

Coming out as a philosopher

Bruno Latour

► **To cite this version:**

Bruno Latour. Coming out as a philosopher. Social Studies of Science, SAGE Publications, 2010, 40 (4), pp.599-608. hal-01023897

HAL Id: hal-01023897

<https://hal-sciencespo.archives-ouvertes.fr/hal-01023897>

Submitted on 1 Sep 2014

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Social Studies of Science

<http://sss.sagepub.com/>

Coming out as a philosopher

Bruno Latour

Social Studies of Science 2010 40: 599 originally published online 14 May 2010

DOI: 10.1177/0306312710367697

The online version of this article can be found at:

<http://sss.sagepub.com/content/40/4/599>

Published by:



<http://www.sagepublications.com>

Additional services and information for *Social Studies of Science* can be found at:

Email Alerts: <http://sss.sagepub.com/cgi/alerts>

Subscriptions: <http://sss.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

Citations: <http://sss.sagepub.com/content/40/4/599.refs.html>

>> [Version of Record](#) - Jul 15, 2010

[OnlineFirst Version of Record](#) - May 14, 2010

[What is This?](#)

Coming out as a philosopher

Social Studies of Science

40(4) 599–608

© The Author(s) 2010

Reprints and permission: sagepub.

co.uk/journalsPermissions.nav

DOI: 10.1177/0306312710367697

sss.sagepub.com



Bruno Latour

Sciences Po, Paris, France

Abstract

In parallel with the empirical work pursued for almost 30 years on the socio-technical networks of science, the author has systematically pursued a philosophical inquiry to compare different ways of producing truth (science and technology being only two ways among several). The principle is to add to the analysis of networks the ‘key’ in which each type of network is able to spread, this key defining for each type of mediation the felicity and infelicity conditions necessary to grasp it. This project aims at providing a positive philosophical anthropology of the moderns instead of the only negative one offered in *‘We Have Never Been Modern’*.

Keywords

comparative method, mediation, philosophical anthropology, science and law, science and religion

When I was reading philosophy, my university professors had warned me that I would never go very far in that direction because I didn’t read German, ‘the language of philosophy’. And yet I have always had much involvement with Germany through the new *koinè* of English. I am not alluding to the mass of ‘great white dead’ German philosophers I read when preparing my *agrégation*, but to the many friends I have had the good fortune of meeting over here. Bernward Joerges introduced me to Berlin in the early days of Science and Technology Studies just before the fall of the Wall, and, later, I had the good fortune of being allowed to work with Ulrich Beck and his group, with whom I have maintained many strong contacts. But it is when I met Peter Weibel, in Graz, that I began to admire even more what could be done in this country, which allowed me to set up two major exhibitions in Karlsruhe, first *Iconoclash* and then *Making Things Public*, feats that would have been unimaginable in any other country. I decided it might not be inconsiderate of me to indulge in a little bit of soul-searching, and to sketch for you the

Note:

This paper is a version of the speech given on 28 September 2008 for the reception of the third Siegfried Unseld Prize awarded biennially by the Siegfried Unseld Foundation, Frankfurt. I thank Tammy Lu and Peter Erdelyi for correcting my English and Mike Lynch for his remarks.

Direct correspondence to:

Bruno Latour, Sciences Po, 27 rue St Guillaume, 75007 Paris, France.

Email: bruno.latour@sciences-po.fr

intellectual project I have always pursued and that your prize will hopefully help me carry further. If I concentrate on myself – something I have not done since my *habilitation* 20 years ago – it is not, be assured, out of narcissism, but because for the last 20 years I have carefully hidden my big project under a screen of apparently disparate types of studies. As Peter Sloterdijk, with his usual perspicacity, has well understood, I am first of all a philosopher, although not a professional one. Even though I have always held positions in sociology, and have sometimes been accepted as an honorary anthropologist, and feel much loyalty to the little field of science and technology studies, and have also dabbled in social theory, I have never left the quest for philosophy. To be sure, I have written on various topics that make my work hard to locate. In French bookstores, the rare buyers complain that my books are spread in too many different aisles: one book on the *Conseil d'Etat* in the law section, another one on an automated subway in the engineering section, while a book on the invisible city of Paris is put, wrongly of course, in the travel section, whereas a little book on religion has disappeared in the spirituality section (almost as wrongly). And yet, I have not dispersed myself at all: it is just that, throughout my career, I have simply rather disingenuously hidden my real intentions.

It is actually through another German scholar, whose reputation has somewhat faded, that I will start this brief portrait of myself as a philosopher. Thanks to the very run of the mill, but on the whole excellent, classical education I received at the University of Dijon, I had the good luck of befriending a former Catholic priest who had become a university professor and a Protestant pastor, and who was also the French translator of Rudolf Bultmann. Under André Malet's guidance, I discovered biblical exegesis, which had the effect of forcing me to renew my Catholic training, but, more importantly, which put me for the first time in contact with what came to be called a *network of translations* – something that was to have decisive influence on my thinking. You might think that Bultmann's radical exegesis would have had the dissolving effect of an acid on the sturdy set of certainties acquired in good Catholic and bourgeois Burgundy. But for me the result was exactly the opposite. Even though Bultmann himself was trying to reach for authenticity by wiping out, one after the other, every successive addition that had been wildly invented by long chains of Christian locutors – and the result, as you know, was that, at the end of *The Synoptic Tradition* (just translated by my mentor: Bultmann (1973)) – you might end up with no more than three or four 'genuine' Aramaic sentences uttered by a certain 'Joshua of Nazareth'. My reading was, on the contrary, that it was *only* in the long chain of continuous inventions that the *truth conditions* of the Gospel resided. Provided, that is, that those inventions were done, so to speak, in the *right key*. It was in this key, this way of discriminating between two opposite types of betrayal – betrayal by mere repetition and the absence of innovation, and betrayal by too many innovations and the loss of the initial intent – that I wrote my PhD thesis: the subject matter was really the spirit of invention, or I should say, the Holy Spirit! In a way, I had taken the poison out of Bultmann and transformed his critical acid into the best proof we had that it was possible to obtain truth (religious truth, that is) through an immense number of mediations provided that each link was renewing the message in the 'right manner'. The question being of course of how to define this 'right manner' precisely enough. I did this through a close reading of Charles Péguy's amazing book *Clio* (Péguy 1961 [1914]), the topic and manner of which was precisely on the question of good and bad repetition (a question that was also taken

up by Deleuze (1968) in *Différence et Repetition* (published at the same time that I submitted my thesis)). That my PhD thesis was never read except by rats and mice doesn't mean that it was not for me an essential learning experience (carried out, strangely enough, in the heat of Ivory Coast where I was doing my civil service and learning ethnographic methods as well as discovering the extent of neo-colonialism).

What Bultmann did for me (I mean my constructed Bultmann, put back on his Catholic feet if I may say so!) was that, when I entered the biological laboratory in California, where I began my first serious ethnographic field study, I was primed to detect its exegetic dimension in the immense complexity of scientific practice. Hence, my fascination for the literary aspects of science, for the visualizing tools, for the collective work of interpretation around barely distinguishable traces, for what I called *inscriptions*. Here too, exactly as in the work of biblical exegesis, truth could be obtained not by *decreasing* the number of intermediary steps, but by *increasing* the number of mediations. Provided, of course, that each step was carried out in the right key. Here again, for the second time, I was busy defining as exactly as I could, the right key that would provide the felicity conditions for a long chain of translations. It was obvious that the key for insuring the objectivity of science was entirely different from the mode for insuring the faithfulness of religious spirit, but this difference did not mean that there was direct certainty in one case and pure invention on the other. In other words, I could already detach myself from the dispute between 'knowledge' and 'belief' and replace those two most confusing terms with two sets of empirically graspable chains of translations that were spreading along two different regimes. 'Immutable mobiles' is the name I gave to the reference chains I had first scrutinized, in agonizing detail, in Roger Guillemin's lab at the Salk Institute and later in various other scientific production sites. The name was a bit awkward, but over the years I realized that it was a very handy concept because I now had in hand a *comparative* method for studying various types of truth production that did not rely on the usual notions (the supernatural and the natural for instance), but instead on two and only two elements: networks of translations on the one hand, and, on the other, the key, the mode or the regime in which they were made to spread. This opened me to a very different vista that I characterized with the word *irréduction* and that I summarized in a little treatise as the second part of my work on Pasteur (Latour, 1988 – I still have a weakness for this juvenile piece of work).

The great surprise came when I had to learn, quite bitterly, that what I had taken as a rather innocent method to study the *truth* conditions of science (exactly as I had adopted the exegetic method to study the different truth conditions of religious enunciation), was immediately taken by my readers as a *debunking* of the claims of scientific reason to objectivity. Without noticing it, I had stepped into the middle of a sort of 'science war' that was to have a somewhat unpleasant but also, in the end, a quite fecund influence on my work. A carefully studied, realistic and generally objective study of scientific chains of reference could be seen as the negation of scientific truth. Retrospectively, I should have known better: after all, Biblical exegesis too had been taken as a dangerous acid test that would destroy faith (many Catholics still think like that). But since I had had a completely *positive* and constructive reading of Bultmann's chains of translations, I was not prepared to see my reading of scientific mediations taken as a destructive critique of science, but, on the contrary, as the only real way to

access entities that otherwise would have remained invisible, remote and inaccessible. For me constructivism was, well, constructive, not destructive. How wrong I was! I soon realized this when I entered into tense discussions with epistemologists over what was for me a complete red herring, namely the realist versus relativist controversies. (It is true that the unfortunate addition of the word 'social', as in 'social construction', introduced a bias that has taken me 20 years to redress.)

This complete disconnect between what I thought I was doing (a realist description of the scientific network's ability to produce objectivity) and what I was accused of doing (a debunking of science's claim to reach the natural objective world of matters of fact) soon became for me, instead of the irritating misunderstanding it was at first, a fantastic opportunity to study what in the meantime I had defined as a 'symmetric anthropology of the moderns' (Latour, 1993). If, I told myself, those who defend the value of science can maintain such a gap between what they say science is, and what I and my many colleagues in the thriving field of science studies, through a very banal use of ethnographic and historical methods, can see it is, then it is no wonder that the 'front of modernization' that I had observed first hand in Africa and then in California, had some trouble defining itself positively. There must be something deeply flawed – and also, then, deeply interesting – in how the moderns define, defend and project their 'universal values'. This intuition was going to lead me very far, and in effect very near to thinkers such as Ulrich Beck and Peter Sloterdijk, whose work I did not know of at the time: the moderns don't know where or who they are. They behave as if they were, literally, homeless. Where they come from, where they go, where they claim to lead the rest of the world they want to modernize, seemed to me entirely up for grabs.

This intuition gained much strength from the next set of field studies I did on technology. At the School of Mines, where I was lucky enough to be welcomed by a remarkable group of friendly spirits, I was able to study a third network of translations, namely technical *projects*. And here again, there was barely any connection between what the whole modernist discourse was saying a machine or a technical system was, and what I could observe myself first hand by following their complicated life in several industrial laboratories and in a long field study on a marvellous automated subway called ARAMIS (Latour, 1996). Mastery, transparency, autonomy and efficiency certainly are not the qualities of a project. *Objects* might float in the clear light of *res extensa*, but certainly not projects constantly running the risk of disappearing, even when they are achieved. Projects are also chains of translations, but this time in a different key, of the ability to maintain a highly complex socio-technical assemblage of heterogeneous constraints. Technology too has its felicity and infelicity conditions; different, of course, from those of religion or science, but open to a comparative inquiry. So, I now had three different keys for three different networks of translation.

You begin to see how, as the comparative project grew, the other discussion on modernism developed in parallel. If, what could be taken as the main impact of modernism, the fantastic development of technologies, could be so badly described by the notion of a mechanical autonomous object, and that in practice, there is never any object, any *Gegenstand*, but always projects, assemblies, gatherings, that is *Dinge*, what confidence could we have in the overall narrative that moderns were giving of themselves? And what confidence could we have in the critical discourse of so many

anti-modern, anti-science, anti-technology scholars who could not see that they were attacking the moderns for sins they were wholly unable to commit.

I had now reached a point where I could gain confidence in my original project (I know it is old, since I found an entry in my 1973 notebooks in which it is clearly outlined) of systematically comparing truth productions, and where I could be more confident of this other project, forced upon me by the science wars, about the anthropology of the moderns. What was clear to me, at least, was that the two master narratives of 'nature' and 'society' with which modernism had built what I called its *Constitution*, have always been only the most superficial part of what had happened to them. Something else had happened that required a double-edged critique of Nature and Society. For criticizing the latter, I had to delve into social theory and to propose, with Michel Callon, under the horrible name of actor network theory, an alternative possibility – which, I later discovered, had actually been entertained by Gabriel Tarde at the beginning of sociology. For the former, that is nature, the task was much more complicated, since it meant a rethinking of much philosophy, and, as I discovered completely by surprise, of politics as well. Still, quite undaunted, beginning in Easter 1987, I started in earnest the first project about comparing regimes of enunciation (what I now call *An Inquiry Into Modes of Existence*), even though I have not published a line about it ever since – until today that is.

An entry into a fourth chain of translations was opened to me by a long internship I had in the outfit of Tobie Nathan, a student of Georges Devereux, the founder of one daring branch of ethnopsychiatry (Latour, 2010). Here I was offered a glimpse of how the production of *subjectivities* could be studied in the same empirical ways as the production of *objectivities* I had followed in several sites. Because Nathan's method was to hold his consultation collectively, I had the rare chance to seize a completely different definition of what it was to produce subjects by following the way he and his co-workers could literally *de-psychologize* the migrant workers they were treating and re-allocate them to other *spirits* – and spirits here is to be taken materially – through the use of techniques developed in various cultures by those who are usually called 'charlatans' or 'fetishists'. I was well aware, naturally, that the notion of individual psychology was a Western and rather recent elaboration, and, in addition, I knew first hand that the modernist narrative around objectivity could not be taken for an accurate description of what an object is, neither in science nor in technology, but until Nathan I could not see how it was possible to render the transformation, the translation of psyches, observable. This internship had profound influence on me, first, because it led me to revise the anti-fetishist tradition of so much religious and Western thought (it resulted later in *Iconoclash* (Latour and Weibel, 2002)) but, second, because the question of finding an ontological status for the divinities invoked so efficiently by Tobie Nathan in his cures, was even more puzzling than finding a place for the God of religion, the references of science and the projects of technology. Obviously, my comparative project required a somewhat drastic overhaul of ontology, in order to have enough room, so to speak, to accommodate so many different types of existing entities. Having started out with semiotics as my toolbox (through a long frequentation of Greimas' work), I had to get into more hard-core philosophy.

The breakthrough was made possible for me through the work of Isabelle Stengers – certainly the longest lasting influence on my overall thought – especially her introduction

to Alfred North Whitehead, whose fundamental achievements had been largely overlooked by commentators (Stengers, 1994). It was through Whitehead, and also William James, that I discovered that the reason why it was so difficult to find an ontological status for all those other entities I was slowly adding to my list of modes of existence – including science – was that a very strange idea of matter and nature had surreptitiously taken the place of a *fifth* mode of existence.

This is a somewhat hard point to make in a few pages, but suffice it to say that, in the modernist idiom, matter is not a taken-for-granted category, but a historically contingent amalgam of at least two entirely different elements: the way we know (which is generated by the reference chain of science) and the way entities reproduce themselves (Latour, 2007). The modernist parenthesis, opened at the time of Locke, begun with a new role given to primary qualities (the stuff out of which the objective world is made) and to the secondary qualities (the subjective values that the mind adds to it – ‘psychic additions’ is Whitehead’s term for it). This distribution of roles has become, over the three centuries of modernism, such an entrenched prejudice that every single official category depends on it and, most of all, the sacrosanct distinction between facts and values. And yet, it is a recent and a very baroque invention that takes not a very long empirical inquiry to contest. If, in the eyes of Whitehead, William James had put an end to the modernist parenthesis (to what he calls the ‘Bifurcation of Nature’ (Whitehead, 1920), it is because James had made a shambles of the distinction between primary and secondary qualities. Relations are not what is *added* to a world of meaningless matters of fact, but what are empirically *given* in the world of experience. ‘Nature’ might be made of primary qualities, but *not* the pluriverse, to use James’ term for a world freed from being defined by only one mode (James, 1996 [1909]). To be sure, in ‘nature’, it is very difficult to give an ontological status to all the other entities on my list – they are to be treated at best as ‘language games’, at worst as pure fantasy – but in the pluriverse there is plenty of room for other modes of existence, each with its own key.

What seems to me so liberating in this argument, is not only that Gods, divinities, projects, and even the production of scientific facts might finally have a pride of place – instead of being either squeezed into the subjective mind as so many ‘psychic additions’ or flattened out into the *res extensa* – but especially that material entities, and above all, biological organisms, have finally room to risk their existence in a medium much more conducive to innovation, to evolution than ‘nature’ – a medium for which Von Uexküll found the right alternative German term, *Umwelt* (Von Uexküll, 1965). In a sense, Whitehead offers the first philosophy to absorb the immense philosophical importance of Darwin’s discovery of evolution – a discovery that has been thwarted by Bergson’s ‘*élan vital*’ as well as by social and neo-Darwinism with their search for optima produced by some Blind Watchmakers (Latour 2009a). The immense importance of this fifth mode of existence is that it is not another failed attempt to *add* some ‘spiritual’ dimension to a ‘reductionist and mechanical world view’, but, on the contrary, it is a way to *subtract* from the ill-conceived bags of matter and of nature a spurious spirituality borrowed for scientific and political reasons (as I soon learned by getting into the politics of nature). To usher ourselves out of nature, is the only way to put an end to the modernist parenthesis while avoiding the negative and somewhat desperate solution of post-modernism.

You see that, through a totally different route, and through some pretty arduous meta-physical (or I should rather say *infra*-physical) arguments, I had come very close to two other German thinkers who have also tried to divine the end of modernism: Beck through the notion of risk society (Beck, 1992), and of a second or reflexive modernity, and Sloterdijk with his extended inquiry into the notion of Spheres (Sloterdijk, 2004). The three of us share the same argument that the moderns reside in an entirely different place than nature and its progressive extension to the planet. We also share the argument that there is a gigantic gap between what the moderns say they are and what they have done and do. The styles, methods and empirical insights may be entirely different, but the common question is to define as starkly as possible what the *successors* of the notions of modernity and more generally, of the West, are. As Sloterdijk so ironically said, we, Europeans, used to love globalization when we were the ones doing it, now that we *are being* globalized by the others, we don't find it fun any more and we suddenly clamour for roots, walls, sites, niches and, as the French say, 'cultural exceptions'. The globes of science, technology, politics, those universal values that we were pretending to extend to the whole planet – this is the topic of the second volume of *Sphären* – appear now as so many ruins of a project that cannot be carried out any longer since this universality had been achieved too cheaply and too fast. The globes, so to speak, did not resist globalization.

And yet, the three of us, it seems to me, are convinced that those ruins are a great chance to finally come to the definition of what modernity has been. Yes, the moderns might finally come *home*. 'Home' is in Greek '*oikos*' and this is why the alternative I proposed between modernization and ecologization might not be a bad term to define the next step. Between modernity and ecology, we have to choose. Ecology is not the science of nature but the reasoning, the *logos*, about how to live together in liveable places. As I have shown at great length in *Politics of Nature* (Latour, 2004), ecology will succeed only if it is not a re-entry into nature – this mixed bag of narrowly defined concepts – but if it gets *out* of it. Which is another way to try to define the spheres of breathable existence, the architecture of which Sloterdijk has so powerfully sketched. Will the moderns finally settle on some durable and sustainable site? To twist Marshall Sahlins' marvellous witticism: 'Nature is a nice place to visit, but nobody lives there!' (Sahlins' passage had 'reality' instead of 'nature'). I am convinced that the project is feasible, precisely because Europe, by fast losing its exaggerated dominion, has also lost some of its *hubris* that had made its pretence at defining universality for all the others so cheap and so incoherent. Moments of weakness are a great occasion to finally come to grips with what we hold most dearly. This is what makes globalization so interesting: at the negotiating table, the former moderns might finally be able to articulate what they were after all along. In the end, what are the values you are ready to die for?

And here you may see how my project of systematically comparing the various felicity conditions that have been developed in the course of European history could come in handy. For instance, at the negotiating table it is not at all the same to attempt to defend Science, with a capital S, or to make sure that we can extend the long reference chains that produce objectivity, provided that they are set up in the right key to allow a two-way transfer of immutable mobiles. The first actually obfuscates the development of the second, so much so that the very crucial value of scientific practice, so essential to the definition of our tradition, is jeopardized by a defence of Science, with a capital S, which bears

almost no relation to it. And the same is true of technology: there is no relation between pretending to extend (or to restrict) the expansion of 'objects' and promoting or resisting the extension of *projects*. So what should be universalized? Science and Technology, or *reference* and *projects*? These are two entirely different definitions of the sets of values we might wish to introduce into the negotiation over what is universality and what is the global. And the same is true, I could show in greater detail, of all the other modes, especially religion, politics and law. It is as if the moderns had suffered from an embarrassment of riches and could not promote or highlight one value without having to squeeze out or gainsay the truth conditions of another one. They had no occasion, they were too busy pushing forward their modernizing frontier.

I don't have the space to get into those other contrasts that have been euded or repressed by the complicated history of the West, and that, taken together, form the architecture of what the moderns have been after all along. I just want to say a word about law as an original mode of existence. The practice of law has seemed to me so important that I invested in a long field study to understand its chain of translation (Latour, 2009b). Its great interest for me was that, in contrast to religion, technology, fiction and politics, law has suffered much less from the modernist invention of matters of fact. In a way law has never been modern, always insisting on its original type of truth condition and its completely specific key – even though the temptation of a scientific approach to law as always been there. Allowed to attend the daily work of the French Supreme Court for administrative law, *le Conseil d'Etat*, I have been able, once again, to detect the manner in which long series of mediations could carry forth the 'passage of law'. Still another key.

Nothing will be achieved, however, in this anthropology of the moderns, or in this infraphysics of Europe, or regional ontology (depending on how we want to call it), as long as the other 'oikos', that is economics, is not fully anthropologized also. Once 'out of nature' (the first nature), the moderns are still thrown into this second nature defined by 'the iron laws of economy', which no longer is their rightful home than the first, and where all the defects of their strange contradictory construction are made even more damning. If it is true, as I have argued all along, that modernity can be *recalled*, meaning that we should finally remember what it is really made of, but also that we are responsible for rectifying the defects of the product that we have sold all too well to the rest of the world (the same way an automaker 'recalls' a flawed car), the project of modernity will not be achieved as long as we have not been able to *recall economics* (Callon, 1998): a task, strangely enough, more arduous than freeing scientific practice from the ideology of Science, with a capital S, or helping religion and also politics to sing again in their right respective keys.

No doubt that this project in its double extension, first the systematic comparison of the modes of existence, and then their inclusion into the negotiation about what globalisation will be and how the former moderns can play a role in it, is somewhat oversized for a limited mind. But ever since I discovered in Africa the ambiguous effect of the modernization frontier, I have been convinced that the moderns deserve a full-scale positive and constructive anthropology. To say that they are moderns – and modernizing the planet – means nothing. But to claim, as I did, that they have *never* been modern, is a first but only a *negative* step that does not describe positively what they have been, and thus, what they might wish to become. I want to have a go at this positive definition of the set of values that has been, until now, so badly presented.

If I dared to reveal my entire mad project to you, I would confess that I always had this odd dream of being able to do for contemporary collectives what had been done, on the Elgin marbles, for the Panathenaic festival: a procession, that is, a theory of ambassadors – and thus not a critique – of the various modes of existence, each with its own incommensurable and yet fully respected truth conditions. You see how drunk I am! And yet, I can't help it, there is an urge, consubstantial to the philosophical tradition, whenever you are told to limit yourself inside a well defined specialty, to jump on the other side of the fence in order to embrace the Whole. Naturally, the Global will never come back, and fortunately so, but that does not mean that other figures of the Whole are not there to be detected and composed. I want to have a go at it.

A last wish with which to conclude: please, don't tell anyone, especially in the UK or the US, that such is my overall life project and that I am, in effect, a philosopher – worst of all a philosopher with a system: they will never take me seriously again. Only under a German sky is one allowed to think that big!

References

- Beck, Ulrich (1992) *Risk Society: Towards a New Modernity* (London: Sage Publications).
- Bultmann, Rudolf (1971) *L'histoire de la tradition synoptique*. Translated by André Malet (Paris: Le Seuil).
- Callon, Michel (ed.) (1998) *The Laws of the Markets* (Oxford: Blackwell).
- Deleuze, Gilles (1968) *Différence et répétition* (Paris: PUF).
- James, William (1996 [1909]) *A Pluralistic Universe: Hibbert Lectures at Manchester College on the Present Situation in Philosophy*. (Lincoln: University of Nebraska Press).
- Latour, Bruno (1988) 'Irreductions', in B. Latour, *The Pasteurization of France*, part two (Cambridge MA: Harvard University Press): 153–238.
- Latour, Bruno (1993) *We Have Never Been Modern*. Translated by Catherine Porter (Cambridge, MA: Harvard University Press).
- Latour, Bruno (1996) *Aramis or the Love of Technology* (Cambridge, MA: Harvard University Press).
- Latour, Bruno (2004) *Politics of Nature: How to Bring the Sciences into Democracy*. Translated by Catherine Porter (Cambridge, MA: Harvard University Press).
- Latour, Bruno (2007) 'A Textbook Case Revisited: Knowledge as Mode of Existence', in E. Hackett, O. Amsterdamska, M. Lynch & J. Wacjman (eds), *The Handbook of Science and Technology Studies*, 3rd edition (Cambridge, MA: MIT Press): 83–112.
- Latour, Bruno (2009a) 'Will Non-humans Be Saved? An Argument on Ecotheology', *Journal of the Royal Anthropological Institute* 15(3): 459–75.
- Latour, Bruno (2009b) *The Making of Law: An Ethnography of the Conseil D'Etat*. Translated by Marina Brilman & Alain Pottage (London: Polity Press).
- Latour Bruno (2010) *On the Modern Cult of the Factish Gods* (Durham, NC: Duke University Press).
- Latour, Bruno & Peter Weibel (eds) (2002) *Iconoclasm: Beyond the Image Wars in Science, Religion and Art* (Cambridge, MA: MIT Press).
- Péguy, Charles (1961 [1914]) 'Clio dialogue de 'histoire et de l'âme païenne', in C. Péguy, *Oeuvres En Prose* (Paris: La Pléiade, Gallimard).
- Sloterdijk, Peter (2004) *Sphären III – Schäume* (Frankfurt: Suhrkamp).
- Stengers, Isabelle (ed.) (1994) *L'effet Whitehead* (Paris: Vrin).

Von Uexküll, Jacob (1965) *Mondes animaux et monde humain. Suivi de Théorie de la signification* (Paris: Gonthier).

Whitehead, Alfred North (1920) *Concept of Nature* (Cambridge: Cambridge University Press).

Biographical note

Bruno Latour after 25 years at the Centre de sociologie de l'innovation de l'Ecole des mines de Paris, is now Professor and Vice-President for Research at Sciences Po, Paris. He has published extensively in science and technology studies and all the references and most of the preprints of his articles may be found at www.bruno-latour.fr