, or paints—with other people … The butcher's trade extends as far as the practice of butchers, their stalls, their cold storage, their pastures, and their slaughterhouses. Next door to the butcher – at the grocer's,

> for example – there is not butchery. It is the same with psychoanalysis, theoretical physics, philosophy, social security, in short all trades. However, certain trades claim that they are able to extend themselves potentially or "in theory" beyond the networks in which they practice. The butcher would never entertain the idea of reducing theoretical physics to the art of butchery, but the psychoanalyst claims to be able to reduce butchery to the murder of the father and epistemologists happily talk of the "foundations of physics." Though all networks are the same size, arrogance is not equally distributed (Latour, 1998: 187).

He is showing us here an example of the actor-network of butchering to remind us that all actors only gain agency by being part of particular networks made of more or less durable materials. If we take the butcher out of the assembly of farmers, delivery companies, freezers, trucks, sharp knives and saws, cash registers and banking then we have a weak actor able to do very little for his trade. Latour in his studies of scientists brings them down from their privileged position to place them on a level with butchers and grocers. Whilst retaining the greatest respect for the toil of science, he dispels its fairy tale and miraculous existence in favour of taking seriously its rootedness and routedness in practices and things.

Through an experimental 'virtual book' (Latour, 2003) on Paris which involved a collaboration with a photographer and web design and is a fine example of his textual inventiveness, Latour put forth an important critique of panopticism. This is a concept originally from Foucault's (Foucault, 1977) *Discipline and Punish* which gained theoretical dominance over the ensuing two decades. In this book he examines how Paris was planned, how it is currently monitored through a number of control rooms in which 'very little be seen at any time, but everything appears with great precision' (p. 35) and how equally what seem to be small scale intimate moments such as having a cup of coffee are linked to a swarm of tokens in circulation. It is a remarkable series of sketches of how Paris holds together as city, how numerous entities within it circulate and how as soon you try to zoom out for a macro-view or zoom-in for a micro-view quite what the connections are that constitute the city's very fabric begin to disappear.

Latour is, it should always be born in mind, anti-theory. A good reason, as he notes (Latour, 1999) for ditching the term 'actor-network *theory*' since it has lead many to believe it is yet another Theory to add to the social sciences' extensive and perhaps excessive collection:

> There is no metalanguage, only infralanguages. In other words there are only languages. We can no more reduce one language to another than build the tower of Babel (Latour, 1988: 179)

An *infralanguage* for Latour holds the promise of being able to write and reveal things about science, engineering and society without claiming that he is laying foundations, nor knows better than those he is studying what it is that they do, nor is socially critiquing their community. Yet he does not wish to simply describe scientific practice in detail, and this is where he differentiates himself from ethnomethodological studies of science (Lynch, 1985; Lynch, 1993). Akin to Latour, ethnomethodology describes the practical activities of scientists (e.g. utilising equipment in laboratories) whilst also being critical of blanket social constructivist explanation. However, Latour parts way with ethnomethodology since he wishes to map out his infralanguage of paths, connections, displacements, associations, topologies and networks, strands of ordering which are otherwise invisible since they are hidden behind terms like 'science', 'genius' and 'society'.

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