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**ACTOR-NETWORK
THEORY**

Trials, Trails and Translations



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INTRODUCTION

So, How Does This Book Start, Then? How Should I be Reading it?

Not so long ago, I ran a postgraduate workshop on Actor-Network Theory (henceforth ANT). An introductory overview had been specifically requested by students, many of whom did not seem to have much of an overt interest in ANT. My sense, though, was that several people had a vague feeling that it was of potential relevance to their research: they felt somehow impelled to find out about it. It surprised me that ANT was something that these students felt they ‘should’ know about as neophyte researchers in sociology, working in such fields as the politics of migration in Southeast Asia, the role of romance narratives in gay relations, or the representation of intellectual disability. How has ANT come to attract this sort of slightly anxious attention?

In a quick and dirty Google Scholar search of ANT’s presence in a number of (primarily) social scientific disciplines, I looked at the number of mentions of these disciplines across the citations for two ‘classical’ ANT texts. At the time of first writing (late 2013), Michel Callon’s (1986) ‘Some elements in a sociology of translation: domestication of the scallops and fishermen of St Brieuc Bay’ had received about 4700 citations altogether. Around 4000 of these mentioned Sociology, 1100 Anthropology, 1000 Geography, 800 Management and Organization Studies, 1000 Science and Technology Studies (700 STS), 200 Cultural Studies, 200 Political Theory, 500 Political Science, 400 Social Psychology. Bruno Latour’s (2005) volume, *Reassembling the Social: An Introduction to Actor-Network Theory*, has gathered around 6700 citations. Around 4200 of these referred to the term Sociology, 2000 Anthropology, 1800 Geography, 900 Management and Organizational Studies, 200 Science and Technology Studies (800 STS), 900 Cultural Studies, 300 Political Theory, 700 Political Science, 500 Social Psychology. The point of these all too crude figures is simply to hint at the reach of ANT – it has come to be an intellectual port of call for many disciplines and their subsidiaries (and that includes disciplines beyond the social sciences – e.g. design, history, philosophy). Whether as a positive resource or a source of irritation, ANT has

become a conceptual framework (or, latterly, an analytic and methodological sensibility) that many writers feel obliged to reference. Why should that be so?

This piece of scene-setting – situating ANT as a focus of widespread interest – is also an exemplification of some of the processes that ANT has analysed in detail. Data have been gathered and arranged in order to establish the prominence of ANT across a variety of social science disciplines. The impression that is conveyed is one in which ANT is clearly an important perspective, one deserving of attention. This numerical accounting of ANT's pre-eminence aspires to a translation of interests: you want to be a respected researcher, ANT can transform you into a respected researcher, that means that you need to know about ANT (and fortunately, it also implies, by extension, that you really want to read this book). Analysis of the role of a 'technical' form of representation (immutable mobile) in forming associations (between a researcher and ANT in this case) is typical of 'classical' ANT analysis. However, there is also a hint of the latterday complexity of ANT – or post-ANT – in these opening sentences. Juxtaposed with the numerical accounting is a short autobiographical note of my experience of the popularity of ANT amongst postgraduate students. Here, students felt a certain concern that ANT might be useful, they wanted to find out something about what it can offer, they wanted to examine how it might potentially inform their research. In sum, there was a sort of appropriation of ANT that ideally would be fertile though need be neither faithful nor fine-grained. In the former case, one is being potentially 'enrolled' into – recruited to the cause of – ANT because of the persuasive potency of the evident 'factuality' of its prominence amongst a range of disciplines. In the latter case, students use my workshop as a means to explore the usefulness of ANT. And perhaps, somewhere down the line, they might develop a taste for it, gently import it into their projects, and put it into dialogue with other approaches with which they are more familiar.

So it would seem we are witness to two versions of ANT: one which is more 'agonistic', using particular forms of representation to persuade – *enrol* – people to ANT's cause; and one which is more 'collaborative', where ANT can be drawn on in various ways. In this light, ANT is not a singular framework, even at this basic level of how associations are drawn between social 'actors' (ANT and postgraduate students). Another way of putting this is that we have two ANT 'realities' (or ontologies) – let's call them for convenience's sake, a 'numerical-agonistic' one and an 'affective-collaborative' one. But, of course, these two versions of ANT are hardly distinct, they can play off and through each other.

The foregoing is simply a way of saying that ANT cannot be easily packaged. While it might once – in its very early days – have been reduced to an analytic recipe, this is certainly no longer the case. Indeed, some would dispute whether ANT was ever really a 'theory' at all. As Bruno Latour once quipped (to paraphrase): there are four things wrong with actor-network theory – actor, network, theory and the hyphen in between actor and network. Later he claimed, his tongue not too far from his cheek, that a better name for actor-network theory would be 'actant-rhizome ontology' (Latour, 2005a, p. 9). The upshot is that this book does not aspire to present ANT as

a neatly demarcated approach that can be ‘picked up’ and applied across different empirical domains (e.g. media, sexuality, technology, environment, medicine, transport, markets, everyday life, etc., etc.). Rather, it is a complex, and oftentimes disparate, resource (closely aligned with a particular, evolving, set of sensibilities) that opens up a space for asking certain sorts of methodological, empirical, analytic and political questions about the processes of the (more-than-)social world.

Having said that, as we shall see, there are plenty of cases where ANT has been treated as just such a toolbox – a set of concepts or empirical orientations that can be disaggregated and dropped piecemeal into a particular research project or analytic exercise. What this appropriation of ANT does, however, is miss out on the sensibilities that underpin it. But, ironically, these ANT sensibilities are not always easy to get a handle on, not least when, as we have already seen, ANT turns out to be rather slippery. For John Law (2009), ANT is multiple, realized through various case studies rather than an abstracted body of theory (so, again, ‘it’ is not a theory). And for Annemarie Mol (2010), ANT entails a sensibility marked by adaptability: ‘a set of sensibilities ... a rich array of explorative and experimental ways of attuning to the world’ (p. 265).

The broader point is that there is both a set of sensibilities and practical orientations that comprise ANT, yet those sensibilities and practical orientations are adaptable, realized through concrete case studies, and multiple.

What Makes ANT so ‘Special’? Why Does it Deserve my Attention?

This is not an easy question to answer. After all, ‘special’ is a pretty vague term – it can connote both attraction and revulsion. So let’s use ‘special’ as proxy for a nexus of terms that might include ‘intriguing’, ‘promising’, ‘insightful’ and ‘aggravating’, ‘simplistic’, ‘unhelpful’. These attributed qualities reflect a number of elements that go to make up ANT, not as a unitary entity, or a discrete tradition, or even a cast of academic characters, but as a fluid set of analytic and empirical practical orientations and sensibilities.

As indicated above, this set of practical orientations and sensibilities, while once quite tightly knit, has proliferated in a number of ways. For instance, the intellectual antecedents of ANT used to be found in the sociology of scientific knowledge, the social studies of science and technology, in ethnomethodology, in Greimas’s semiotics, in the philosophical works of Michel Serres and Alfred North Whitehead. Recently we have seen a new a forebear emerge, namely Gabriel Tarde. This is, taken altogether, a contrarian lineage – one that cuts an alternative route through the history of social scientific thought. This might seem at once intriguing (what does such a lineage promise?) but also aggravating (where are Kant, Marx, Durkheim and Weber?).

Relatedly, let us consider how ANT has differentiated itself from more mainstream approaches to the social scientific study of the ‘social’. For ANT,

the 'social' is not a given but a heterogeneous product laden with the nonhuman – technologies and natures are as much a part of society as humans. Further, the 'social' is not structured in micro, meso and macro layers or spatially arranged into the local and the global (and sometimes the 'glocal'); rather, according to versions of ANT, the social is 'flat', made up of a single layer of associations amongst human and nonhuman entities, though the layer itself can be 'topologically' contorted in all sorts of ways. Moreover, such standard social scientific categories as class, or gender, or ethnicity have been largely eschewed. In ANT accounts, instead, the conversation is more usually about actors or actants, mediators and intermediaries, and, of course, these need not be human. Indeed, sometimes the heterogeneity of these entities is emphasized: as both human and nonhuman they are hybrids, or monsters. When it comes to political processes, the focus is less on national parliaments, revolutions, political parties, new social movements, non-governmental organizations and the like; rather, the emphasis is on multinaturalism, cosmopolitics, political ecology and hybrid forums. Finally, when it comes to the status that might be ascribed to ANT's methodology and analytics, nowadays there seems to be a concern with the ways in which method and analysis are complexly constitutive of their objects of study. Method 'performs' the social, and in the process makes it in particular ways. This concern is captured in such terms as 'method assemblage', 'othering', 'factishes' and the 'ecology of practices'.

Coming from a more traditional social scientific background, one is confronted with a whole new (and shifting) vocabulary that perhaps holds a certain allure, but also can seem daunting and not a little obfuscating. Any ambivalence toward ANT will only be reinforced as one becomes aware of the sheer range of empirical topics, with which, in one way or another, it has engaged. If, in ANT's very early days, work was concentrated on the processes of scientific and technological 'innovation', it has subsequently been spun out in various empirical directions. A short, but hopefully indicative, list might include the following: the examination of the role of mundane technology in ordering everyday life; the querying of the notion of modernity which is placed in juxtaposition to that of 'amodernity'; analyses of the processes by which divergent medical 'realities' are proliferated and managed; investigations of the complex means by which markets are performed; a rethinking of what it means to introduce the nonhuman into political processes of negotiation, notably in relation to environmental issues. How has ANT made such empirical inroads? Is such adaptability a sign of conceptual and theoretical dissipation or a peculiar strength of ANT (Mol, 2010)?

Again, we are challenged by the fact that ANT is not a static edifice – it has been adapted, nuanced, expanded, and problematized by numerous scholars, not least by its founders. But further, it has become blurred as it has been deployed by scholars from different traditions, or has become embroiled in, and drawn from, broader scholarly concerns, both conceptual and empirical. The term 'network' is now entangled with the term assemblage; the concern with everyday technological artefacts must speak to the anthropological tradition of

‘material culture’; and the figure of the hybrid has long been in conversation with that of the cyborg. In other words, there are traces of ANT in other works whose relation (or even debt) to ANT is, not infrequently, highly complex and not always clear.

The upshot of all this is that what ANT ‘is’, or, indeed, what it is becoming, is not at all transparent. To reiterate, the aim of this book is not to demarcate and explicate what ANT definitively ‘is’. Rather, it is to provide a set of possible relations through which one can engage productively with ANT. However, this is also to say that, as one enters into those relations, ANT does not necessarily remain the same – the ‘use’ of ANT in its specificity can mean that ANT ‘itself’ changes.

Having made this point, I nevertheless want to set out a number of general practical orientations and sensibilities that can be said to characterize ANT. By ‘sensibilities and practical orientations’ I mean a sort of comportment toward the study and analysis of the world which at once seeks out and is receptive to particular elements, processes and relations (though this might end up meaning that there are multiple worlds). What follows is a minimal list and it will be much expanded and nuanced as the book unfolds. At this stage, the aim is merely to introduce some of these ‘practical orientations and sensibilities’ as a way of setting the scene, and providing some markers, for later discussions.

- To study society, or some aspect of it, is to focus on relations – how these are produced and reproduced, ordered and disordered. Such relations are not simply social but heterogeneous – they necessarily entail the role of nonhumans as well as humans. These nonhumans include mundane objects, exotic technologies, texts of all sorts, nonhuman environments and animals.
- The relational processes of ordering and disordering entail circulation – circulations of people, texts, objects and artefacts, bits of natures and cultures.
- These relations and circulations need to be studied in their specificity as it is not always easy to tell what enters into them and what emerges from them. What sort of humans and nonhumans become embroiled within these relations and circulations? And what sort of humans and nonhumans, or combinations, are produced in the process?
- This entails both paying close empirical attention to these relations, circulations and entities, and resisting any temptation to make assumptions about them (such as assumptions about their character in terms of class or gender, for instance).
- These relations and circulations presuppose a certain ‘flatness’ to the world – what can enter into a relation are only those elements in their concreteness and specificity. More and more elements might be drawn into these relations, and these relations can take on different patterns and forms – but what is analytically resisted is recourse to ‘broader’ or ‘higher’ or ‘deeper’ social processes such as class or gender or market dynamics as a way of

accounting for these relations. Rather, it is through the attention to specificity that we come to an understanding of class, gender or markets.

- To this end, a ‘neutral’ vocabulary is in order. Reference to abstracted terms such as actors and hybrids, association and enrolment, mediation and translation, networks and assemblages, is a means of shedding any sociological presuppositions about the constitution of the world.
- Yet ANT is itself a network made up of specific elements. In their empirical engagements, and in the process of accounting for their work, ANT scholars are themselves concerned with crafting relations. As such, care needs to be taken over the ‘neutrality’ of its terms which are of course engaged in mediating associations. These terms are not innocent.
- Relatedly, ANT is the outcome of such relations – relations through which certain terms have become part of ANT’s terminology. Again, this suggests that there is nothing neutral about those concepts, they come with historical baggage.

No doubt the foregoing is dense, and many of the terms are not a little obscure. To make things a little easier, I have put together a short, selective glossary of key terms at the end of the book (key terms are indicated in bold italic on their first relevant appearance). This should be treated with the scepticism it deserves – it is there as a means of orientation rather than as a site of definition. After all, ANT has been subject to much problematization, not only by scholars hostile to ANT, but also by those ostensibly working under its auspices. Indeed, ANT long ago entered a post-ANT phase – a phase characterized by an elaboration and proliferation of the ‘sensibilities and practicalities’ listed above. This book will attempt to address both the early and later versions, and their continuities and discontinuities.

What is the Point of This Book? What Should I Expect to Get out of it?

If the foregoing conveys a sense of the unfolding multiplication of ANT, is this book primarily a chart of ANT’s complex intellectual trajectory? Certainly, something along these lines is attempted. However, it will soon become apparent that a very particular line has been traced through ANT and post-ANT that inevitably reflects my own interests. For instance, particular texts that would be key or essential in someone else’s account, feature in a subsidiary or subordinate role here. The more important aim is to share a positive sense of the way ANT reconfigures our understandings of the processes that shape the social world. To be sure, this reconfiguration is complex and *fluid* and adaptive; nevertheless there is a set of sensibilities that, amorphous though it is, can suggest new ways of thinking about and ‘*performing*’ the social world (and its politics).

I have tried to strike a balance between depth (going into the inner workings and internal dialogues that mark ANT and post-ANT) and breadth (surveying

the many empirical, methodological and conceptual routes ANT has taken). I am not at all sure I have succeeded. In any case, the book is a multiple. For some, it might be a resource from which certain concepts can be derived and particular methods mobilized. For others, it might be a text that situates ANT in relation to particular histories of thought, and contrasts it against several countervailing sociological traditions. For others still, the book might feed into an intellectual or personal adventure opening out onto new avenues of thought and practice. But if this book simply sparks, or even deepens, a curiosity in ANT and inspires further exploration of its large and involuted corpus, then I would be pretty happy.

What's in This Book? How Should I Read it?

This book has been designed to provide a sense of the roots of ANT, its earlier versions, the dialogues and diatribes that have surrounded it, the ways in which it was differentiated from other perspectives, its take-up in a number of disciplines, and its continuing development. As such, the structure of the book is fairly straightforward, perhaps even a little too linear.

Chapter 2 considers the roots of ANT in a number of traditions within philosophy and the social sciences: it traces lineages in the philosophy and sociology of science, and the Sociology of Scientific Knowledge (SSK). In stressing the social constructedness of scientific knowledge, SSK serves as a base for ANT's more radical notion of *construction*. A second foundational resource is the work of Michel Serres, whose focus on the role of the nonhuman in the production of social ordering and disordering underpins ANT's analytic focus on *heterogeneity* and the processes of '*translation*'. Alfred North Whitehead's view of the social as the object of 'explanation', rather than the source of explanation (typical of much social science), is also crucial. Foucault's model of power and its productivities will also be seen to be central to ANT, especially to its relational account of actors and their agency. In addition, the debt to micro-sociology, not least ethnomethodology, which anchors ANT's reluctance to draw on macrosociological categories, will be set out. While this is the general intellectual scaffold from which ANT might be hung, this has been supplemented by various other forebears (Tarde's recruitment into ANT's lineage is especially notable). By the end of this chapter the reader should have a robust view of the various issues (the '*flatness*' of the social, the 'relationality' of the human, the role of the nonhuman, etc.) that these lineages have afforded ANT.

Chapter 3 provides an account of the development of ANT in its early 'classical' phase. It summarizes the key concepts that ANT put into circulation – concepts such as *actor-network*, *actor*, *problematization*, *translation*, *interessement*, *enrolment*, *obligatory points of passage*, *immutable mobiles*, *heterogeneous engineering*, *scripts*. It will also outline the sorts of methodological injunctions that were suggested in order to do ANT research. Throughout the chapter, concepts will be grounded in ANT's classic empirical case studies. However, even as ANT was being 'systematized', so it was being unravelled, reconstituted

and diverted. Thus the chapter also traces some of the ways in which the concerns of ANT were being modified and its concepts developed (often through particular case studies) by the key ANT scholars themselves. Approaches to issues around representation, reflexivity, power, modernity and ordering or *durability* began to be rethought, refined or reconfigured.

Chapter 4 traces how ANT has been subjected to numerous – generally ‘friendly’ – critiques. These critiques tend to focus on making ANT ‘better’ at what it does or could do, rather than trying to dispute its underlying principles. Amongst these critiques can be counted: ANT’s neglect of the other; the constitutive role of *ambivalence* and ambiguity; the need to account for multiplicity and *fluidity* within networks; the empirical and conceptual issues that arise in determining the limits of the network; the role of culture in shaping how networks cohere; the influence of non-experts in the production and circulation of knowledge.

Chapter 5 goes about placing ANT in relation to a number of important traditions in sociology. In particular, its perspectives on the human actor and agency, on the relation between macrosocial and microsocial processes, on the nature of power and interests will be set against three perspectives. These are Elias’s figurational sociology, Bourdieusian practice sociology and Giddens’ structuration theory. These frameworks seem particularly appropriate in that they too are concerned with ‘solving’ classic tensions within sociology, such as that between human agency and social structure. This chapter is illustrated with particular case studies chosen because they draw directly on ANT in order to supplement their use of Elias, Bourdieu or Giddens. As we shall argue, these piecemeal appropriations of ANT do not always do justice to its potential.

Chapter 6 further explores the ‘appropriation’ of ANT, this time by a select group of disciplines. We see how ANT has been adopted and adapted by social theorists John Urry and Nigel Thrift. Crucially, we see how ANT is translated in ways that feed back into what ANT ‘is’. Thus, Thrift’s non-representational theory highlights the speculative potential of ANT. The same goes for ANT’s introduction into parts of geography and management and organization studies: these too have drawn out and elaborated particular dimensions of ANT, in the process shifting it toward new directions.

In Chapter 7, additional ‘proliferations’ of ANT are presented. Under the auspices of post-ANT, we trace a particular trajectory that brings to the fore inter-related issues of *ontological multiplicity* and *ontological politics*, the relationship between *matters of concern* and *matters of care*, a re-visioning of the world as one of emergence and co-becoming, and a methodological reorientation of post-ANT methods toward speculative practices. Perhaps this traces a peculiar route through recent post-ANT debates – certainly it betrays my interests. Nevertheless, the hope is that it at least evokes the continuing inventive potential of (post-)ANT.

Chapter 8 tries to recalibrate Chapter 7’s account of post-ANT. After an initial overview of the book – which includes a commentary on some of the things that have been neglected – the chapter points to a number of other, more

or less, fresh developments in post-ANT. Some of these can be linked to particular trends that have gained, or are gaining, prominence, for instance, disasters, dementia and the digital. Some reflect recent interest in empirical topics that have played a relatively minor part in ANT's history – experience, animals and the studio, for instance. In any case, the primary aim is to convey a sense of the expansive liveliness and promise of post-ANT. The chapter ends with a heuristic and tentative list of sensibilities and practical orientations that might help in 'doing post-ANT'.

So, Who's to Blame for This Book, Then?

It is a convention in academic writing that the author takes the blame for whatever is wrong with their text, and redistributes responsibility for all that is good in it over a long list of others. There is certainly no need to break with convention in the case of this book. Over the extended course of my adventures with ANT, numerous colleagues have been hugely influential. While at Lancaster University, Lynda Birke, Nik Brown, Simon Carter, Alan Collins, Susan Condor, Gavin Kendall, Maggie Mort, Rosemary McKechnie, Kath Smart, Vicky Singleton and Brian Wynne were particularly important in shaping my thinking on ANT (and its early drawbacks). While at Goldsmiths, University of London, it was Andrew Barry, Miquel Domenech, Jennifer Gabrys, Bill Gaver, Priska Gisler, Mick Halewood, Maja Horst, Alan Irwin, Tobie Kerridge, Danny Lopez, Celia Lury, Tahani Nadim, Noortje Marres, Finn Olesen, Israel Rodríguez-Giralt, Marsha Rosengarten, Paul Stronge and Alex Wilkie who especially pushed me to develop my thinking in new post-ANT directions. During my time at the University of Sydney, I have been very lucky to have been further inspired by David Bray, Caragh Brosnan, Melinda Cooper, Catriona Elder, Masato Fukushima, Gay Hawkins, Deborah Lupton, Sarah Pink, Kane Race, Robert van Krieken, Sonja van Wichelen, Cathy Waldby, Dinesh Wadiwel. In addition, many friends and colleagues have drawn me into conversations which, in one way or another, refreshed otherwise stale or stuck thinking. A sample would include: Gail Davies, Uli Felt, Sarah Green, Steve Hinchliffe, Joanna Latimer, John Law, Annemarie Mol, Michael Schillmeier, Bev Skeggs, Steve Wainwright, Clare Williams, Steve Woolgar. Needless to say, there are many more. There is a cast of family and friends who also need to be thanked for their support: Tor Brandon, Grahame Jenkins, Steph Macek, Mario Michael, Steve Russell, Chris Todd come immediately to mind. And finally my family – Bethan, Nye and Yanna Rees – must be acknowledged: without their tolerance, humour, love and indifference it would have been impossible to write this book. This book is dedicated to the memory of my aunt, Katerina Michael.