

Book Review of Casper Bruun Jensen's *Ontologies for Developing Things*

Juan Felipe Espinosa-Cristia
University of Leicester

Casper Bruun Jensen's book is centered upon Science and Technology Studies (STS), more specifically in the area of healthcare technologies studies. One of the central interests of the book is to offer an open-ended invitation to break the traditional compartmentalization that exists between the theory-oriented humanities and the empirical-oriented social sciences. It does so by focusing on the conceptual and empirical components of what Jensen refers to as 'practical ontologies,' which emerge as health care technologies are envisioned, developed, and deployed in diverse settings of Danish and Canadian health care. Through a series of analyses centered on different empirical and analytical themes, including the making of health care futures, analysis of technology and power, and questions of STS and 'intervention,' the author presents convincing examples of how scholars working in STS and adjacent fields might embrace new spaces of methodological and theoretical experimentation. The process of adopting such forms of experimentation is not limited to technological objects like the electronic patient record (EPR). Such studies might be expanded, for example, to deal with information and communication technologies more broadly, or, as the author suggests, any setting where new ontologies emerge through (and to an extent *as*) the development of things.

Jensen's book deals primarily with the case of the EPR development in Denmark, but also discusses technology development issues within the Canadian healthcare context. These studies are used simultaneously as empirical characterizations and as springboards for engaging with a series of interrelated topics at the intersection of STS and various other fields such as feminist studies or the philosophy of technology's differences and history. He draws on a range of theoretical resources, including pragmatism and poststructuralist approaches, which allow him to engage in an innovative analysis of the ontological reconfigurations to which the making of the EPR gives rise. Additionally, this approach allows him to specify various organizational and political consequences of these practical ontologies, including the consequences for the social analyst engaged in their study. Doing so, Jensen embraces what might be called a multidisciplinary approach to the study of technology. Through this approach, Jensen engages in a sustained and critical discussion with various well-known positions in STS, not the least being social

constructivism, but also, more broadly, any form of structuralism. In their place, he puts forward what he calls a 'performative disposition' instead of an alternative overarching theory (see also Gad and Jensen, 2010).

The concept of performative disposition is fundamental to Jensen's work. The notion of performativity has emerged from Actor-Network Theory (ANT) (e.g. Bruno Latour, 1987, 1999, 2005; John Law, 1992, 1999, 2008 and Michel Callon, 1986, 1998). These authors have demonstrated that the practices of the researcher *enact* reality, rather than merely *describe* it. However, performativity also has roots in the speech-act theory of J.L. Austin and its later deployments and transmutations, such as into the feminist theory of Judith Butler. A performative disposition offers a cautionary tale about how research generates unforeseeable effects, irrespective of our hopes and aspirations. Analytically, this underpins the claim that, when researchers or analysts produce descriptions or analyses, they inevitably add a new element of complexity to the already cluttered associations inherent to their work. In the following paragraphs, I center my comments on chapter two (methodology), chapter three (cyborg history and future-generating devices) and chapter seven and eight (the problem with STS interventions).

In chapter two, Jensen problematizes his object of study – electronic patient records – by characterizing them as 'partially existing objects,' or objects that are capable of gradually gaining in reality and changing in ontology. Thus, Jensen aims to study the EPR as a technology under development and therefore not be 'black boxed' in Latour's sense. Following Annemarie Mol's (2002) 'empirical philosophy,' Jensen approaches the EPR by considering the gradual entanglement between ideas, aspirations, diverse work practices, and bits and pieces of technology that come together in a fragile, distributed system. However, the more empirically-oriented analysis that follows from chapter three onwards does not neatly connect with the analytical and methodological positions that the author described within the first chapter of the book. Instead, chapter three delves directly into what he calls, following Andrew Pickering, a 'cyborg historical' analysis of the Danish EPR. This is not to say that the use of a "*cyborized*" analysis is antithetical with the performative disposition that the author explains in the first chapter. Perhaps this point is merely stylistic, but this leap could be difficult for a reader that is not an expert on this particular branch of the STS literature.

In any case, Jensen elaborates in chapter three on an interesting concept: the notion of the 'future-generating device.' This is a concept that Jensen translated from the work of science historian Hans-Jörg Rheinberger (1994) and redeployed as an alternative to Latour's notion of the black box and Star and Griesemer's famous 'boundary objects.' On one hand, cyborg history offers a way of engaging in the history of technology that emphasizes the performativity of both human and technological actors. Consequently, the researcher actively looks to describe the 'social material, and conceptual heterogeneity' aspects of the historical context of technology (Pickering, 1995, p. 1). On the

other hand, Jensen uses the ‘future generating device’ to avoid a teleological approach to history and to stress the central ways in which modern science and technology are about creating new futures (Rheinberger, 1994, p. 70). Together, cyborg history and the ‘future generating device’ approaches offer a reading of the EPR technology that shows an ‘open black box’ (Jensen, 2010, p. 43). Most centrally, this is an approach that aims to identify sites and practices of emergence; that is, the specific locations where (and when) the electronic patient record actually *became an actor*, and thus changed the ontological landscape of Danish health care. This is the key “cyborg” move in the text, since it defines the EPR neither in terms of social construction, discourse, or power, but instead as an entity that gains reality and irreversibility over time.

In later chapters, Jensen’s aforementioned performative disposition leads him to respond to the increasingly widespread imperative to make research ‘practical’ and ‘useful.’ In STS, this imperative is internalized under the rubrics of “normativity” and “intervention.” The example of Jensen’s approach offers a possible way to generate a critical response to the demand for ‘applicability.’ On one hand, intervention and performativity are not choices, but rather, conditions. Therefore, any overt decision to understand and make an intervention about the EPR under the lens of STS approaches does not guarantee any better result. It is actually more applicable or has the effects that the interventionist researcher hoped for. On the other hand, non-practical and interventionist research may also have all kinds of practical effects. All in all, the performative disposition “deflates” the high-minded ambition to improve the world by “intervening” via analysis.

An application of Jensen’s performative disposition is offered to the readers in topics such as the implementation, development, standards, versions, and visions of EPR that are well developed in the book. This practice is especially lucid in chapter 4, when Jensen further develops aspects about the standardization of the system by using some of the “big names” in the social studies of information technology. No reader will be disappointed about the scholarship level or Jensen’s impressive use of ideas from the work of Lucy Suchman, Susan Leigh Star, Geoffrey C. Bowker and Marc Berg. It is then that the author creatively conjugates the discussion that makes STS an interesting place to produce ‘*empirically based conceptual experimentation*’ (Jensen, 2004 p. 250). This is the place where the author of *Ontologies for Developing Things* is inviting us to walk. This is where empirical case analyses and high philosophical explorations of healthcare technologies are well conjugated, and where the book shows us the richness of STS approaches and space of possibilities that they bring to the humanities.

Overall, Jensen’s “performative disposition,” as instantiated in *Ontologies for Developing Things: Making Health Care Futures Through Technology*, offers an array of elegant analyses that are empirically grounded, conceptually inventive, and provocative. As I have outlined, the book engages a collection of problems and ways of

conceiving, interpreting, and engaging with the implementation, development, standards, versions, and visions of EPR. In conjunction, they offer resources for a lively (and probably heated) dialogue between STS and other fields of social science and humanities with an interest in technology. This ‘cross-disciplinary’ intellectual practice and aspiration is lucid throughout the book.

All in all, Jensen’s approach to health care technologies evokes a novel form of study of the emergence, contestation, and consolidation of heterogeneous objects in practical ontologies. In this context, the author eventually characterizes his own ambition as an ongoing effort of ‘empirically based conceptual experimentation.’ This is the precise place where the author of *Ontologies for Developing Things* is inviting us to travel. This is where the book shows us the richness of STS approaches and the space of possibilities that they bring to the humanities and the studies of technologies.

References

- Callon, M. (1986). Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St. Brieuc Bay. In *Power, Action, and Belief: A New Sociology of Knowledge?* edited by J. Law. London: Routledge & Kegan Paul.
- Callon M. (1998). Introduction: the embeddedness of economic markets in economics, in *The Laws of the Markets* Ed. M Callon (Blackwell, Oxford) 57
- Gad, C., & Jensen, C. B. (2010). On the consequences of post-ANT. *Science, Technology & Human Values*, 35(1), 55-80.
- Jensen, C. B. (2004). *Experimental devices: studies in STS and electronic patient records*. Aarhus Universitet.
- Latour, B. (1987). *Science in Action: How to Follow Scientists and Engineers through Society*. Cambridge, MA: Harvard University Press.
- Latour, B. (1999). On Recalling ANT. In *Actor Network Theory and After*, edited by J. Law and J. Hassard. Malden, MA: Blackwell.
- Law, John. 1992.
- Latour, B. (2005). *Reassembling the Social*, Oxford: Clarendon.
- Law, J. (1992). Notes on the Theory of Actor-Network: Ordering, Strategy and Heterogeneity. *Systems Practice*, 5, 379–93.
- Law, J. (1999). After ANT: Complexity, Naming, and Topology. In *Actor Network Theory and After*, edited by J. Law and J. Hassard. Malden, MA: Blackwell.
- Law, J. (2008). Actor-Network Theory and Material Semiotics, In Turner, B.S., (ed.), *The New Blackwell Companion to Social Theory*, Oxford: Blackwell.
- Mol, AM. (2002): *The Body Multiple: ontology in medical practice*, Durham, NC, Duke University Press.
- Pickering, A. (1995). *The Mangle of Practice: Time, Agency and Science*. Chicago: University of Chicago Press.
- Rheinberger, H. J. (1994). Experimental systems: Historiality, narration, and deconstruction. *Science in Context*, 7(01), 65-81.