

Bruno Latour

Hybrid thoughts in a hybrid world

**Anders Blok and
Torben Elgaard Jensen**



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French sociologist and philosopher, Bruno Latour, is one of the most significant and creative thinkers of the last decades. *Bruno Latour: Hybrid thoughts in a hybrid world* is the first comprehensive and accessible English-language introduction to this multi-faceted work. The book focuses on core Latourian themes:

- contribution to science studies (STS – Science, Technology & Society)
- philosophical approach to the rise and fall of modernity
- innovative thoughts on politics, nature, and ecology
- contribution to the branch of sociology known as ANT – actor-network theory.

With ANT, Latour has pioneered an approach to socio-cultural analysis built on the notion that social life arise in complex networks of actants – people, things, ideas, norms, technologies, and so on – influencing each other in dynamic ways. This book explores how Latour helps us make sense of the changing interrelations of science, technology, society, nature, and politics beyond modernity.

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Preface

The works of Bruno Latour have emerged as some of the most original, wide-ranging and provocative calls for a radical re-examination of the key issues of our times. Difficult questions about the internal workings of science and technology, the history of modernity, the political challenges of globalization and the moral significance of the ecological crisis are all scrutinized in his far-reaching thinking – and surprising results always follow. Latour is one of the most astute interpreters of our hybrid, chaotic and ever-changing world, and it is our conviction that his thinking deserves a wider audience. That, at least, is our rationale for writing this book, which is set to be the first introduction to the (so far) complete authorship of Latour.

Latour's approach is notoriously difficult to capture in a few simple characteristics. He was educated in theology, philosophy and anthropology, but spent many years working as a sociologist at *École des Mines*, an elite school for engineering students, before moving to his current position as dean of research at *Sciences Po*, a Parisian center of political science. His name is often associated with actor-network theory (ANT), which he developed with colleagues Michel Callon and John Law during the 1980s. But even a cursory look at his formal career and publications indicates a considerably broader field of intellectual engagement. Similarly, Latour is often identified with the interdisciplinary field of science studies known as STS (Science, Technology, Society; or Science and Technology Studies), which also emerged during the 1980s, primarily in British and American settings. However, while Latour is certainly recognized as a pivotal figure in this field, his theoretical position remains distinct, in part because it reaches well beyond the thematic boundaries of science and technology.

In short, it is quite difficult to simply categorize Latour in terms of academic disciplines, thematic interests or theoretical currents. And it would be just as problematic to try to pinpoint his theoretical position by using a few philosophically charged concepts. Despite persistent rumors to the contrary, Latour is neither a social constructivist, a postmodernist nor a relativist. He *could*, however, be reasonably linked with a number of subtly different labels, such as constructivism, non-modernism and relationalism. But unlike their more well-known counterparts, the theoretical significance

of these labels is not immediately apparent. Latour develops his position in ongoing dialogue with a number of intellectual figures from the sidelines, ranging from theologian Bultmann to sociologist Tarde and philosopher Whitehead. This quick glance at Latour's sources of inspiration is enough to suggest that we are dealing with a highly original and vigorous intellectual project. Overall, an adequate picture of Latour needs to embrace the *intrinsically* interdisciplinary nature of his thinking, together with the sheer diversity of his philosophical, empirical and public engagements. As authors of this book, it is our (admittedly ambitious) goal to create an account that retains the complexity of Latour's intellectual pluralism, while highlighting those common threads that will help readers navigate his hybrid universe.

One of the central points of this book is that there *are* indeed common threads running throughout the better part of Latour's 35 years of work as an intellectual – and as a prolific writer of a dozen books and a wealth of scientific articles. These threads are merely difficult to find, and it requires a bit of perseverance to discover and describe them. Put briefly, however, Latour is arguably *the* contemporary intellectual who has most radically investigated, deconstructed and carefully re-described the divide between *nature* and *culture*, which he (and others) believes to be constitutive of modernity itself. In Latour's case, this investigation takes the shape of a sustained attempt to better understand the practice through which our modern society recognizes nature: the practice of natural science.

Since his first anthropological studies of science, which took place in a Californian laboratory in the 1970s, Latour has pursued the fundamental point that “nature” must be viewed not as the *cause*, but as the *product* of scientific practice. Scientific facts are constructed in a process where human interests and non-human technologies are both negotiated and brought together to work as one. In this way, the very existence of an ontological gap in the given order of things between nature and culture – and between science and politics, technology and society – is called into question. Latour's exquisitely detailed studies of the close interconnections of science and society show that, in practice, we have *never* been modern (to paraphrase the theoretical slogan for which he is best known). “Nature” and “society” have never been separate domains; they have always been interwoven in hybrid networks of human and non-human elements; therefore, these terms require a new set of definitions. Since the end of the 1990s, Latour has written books and articles that re-describe these two domains as part of a single, ecological and negotiating assembly. The central question now is, how can we live together peacefully in a world that exists beyond the unshakable truths created by science? If we Westerners have never been modern – then what have we been, and what should we strive to become?

What we just said might be read as an ultra-short outline of how the argument of this book is structured; a structure based on a thematic and a philosophical thread running through Latour's writings, as we elaborate in the introductory chapter. It is worth noting that, as readers and writers, we

have had to undergo a significant learning process to reach the point where these connections seem evident to us. There are many possible routes into Latour's multifaceted universe, and together we represent merely two of these possibilities. One of us, Torben Elgaard Jensen, was educated as a psychologist but re-trained in the interdisciplinary field of science studies (STS). Working at *Danmarks Tekniske Universitet* (DTU),¹ Torben (like Latour!) teaches technology—society relations to engineering students.

Anders Blok trained as a sociologist, focusing on environmental sociology, and had no real connection to science studies – only discovering Latour's work through research in social theory and political philosophy. By now, we obviously share a professional interest in and enthusiasm for Latour's thinking, but as our respective biographies indicate, we have reached this conclusion from quite separate starting points. Torben first encountered Latour through the latter's early work in the anthropology of science (and ANT), and the construction of techno-scientific networks has remained central to Torben's own research. Anders started out reading Latour's much later texts in political ecology and the sociology of associations, and then gradually worked his way backward through the authorship. Writing this book has been a mutual discovery process where we, as writers, have come to meet in the middle, so to speak – and quite appropriately, given that the subject of this book is a thinker for whom "The Middle Kingdom" (of nature—culture hybrids) always takes center stage.

We hope that, through our different yet converging approaches, we have managed to create a richly textured portrait of Latour, while also opening a broad range of theoretical, philosophical and thematic interests for the reader. This book is written with higher-education students in mind (although, others are obviously very welcome to read it). However, it is *not* directed at audiences within any particular academic field. Such an approach would, in our view, deviate too far from Latour's intrinsic interdisciplinarity. In this context, it is worth emphasizing that we are also deliberately avoiding a particular tendency in much of the previous reception of Latour: namely, the tendency to read his works as *primarily* philosophical in nature, whether that refers to philosophy of science, philosophy of modernity or to metaphysics.² As interesting as such philosophical explorations are, we want to maintain throughout this book the (only slightly) polemic argument that Latour's intellectual universe is exciting and original mainly because it *breaks away* from the dominance traditionally held by philosophy over key questions of knowledge, facts and modernity.

Despite our taste for interdisciplinarity, we must admit that our own approach leans rather systematically toward the sociological and the anthropological. By flagging this inclination, we wish to stress that, above all, Latour outlines an *empirical* program for alternative explorations in a hybrid world of constant dynamism and change. We thus hope to inspire our readers – across academic segments – to experiment with the analytical tools made available by Latour. Our ultimate aim with this book, then, is to provide

readers with the means and the inclination to navigate *themselves* through Latour's *own* texts and intellectual universe. In that sense, this book is a bridge, not a destination in itself. While Latour's thinking is challenging and at times difficult to access, we hope to communicate the subject matter in ways that engage the reader and provide a glimpse of the inspiring and entertaining experience that may *also* be found by moving around in Latour's hybrid world.

It remains only to thank the many students, colleagues, advisers and friends whose constructive criticisms have been an invaluable support in our work with Latour and in the making of this book. In particular, we wish to thank the following people, who either made valuable comments on one or several earlier chapter drafts, or who otherwise provided tangible assistance to the work: Niels Albertsen, Heine Andersen, Christoffer Andersson, Margareta Bertilsson, Christian Borch, Christian Clausen, Paul du Gay, Casper Bruun Jensen, Mette Jensen, Lars Bo Kaspersen, Liv Nyland Krause, Martin Letell and Estrid Sørensen. A warm "thank you" to Astrid Jespersen, who has supplied *both* valuable comments and practical support on the home front to one writer.

The rapidly growing Danish STS environment – including many who, like us, are affiliated with the Danish Association for Science and Technology Studies (DASTS) – has played a vital role in nurturing our Latourian interests. This energetic network of mostly young researchers has given us the belief that the majority of effects, applications and discussions of Latour's work lies in the future, not the past. At the same time, this STS community – together with its international counterparts – forms an important part of our imagined audience for this book.

In the course of writing the original Danish version of this book (published by Hans Reitzel; Copenhagen, 2009), we had the pleasure of collaborating with Social Science Editor Martin Laurberg. We are grateful to Martin for his encouraging, extraordinarily precise and always well-directed commentary, which helped us improve the manuscript substantially. We would also like to thank the editors and staff at Routledge for their unwavering support, experience and professionalism.

Since this book started out its life in the Danish language and has since been translated and modified, we wish to gratefully acknowledge the invaluable translation work and language assistance provided by Amy Clotworthy and Luci Ellis. As anyone familiar with the work of Bruno Latour is likely to acknowledge, translation is neither easy nor innocent. Working with native English speakers who are simultaneously competent in the obscurities of the Danish language has provided us, as authors, with much-needed guidance on how to balance linguistic curiosity against the strains of working in our second language. Needless to say, we remain solely responsible for whatever shortcomings can be detected in this collective endeavor.

Finally, we owe special thanks, of course, to the main character himself: Bruno Latour. Not just for the inspiration his writings have provided us, but

also, and more specifically, for his generous involvement in the interview printed toward the end of this book. Having first endured the fate of seeing his voice translated into Danish, at least we are now back to a language he understands! The irony, of course, is that this book as a whole translates the writings of an author renowned for his own well-articulated translations, not least across the Atlantic of French– American relations. Not that this seems to bother a man for whom *translation* as *transformation* represents a general truth about the world, inside and outside social science. Nevertheless, we conclude by emphasizing that any deficiencies in this book should of course be blamed on us, the interpreters, rather than on Latour, the interpreted.

1 On the trails of Bruno Latour's hybrid world

I would define myself as an “empirical philosopher,” not as an empiricist philosopher, but as someone who tries to get at classical philosophical questions through the methods of fieldwork and case studies. [. . .] It is just that sometimes I identify myself more with philosophy and sometimes more with anthropology. In fact, deep down, my real interest is in metaphysics.

(Latour, in Crease *et al.* 2003: 15f)

Prologue: “Do You Believe In Reality?”

On a hot afternoon in June 1996, two researchers – from two different scientific disciplines and two different parts of the world – meet for an informal conversation by a lake in the tropical mountain region of Teresopolis, near Rio de Janeiro, Brazil. They are both middle-aged, Western men, participating in the same scientific conference; both are highly respected for their research efforts, although in entirely different fields. One is an American psychologist, and as such, a recognized member of the natural-science establishment. His counterpart belongs to another domain of scientific culture: He is a French philosopher and anthropologist of science, known for his work within the growing interdisciplinary field of Science and Technology Studies (STS). The psychologist is anonymous. The anthropologist is Bruno Latour, and he is the focus of our attention here, based on his own re-telling of this meeting (Latour 1999b: [chapter 1](#)).

The conversation itself is amicable, but the context is dramatic: At this time in the United States, the psychologist's homeland, an intense discussion is raging about the relationship between the “hard” and “soft” sciences – that is, between the natural sciences and the humanities. In fact, conflicts between the disciplines are so intense that they are later dubbed “the science wars.” At stake in these verbal wars are the relations between science, politics and society – relationships that are undergoing dramatic transformation in the so-called “knowledge society.” As an anthropologist of science, Latour analyzes – but is also deeply implicated in – these extensive changes. In his view, science is essentially a social matter. But this approach makes him the object of suspicion in certain academic circles: Mainstream philosophers of

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science, and some quite vocal natural scientists, view such “social constructivist” and “post-modern” standpoints with skepticism and concern.¹ This sentiment of concern is shared by the American psychologist by the lake at Teresopolis.

Only in this context are we able to understand the bizarre exchange that takes place during this meeting – an exchange of words that, deep down, touches upon the status of scientific knowledge, and thus one of the foundations of our modern world. Is scientific knowledge really as compelling, objective and universal as it is usually presumed to be in our high-tech society, influenced by the ideals of the Enlightenment? If not, then what are the implications for our world-view, our self-perception and our very relationship with the world around us? These are the kinds of thoughts that prompt the American psychologist to seek out Bruno Latour, and then to ask, with a slight quiver in his voice, the following cryptic question: “Do you believe in reality?” Latour is completely taken aback by the naiveté of the question. “Why, of course!” he replies. “What a question! Is reality something one needs to believe in?”

Encouraged by this response, the American psychologist asks two further questions: First, whether we now have greater knowledge than before, to which Latour answers, “Of course. A thousand times more!” And second, one of the classic questions of the philosophy of science: whether science generates cumulative knowledge. Once again, Latour responds in the affirmative – although this time, he adds that scientific disciplines also have an unfortunate tendency to forget their own past. The psychologist is clearly pleased and relieved by these answers. Latour, on the other hand, is shocked: How has he managed to put himself in a position where others feel the need to pose such questions, so obviously misguided and bizarre? How could his, and his colleagues', efforts to create a more *realistic* image of science, by studying the sciences as dynamic social activities, have been so fundamentally misunderstood? How could his profound respect for the diversity and intricacies of the scientific world be so casually confused with cheap anti-science?

Even a cursory understanding of the theoretical landscapes of the social sciences and humanities since the early 1980s leaves no doubt that this exchange is a caricature: a caricature of debates between “realists” and “social constructivists,” between “modernists” and “post-modernists,” and between stereotypes of the natural and social sciences. In his book *Pandora's Hope* (1999b), Latour uses this anecdote as the basis for clarifying his theoretical position – and he comments on the ongoing scientific controversies using the motto: “We are not at war!”

In order to clarify his approach, Latour must propose a position that fundamentally diverges from modernist ways of thinking – by at once relating epistemology, ontology, politics, psychology and theology, and by encompassing all of nature, society and God. In Latour's view, such a position is considerably more realistic than the so-called “realism” produced by modern philosophy of science. As such, he uses the anecdote to pointedly

highlight the absurdity of a range of those categorizations that we all, as modernist Westerners, use in our everyday interpretation of the world. To understand how the question “Do you believe in reality?” can become meaningful – indeed, how it can be articulated at all – we must first, according to Latour, understand the deeply entrenched categories of the modern world. Next, we need to transgress these categories by realizing that, in fact, we have never really been modern in the first place (Latour 1993).

Our book, which deals with Bruno Latour's far-reaching intellectual project, examines all of these issues (and much more). For the moment, we simply employ the anecdote as a sign of warning against the error of wanting to understand Latour's ideas via a few compact, (over)simplified interpretive categories – categories such as “social constructivism,” “post-modernism” or, indeed, “philosophy of science.” We claim that understanding Latour's thinking requires a fundamental willingness to rethink categories and intellectual habits. With this introductory book, our aim is to assist readers in such a process of reconstruction.

Bruno Latour, the actor-network

To start this book with a categorical definition of who Bruno Latour *is* – using biographical data, theoretical traditions, philosophical positions and the like – would be tantamount to being out of step with his own way of thinking from the start. Indeed, one of the principal ideas expressed in every aspect of Latour's wide-reaching authorship is that no one entity is significant in isolation, but instead attains meaning through its numerous – and changeable – relations to other entities. Often, these multitudes of relations are called actor-networks, and this constitutes the foundation of the theoretical tradition known as *actor-network theory* (ANT), with which Latour's name is intimately associated. Such actor-networks are hybrid, which means that they consist of both humans and material objects; and everything exists within actor-networks – including, of course, Bruno Latour himself. This relational and hybrid approach to the world has broad implications, and this book aims to capture a number of the essential implications for the theory of science, methodology and politics.

However, the point relating to Bruno Latour is self-evident: It makes little sense to attempt to separate the person from his many books, his academic career, his colleagues, discussion partners and sources of inspiration, or his academic disciplines. Neither would it make sense to separate Latour's works from their numerous enthusiastic, indifferent or indignant readers: Without them, there would be no “famous and increasingly influential French anthropologist of science and philosopher of modernity” to write about. The authors of this book are some of his more ardent readers, and as such, we are small nodes in the “Bruno Latour” actor-network. Our book is an attempt to expand this network by presenting Latour's thoughts in a compressed form to an interested readership. With Bruno Latour, the world is always full of new connections.

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With this in mind, it may no longer be all that obvious what we actually mean when we refer to “Bruno Latour” – let alone whether we mean to refer to one single entity or to a plurality of relations. Are we talking about the man born in the year 1947 in the village of Beaune in the Bourgogne district of France, son of a vineyard owner? The man who studied theology, philosophy and anthropology in Dijon and Tours? The man who later became a professor at the elite engineering institution *L'École des Mines* in Paris? The man who developed a particular version of a “sociology of innovation,” and who has been teaching this version of sociology to engineering students for most of his academic career? Or are we perhaps referring to the numerous books (those low-tech devices from the 1400s) through which the author and label “Bruno Latour” has by now spread to many different countries? The books that have been translated into several languages, and which have achieved recognition while also awakening intellectual resistance? If that is the case, then are we talking about one, some or all of these books? And does it make any difference that Latour refers to himself as an “anthropologist of science” in certain places, a “metaphysicist” in others and a “sociologist” in others still?

Alternatively, are we perhaps referring to the various theoretical positions associated with the labels “Bruno Latour,” “ANT” or “(social) constructivism” in a growing number of articles, textbooks and reference works – although Bruno Latour can hardly be considered a philosopher of science in the classical philosophical sense of the term? Of course, the name Bruno Latour covers all of these facets. For the time being, we are referring to all of them at once. Only gradually do we insert a number of demarcations into this chaotic jumble, and thereby create an ordered image of a complex whole. Bruno Latour, then, is neither a singular entity nor a plurality, but rather an extensive and partially connected network.

This book introduces Bruno Latour's texts and thoughts, as he has presented them in around a dozen books and numerous scientific articles, commentaries, interviews and art-exhibition catalogs. Our ambition is to encompass most of the essential aspects of this vast universe – well aware that such an enterprise requires a considered approach, involves a number of difficult omissions and creates its own risks. With regard to the omissions: Apart from a short overview of Latour's academic career, there are only a few details about the man himself in this book. This is not a biography, and certainly not an intellectual biography, but rather a catalog of one of the most far-reaching, inventive and provocative intellectual projects of our times. In addition, we do not feel that the most interesting aspect of Bruno Latour's intellectual universe is his (more or less explicit) philosophical position in relation to classical epistemological, ontological and metaphysical questions. Although we are aware that he is often read this way, we do not think that Latour is *primarily* interesting as a philosopher of science. Of course, he is interesting in this respect, but he is also a significant contemporary thinker precisely because he *removes* philosophical epistemology from its dominant

intellectual position – replacing it with something we might call “empirical philosophy.” Another word for this is anthropology, or as Latour would say, “symmetrical anthropology”; other terms would be “sociology of associations” or “political ecology.” The most important goal of this book is to clarify and expand upon the meanings Latour gives to these complex designations. We aim to show how, despite internal differences, they form elements in *one* undertaking, *one* intellectual project.

What, then, does this project consist of? Strictly speaking, readers should go through the entire book before they can expect a clear answer to that question – but we give an initial response in this introductory chapter, which also serves as a reading guide for the subsequent chapters. We begin with a short overview of Latour's academic biography, calling attention to the many threads that run from his early authorship through to the later. Next, we attempt to pinpoint Latour's combined intellectual endeavor, which, in essence, concerns the relationship between science and politics over the last 300 to 400 years of (so-called) modern Western society. In short, if “facts are fabricated”,² where does this place our understanding of science, politics, society, technology, nature, modernity, God – and the other essential ingredients in our collective life? This also involves a discussion of the principal philosophical currents to which Latour's thinking is related, especially in a French (and thus Continental) philosophical context. Following this tentative overview, we go straight to a different kind of dissection: We then explain our rationale for dividing Latour's authorship into four “phases” or, more precisely, four “professional identities.” We also define the contours of two of Latour's largest collective projects – ANT and STS – that still play a constitutive role in his own intellectual project.

This review of “phases” and projects in Latour's thinking – a preview of the chapters in this book – leads us to a discussion of the fluid transitions and definite shifts that have occurred during the course of his authorship. This is a complicated discussion, and we save the details for the concluding chapter. Likewise, most of our evaluation and criticism of Latour's contribution to science studies (and a variety of other disciplines) is to be found in this concluding chapter. We round off this introductory chapter with a series of practical and stylistic guidelines for the reader, including a few remarks on the choices and omissions manifested in this book, its strengths and limitations, and our aspirations on behalf of the reader. There is no reason to deny it: Bruno Latour can be a complicated acquaintance to make. This book attempts to facilitate the introduction to his work, but nothing is gained without effort, and everything comes at a price when one attempts to take shortcuts.

Fragments of Bruno Latour's academic biography³

Let us begin by eliminating one potential misunderstanding: Although Bruno Latour is indeed the son of a French vineyard owner, his family is in no way

linked to the famous vineyard *Château Latour* in the Médoc region in north-west Bordeaux! His family owns the lesser known, but still quite impressive, *Maison Louis Latour*, a family business of wine growers and merchants in the Bourgogne district.⁴ This information is taken from Bruno Latour's personal web site – a web site recommended to readers looking for a quick overview of his intellectual universe.⁵ The fact that this information appears on the web site of a French elite university professor is a telling indication of the colorful, and at times playful, temperament that characterizes Latour's work. In addition to standard lists of academic and popular publications, the web site contains a virtual, illustrated and hyperlink-based book (*Paris: Ville Invisible*; see Chapter 5). It also displays photographs from two techno-art exhibitions – “Iconoclash” (2002) and “Making Things Public” (2005) – mounted at the *Zentrum für Kunst und Medientechnologie* (ZKM)⁶ in Karlsruhe, Germany; Latour co-curated both exhibits.

Even this short overview indicates a far-reaching intellectual engagement that is rooted in a creative approach to contemporary challenges, particularly those of a technological bend. Leafing through Latour's academic works, it becomes clear that this creativity is also reflected in his prose. Latour writes energetically, with humor and in a polemic tone. He often experiments with different genres and narrative structures. His stylistic experiments include texts that read like an anthropological travelogue (*Laboratory Life*; see Chapter 2), a courtroom drama (*Science in Action*; Chapter 2), a detective novel (*Aramis*; Chapter 5) and a classical philosophical tract (*Irreductions*; Chapter 3). Indeed, Latour approaches the craft of writing with passion and a sense of pride. His declared ambition is that his readers take as much pleasure from reading a Latour book as from drinking a Latour wine.⁷

Latour describes the environment in which he was raised as being a “typical provincial bourgeoisie” (interview, Crawford 1993). This provincialism may explain why (in spite of everything) he broke with his family's winemaking tradition and embarked on an academic career. Latour studied philosophy and Biblical exegesis at the *Université de Bourgogne* in Dijon in the late 1960s. Later, he studied theology at *Université de Tours*, and in 1975 he received his Ph.D. in philosophy, for a thesis titled “Exégèse et ontologie: une analyse des textes de resurrection.”⁸ In retrospective interviews, Latour strongly emphasizes that – in contrast to a number of his well-known French academic colleagues – he was not educated at the *École normale supérieure*, an incubator of France's bureaucratic elite. In fact, the combination of ontology and theology is far removed from the dominant theoretical currents of his student time, notably Marxism and structuralism. This may explain why Latour – unlike his slightly older but almost contemporary fellow countrymen, Michel Foucault and Pierre Bourdieu – has never undertaken any detailed critique of either Marxism or structuralism. Latour was simply trained in quite different philosophical and theological traditions, and his subsequent work is much closer to, for instance, the Christian metaphysics of Alfred N. Whitehead than it is to the social theory of Karl Marx or the

structuralism of Ferdinand Saussure. We return to Latour's philosophical sources of inspiration later.

As we mentioned earlier, Latour also studied anthropology. These studies, however, did not take place in a traditional university environment. He encountered anthropology during his military service in the early 1970s, when he was stationed in the Ivory Coast, West Africa, and affiliated with an organization called ORSTROM (*Institut Français de recherche scientifique pour le développement en coopération*).⁹ This organization works to improve economic conditions in developing countries through education in, and transfer of, science and technology. At that time, the Ivory Coast office was under the leadership of anthropologist Marc Augé, who later became a well-known figure within his academic field. Latour received inspiration from Augé and learned the fundamental principles of anthropology, especially long-term fieldwork as a scientific method. As early as 1974, the year before receiving his Ph.D. in philosophy, Latour had already published an anthropological and ethnographic report on the French tradition of technical education and training, which he compiled while staying in the Ivory Coast.

This simultaneous encounter with anthropology, the non-Western world (in the form of West Africa) and the complex histories of science and technology was arguably to become more significant to Latour's career than his theological and philosophical studies in France. A direct line extends from here to the anthropology of science and technology that Latour begins in earnest in the mid-1970s. This new work likewise consists of close-up, ethnographic studies of everyday activities. The subjects, however, were to be changed from poor African peasants to highly esteemed Euro—American scientists.

Consequently, Latour's first comprehensive and influential study, published in 1979 and co-authored by sociologist Steve Woolgar, is called *Laboratory Life: The Social Construction of Scientific Facts*. To make this happen, however, yet another historical coincidence was required: Roger Guillemin, whom Latour knew from his time in Dijon, had since become an internationally acclaimed researcher in the field of neuroendocrinology. Guillemin invited Latour into his laboratory in La Jolla, California, and Latour stayed there for two years (1975–76), financed by a Fulbright scholarship. Latour enjoyed full access to every nook and cranny of the laboratory, and this unique opportunity allowed him to make one of the first and most significant contributions to the emerging field of interdisciplinary science studies. To Latour, this also laid the foundation for his theoretical thinking about science and anthropology, which developed into ANT in the early 1980s. (We elaborate on the history of both ANT and science studies later in this chapter; Latour's anthropology of science and technology is the topic of [Chapter 2](#).)

Upon his return from the U.S., Latour was employed by the *Centre de Sociologie de l'Innovation* (CSI),¹⁰ where he achieved the status of professor in 1982; he remained there until 2006. CSI is a center for sociological research and education at *L'École Nationale Supérieure des Mines* in Paris, an elite

institution focused on the education of engineers – traditionally, a rather powerful profession in France. The center was founded in 1967 as part of a restructuring of the engineering education. Later on, CSI found itself in the middle of a maelstrom of political changes in France, characterized by an increasing focus on applied research in science, technology and innovation throughout the 1970s and 1980s (see Fuller 2000). In this context, Latour had ample opportunities to pursue his broad, cross-disciplinary research interests, in line with ongoing developments in science and technology.

Around 1980, Latour began closely collaborating at CSI with Michel Callon, a sociological researcher educated in physics and economics. This collaboration laid the foundation for the initial formulations of ANT, originally conceived of as a “sociology of translation.” The term “translation” became the fundamental concept used to describe technological innovation as a process of translating (forcing, bending, seducing, organizing) a multitude of heterogeneous elements into the hands of a few powerful representatives. Such translation processes occur within specific relations or networks of actors – hence, the name of the theory (see [Chapter 2](#)). Latour and Callon developed these basic theoretical principles using a number of case studies of important, but ultimately unsuccessful, techno-innovation projects. These projects, set in the contemporary French research – political context, included: the electric car (Callon & Latour 1981); a global communication system called Minitel; and a computer-driven public transportation system in Paris (Latour 1996a).

Based on these cases – as well as close collaborations with British sociologist John Law (e.g., Callon, Law & Rip, eds. 1986) – ANT gradually developed into a recognized, and increasingly dominant, research program within the interdisciplinary field of STS. Given that STS is mostly practiced in the English-speaking world, one consequence of the development of ANT was that Latour's work became read and referenced more widely in England and the U.S. than in his native France. Almost all of Latour's books and articles have been translated into English, if they were not originally written in English.

During the developing phases of ANT, Latour became increasingly interested in the history of science. This interest led to a (by now well-known) book about French scientific icon Louis Pasteur and his work with microbes in the 1860s (Latour 1988b). Compared to existing historical accounts, Latour assigns a prominent role to the microbes themselves, thus illustrating the central position envisaged by ANT to technology, machines, animals and organisms – all designated by the common term “non-human actors.” This interest in the non-human actor is similarly apparent in his lengthy collaboration with primatologist Shirley Strum, whose work he uses extensively (and provocatively!) in his own sociology from the late 1980s onward (Strum & Latour 1987; see [Chapter 5](#)).

In the 1990s, Latour continued to work on the distinctly philosophical and metaphysical aspects of ANT, notably in the book most people consider to be

his major philosophical work: *Nous n'avons jamais été modernes* (1991) or *We Have Never Been Modern* (1993). In this book, Latour presents, with visionary clarity, the intellectual program for an exploration of the “modernist” history of ideas in the Western world, a project he dubs “symmetrical anthropology.” At least two of his later books continue, or elaborate on, the threads started in this principal work: the aforementioned *Pandora's Hope* (1999b), which sums up Latour's philosophy of science; and *Politics of Nature* (2004d), which focuses more on political philosophy. In this latter book, Latour expands on his notion of political ecology in the context of contemporary environmental threats, a central theme of his research during the 1990s.

All of these themes are discussed later in this book: the philosophy of modernity of *We Have Never Been Modern* in [Chapter 3](#); the political ecology of *Politics of Nature* in [Chapter 4](#); while [Chapter 5](#) introduces the successor of the sociology of translation, now dubbed the “sociology of associations.” This latter chapter is based primarily on Latour's book *Reassembling the Social* (2005), which reads as an expanded introduction to ANT, in which the theory emerges as a fully fledged sociological research program.

In 2006, after 25 years at CSI, Latour was appointed professor at *Sciences Po*, a Parisian university of political science. Here, he is affiliated with The Center for the Sociology of Organizations, while also currently (2011) serving as vice president of research. Latour's chair at *Sciences Po* is named after sociologist (and psychologist) Gabriel Tarde, who was until recently little known outside of France. Tarde's work originates in the end of the 1800s, a period when the social sciences were being institutionalized in France. Latour has increasingly heralded Tarde as his intellectual role model and as an unaccredited forefather of ANT (Latour 2002a).

In these ways, Latour contributes significantly to a rising interest in Tarde's work outside of France; for instance, Latour wrote the foreword to a republication of Tarde's major work on the “psychological economy” (Latour & Lépinay 2009). Similarly, Latour entered into a famous dispute from the earliest days of sociology: Tarde versus Émile Durkheim, his younger, victorious and better-known counterpart (see Candea 2010). Latour's interest in this dispute concerns nothing less than the future of the sociological (and anthropological) sciences. While sociology in the 20th century was “Durkheim-ified,” Latour now pushes for a “Tardification” of the 21st century (see [Chapter 5](#)). Toward such an end, Latour was one of the driving forces in reviving this classic social-science dispute when he personally played the role of Tarde in a verbal duel with modern-day Durkheimians at Corpus Christi College, Cambridge, UK in March of 2008.¹¹

This endeavor is typical of Latour: he seems to like nothing better than a good intellectual controversy, particularly when the stakes are high – for the future of both the sciences and politics. So although Latour is not at war with the natural sciences as such, he *does* admit that he “won't mind firing a few

shots" (1999b: 23) in the direction of his intellectual opponents and toward the central debates of contemporary philosophy, social science and politics.

Latour's thematic axis: "Facts are fabricated"

From this brief overview of Bruno Latour's intellectual project, it should be clear that any attempt to sum it up in a few words is likely to be incomplete and unsatisfactory – if not downright misleading. He simply moves around too much: both in historical time (Pasteur) and geographical space (Africa and the U.S.), as well as in the zones between established scientific disciplines, philosophical questions and thematic points of reference. But behind all of this mobility, there are nevertheless strong patterns to be found.

In our view, Latour's multifaceted engagements converge into one relatively coherent intellectual project, which can be traced along two axes: one thematic, and one ontological–metaphysical. The thematic axis centers around Latour's lifelong fascination with the worlds of science and technology – especially science's innermost, highly esteemed and quasi-holy core: the scientific fact and its place of production, the laboratory. The ontological–metaphysical axis is harder to capture. Its roots and connections in the history of ideas are somewhat fleeting, and these relations are often only minimally mentioned in Latour's own writings. Latour is not a philosophical "system builder" in any strict sense – as he himself declares: "I produce books, not a philosophy" (interview, Crease *et al.* 2003: 19). For this reason, there is always a risk of presenting his thinking in *overly* coherent philosophical and theoretical terms. Nevertheless, we find it meaningful to single out three of his significant sources of inspiration in the history of ideas: Whitehead's process philosophy; Gilles Deleuze's conception of immanence; and Michel Serres' ontology of mediation (see the following section). With this narrowed-down selection, we merely intend to sketch the conceptual landscape and history in which Latour's thinking emerges. It goes without saying that Latour engages with a considerably larger number of significant authors than just the three philosophers on our list; at the same time, Latour does explicitly acknowledge Whitehead, Deleuze and Serres as deep sources of inspiration.

But let us begin with the thematic axis: the complex, often inaccessible and esoteric worlds of science and technology. As others have also noted (Fraser 2006: 59), Latour's lifelong project may be described as a multifaceted, interdisciplinary investigation into the intricate ways in which scientific facts are produced (constructed, fabricated) and then distributed far beyond their original site of production. His project may be considered a practical, as well as philosophical, attempt to "de-naturalize" the scientific fact as a social category: A fact is *not* a given, inevitable nor universal entity. On the contrary, it has a very specific history of production, which may be analyzed by means of thorough empirical and historical studies.

Looking at Latour's academic biography reveals some of this project: His