

At the same time, the inclusion of technology in care processes asks us to take note of the need to recognise the agency of technologies and the political dimension of their existence among us in a plurality of “political” arenas that are far from stable and homogeneous.

Despite these aspects, it is important to acknowledge the book's efforts in exploring the topic in a very broad manner and it has the merit of adding interesting descriptions to the search for health data on the Internet by chronic patients. The digitization processes in healthcare in Italy are still in their infancy. Hopefully, the contributions of those exploring these topics will increase. At the same time, we hope that awareness will increase about how STS sensitivity can provide interesting research questions to understand these emerging phenomena.

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## **Barbara Czarniawska and Tor Hernes (eds.)**

*Actor-Network Theory and Organizing* (2<sup>nd</sup> edition), Lund, Studentlitteratur, 2020, pp. 392

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This second edition of *Actor-Network Theory and Organizing* has been updated from the original version fifteen years previously. The book comprises a variety of chapters that draw from Actor-Network Theory (ANT) ideas and tenets, situated in organizational learning and Science and Technology Studies. There are sixteen chapters, most of which describe research in the field from many different countries including Sweden, Central America, Denmark, Norway, Italy, Poland, Finland, the US and the UK. Further added to this richness of sources is the variety of settings. There are examples from engineering to healthcare, which create

narratives to bring ANT ideas alive. As someone with a varied work background, I found I could relate to many of the accounts. The chapters outside my experience were also presented very clearly and accessibly, and were rewarding in their insights. In particular, I found Chapter 4 *Artefacts Rule* a fascinating read, situated in the area of software development, which I would normally have found intimidating and alien. A real strength of the book is that it invites the reader into these different worlds with the purpose to better understand what ANT *does* rather than what it *is*, much like the search for a “spink” described in Chapter 11 *The Making of Knowledge Society*.

The book is framed in Chapter 1 *Constructing Macro-Actors According to ANT*, and describes the development of the Macro-Actor from the work of Callon and Latour. In the first chapter there is historical development from the first to the current edition regarding the political nature of ANT, and reflections on the seminal work *Actor network theory and After* (Law and Hassard 1999) addressing reflexivity and criticality. In Chapter 1, ANT is now positioned as a diaspora of approaches which Law terms “material semiotics”. This provides the rationale for the selection of chapters. The authors also highlight the influence of important publications around and after the publication of the first edition, such as Latour’s (2005) *Reassembling the Social*, and subsequent, important works that have shaped ANT. The aim is the same as the first edition: “How power emerges through organizing”. The authors go back to Greimas as the source for the idea of the “actant”, which challenges the notions of heroism and anthropocentrism by introducing narrative trajectories and anti-programmes, expanded upon in other chapters. For example, Chapter 2 *Technological Strategy as Macro-Actor* describes anti-plans in strategic research, Chapter 3 *The Little Engine That Could* draws from a field example to describe anti-programs as engine- and project-programs, and Chapter 8 *Macro-Actors and the Sounds of the Silenced* explores compliance and alignment in the context of the anti-program.

A lot has been written about ANT in the last 15 years; to reflect this in ANT terms, we might see this book as a macro-actor. My own experience of navigating ANT has been through building networks of ANT-in-the-field experiences, and the theoretical connections developed through situating ANT, and finding my own path through journal articles, blogs, and conversations. I would argue that the publication of the new edition of this book serves to develop other networks around how these ideas are enacted in different situations. The works within *Actor-Network Theory and Organizing* have formed part of the networks and will continue to do so, but there is always the dilemma of situating the knowledge in the “now”. Chapter 3 does this by providing a commentary. Updated references and appropriate amendments to terminology are included in the remaining chapters, notably in Chapters 5, 6, 9, 10 and 12. The chapters are the same as the first edition, with the omission of *My name is Lifebouy*

by Lena Porsander and *Explaining the Macro-Actors in Practice* by Peter Hagglund. Chapter 16, *Actor-Network Theory, Organizations and Critique* by Rafael Alcapipani and John Hassard, is a new addition to the current, second edition. This chapter is a reflection on developments in ANT from ANT and after, and theorises about the applicability of ANT to Management and Organizational Studies and Critical Management Studies in terms of symmetry and performability.

In the second edition, many of the chapters follow Latour's (1996) *Aramis* and Mol's (2002) *Body Multiple* in their weaving together of events over time, and emulate Law's notion of ANT stories. In that sense I would argue that the chapters hang together by tracing and retracing ANT themes to build a more detailed and in-depth picture, but the chapters do not need to be read in a particular order. In Chapter 3 *The Little Engine That Could* there is a real sense of "what happened next?" and "how do we make sense of this?". The chapter draws out an engaging story of engineering operations, referring to Latour's sleeping policeman and bulky hotel keys. The operational aspects are very accessible and well described, which would allow non-technical readers to appreciate the details in the field. The timings, risks and scale of engineering activities are conveyed in such a way that brings across the importance of how humans and non-humans are considered. Chapter 8 *Macro-Actors and the Sounds of the Silenced* draws from a constellation of examples such as the use of CS spray in the UK police force and Swedish food wholesaler's practices, to demonstrate programs and anti-programs. In Chapter 15 *Net-working on a Neonatal Intensive Care Unit*, transcript excerpts are used to examine three sequences of events in a Neonatal Intensive Care Unit in the UK to develop an ANT story. In this chapter, the distinction between complexity and complication is presented, alongside how to "cut the network". This leads on to the discussion of Serres' blank objects/quasi-objects which circulate in social relations. Chapter 2 *Technological Strategy as Macro-Actor* explores the interconnectedness of strategy and humaneness in the context of ANT's notion of symmetry, and against the backdrop of technology strategy research. This chapter makes some very interesting observations regarding how language indicates humanness, for example, through the development of "skills". The chapter puts forward an approach to strategy which is more performative, and shifts the focus away from strategy as a purely human endeavour, following the "practice turn" in strategy theory.

Stories unfold in subsequent chapters, weaving in some of the well-known aspects of ANT such as symmetry and black boxes. In the setting of human resources, Chapter 6 *The Organisation as Nexus of Institutional Macro-Actors*, a challenging recruitment situation from a university in Sweden is described in an ANT way, by shifting focus away from human agency. The resulting description plays out the notion of the institution as macro-actor and the trust of the nomination committee as a black box. Black boxes are further investigated in Chapter 7 *Powers in a Factory*, an

ethnographic study of a business is described using the idea of “core sets”, and how enrolment in the core set is regulated through the techniques of demonization, demarcating rationality and expertise, and rational emotionality. Callon’s work on irreversibility is also drawn from, where networks become black boxes. The story is about mergers and takeovers, and how outward behaviours scuppered redundancy plans. In this chapter, ANT allows for an account without reduction, a retelling rather than a representation. This story also emphasises the constant work required to build and stabilize networks as dynamic entities rather than the reduced representations of causal flow process diagrams. The notion of the black box is extended to the “leaky black box” as described in Chapter 5 *Organizational Routines and the Macro-Actor* and Chapter 11 *The Making of Knowledge Society*, which draws from existing studies of organisational practices in manufacturing and non-profit organisations in the US. By this, the authors refer to the organisational routines as quasi-stable actor networks. In Chapter 11, black boxes are related to part of the Intellectual Capital Project in the government in Denmark. Like Chapter 2, *Technological Strategy as Macro-Actor* really challenges humanness, and examines our motives in the workplace for a human-centred focus, and perhaps explains the reluctance from some to take on ANT ideas such as symmetry.

Different settings and scenarios are presented in other chapters, such as Chapter 10 *The Internet Web Portal as an Enrollment Device*, which explores markets, as well as Chapter 12 *The Reformatting of Electricity and the Making of a Market* and Chapter 13 *Productive Power, Organized Markets and Actor Network Theory*. Chapter 10 describes how internet portals enrol citizens to education in the new market by drawing from economic sociology, which allows for different interpretations of the market economy in terms of choice and state power. Chapter 12 treats the economy as an object within the Norwegian electricity market reform in the 1990s. It draws from the stabilization of variable ontologies, and the ANT notions of translation, enrollment and association. The history of the market highlights how the integrated hierarchy came about, through market reforms and from the move away from state governance and the cooperative market, and toward commodification and internal governance. Chapter 13 considers markets and macro-actors, or actor-networks. It explores conceptions of power in organizational economics and economic sociology in relation to making markets. This is based on ANT and Foucault’s notions of power, postulating that power in economic sociology can be conceived of as resource asymmetries in deep structures. The chapter extends Callon’s treatment of power through ANT, and presents the market as shaping behaviours and power.

Callon’s ideas are further included, most notably with the four principles of translation, in a number of the chapters. For example, Chapter 9 *Materiality and Organizing* focuses on IT systems from an ANT

perspective, and how these can be viewed in an organizational change context where IT is viewed as part of the social structure rather than causal and deterministic. The four principles are applied to draw out significant stages of the project, including power dynamics and the enrollment of politicians. It is interesting to see how the social defines big projects such as IT, and provides an insightful account of when the social and material are brought together. Chapter 14 *Actor-Networks* draws from Callon's four principles to develop two alternative versions of ANT: entrepreneurial and ecological. The entrepreneurial version is played out with a study which investigated an innovation in an Italian Small to Medium Enterprise (SME), and the ecological version describes the implementation of a management accounting system in the Italian Government. Evolutionary theory in relation to ANT is discussed in Chapter 4 *Artefacts Rule* in the context of open-source software projects.

The stories included in the chapters are evocative and engaging, leading the reader by the hand into ANT readings of workplace scenarios, and how this changes how we might "see" the situations arising. This book is a collection of very clear examples taken from the field and presented in narrative form. ANT ideas are interwoven through the stories, bringing theory to life, which is indicative of ANT being enacted as a diaspora of approaches, as well as a sensibility. The book is invaluable to the researcher seeking to articulate ANT in different situations, and to scholars of STS and other disciplines, to expand their knowledge of what ANT *does* in theory and practice.

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