# Chapter 7
# A Critical Review of Actor–Network Theory (ANT) and Its Use in Education Research

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## ABSTRACT

*This chapter, which expands on a previous publication, presents a critique of actor-network theory as a sociomaterial concept. Furthermore, the author problematizes the relative under-application of this "sensibility" in education research, while simultaneously exploring its contribution as an analytical framework through its central concepts of "actor-network," "symmetry," "translation," and their constituents. This chapter zooms on the concepts of networks and power relations. The author questions the prevalent notion of the "network" metaphor promulgated by globalization discourses, setting it up against the network conception in actor-network theory, where the main principle is multiplicity. Actor-network theory is analyzed as a theory of the mechanics of power, concerning itself with the setting up of hegemony. This chapter is especially targeted for researchers of education reform who are as yet unfamiliar with the concepts of Actor-Network Theory and somewhat wary of the validity of sociomaterialism in the analysis of education issues.*

## A CRITICAL REVIEW OF ACTOR-NETWORK THEORY (ANT) AND ITS USE IN EDUCATION RESEARCH

Actor Network Theory (ANT) is deemed to be one of the more contentious methodologies in the social sciences, mainly because of its analytical realism, which "treads on a set of ethical, epistemological and ontological toes" (Law, 1992, p. 3), through its conception of general symmetry which gives equal and undivided attention to human and non-human 'actors'. Law (2007, p. 2) describes ANT as "a disparate family of material-semiotic tools, sensibilities and methods of analysis". I analyze the diverse characterizations of ANT as expounded by different thinkers while considering the possible reasons behind

the relative under-application of ANT in education studies. While admitting that writing about ANT is extremely difficult due to its messy, fluid, disorderly, dynamic, chaotic and ambivalent nature, it is the very 'messiness', 'fluidity', and 'chaos' of this 'sensibility' that offers invaluable insights to researchers in the education arena (Mifsud, 2014). I sketch possible ways in which ANT can contribute to 'methodological cleansing' in the exploration of networks. Besides providing a critical literature review of the ANT concept, I explore its contribution as an analytical framework in education studies, in particular the exploration of networks and power relations, through its central concepts of 'actor-network', 'symmetry', 'translation', and their constituents.

Two concepts this paper gives prominence to are networks and power relations. In light of the way in which the 'network' metaphor has invaded social order, becoming a common conceptual horizon for contemplating about the ontological 'structure' of the construction of reality, I challenge this conception of networks propagated by globalization discourses, contrasting it in turn with the network conception in ANT, where the main premise is multiplicity, the enactment of multiple, simultaneous ontologies, as outlined by Law (2004), Mol (2002), and Moser (2008). ANT may be regarded as a theory of the mechanics of power, concerning itself with the stabilization and reproduction of some interactions over others; the construction and maintenance of network centres and peripheries; and the establishment of hegemony. I explore how Law's (1991, p. 18) suggestion that "power, whatever form it may take, is recursively woven into the intricate dance that unites the social and the technical" has been received by both ANT critics and proponents.

## DEFINITIONS OF ANT

Law (2007) describes ANT as "a disparate family of material-semiotic tools, sensibilities and methods of analysis ... [it explores] the webs and the practices that carry them ... [and] the enactment of materially and discursively heterogeneous relations that produce and reshuffle all kinds of actors" (p. 2). In his exploration of the definition, Law (2007) outlines four qualifications for this concept/approach. ANT is both theoretical and empirical, as theory is embedded and extended in empirical practice. Law (2007) refuses to regard the actor-network approach as a theory, for him it is a 'toolkit' rather, a 'sensibility' for the exploration of relations and how these assemble. He even refuses to define it as a theory, preferring the term 'material semiotics' rather than 'actor-network theory', as it better captures the open, uncertain, revisable, and diverse nature of this approach, all this hinting at Law's desire to keep it implicit and volatile, he refuses to have it pinned down to something concrete. Callon (1999) denies the claim of ANT being a theory, at the same time stressing that this "gives it both its strength and its adaptability ... we never claimed to create a theory. In ANT the T is too much ('*de trop*')" (ibid, p. 194). Law (2007) further acknowledges the relationality of texts, thereby indirectly admitting to the subjective nature of ANT, with no researcher able to make objective claims. He describes it as neither 'a creed', nor 'a dogma', with humility as a leitmotif. Latour (1999) outlines the agenda of ANT as comprising: the *attribution* of both human and nonhuman characteristics; the *distribution* of properties among them; the *connections* generated; the *circulation* of these elements; as well as their *transformation*. Thus, ANT incorporates both relational materiality and performativity (Law, 1999). It takes a semiotic world-view, embracing a negation of conventional social dualisms, where divisions are understood as 'effects' or 'outcomes' rather than being inherent in entities – "essentialist divisions are thrown on the bonfire of

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