Sociomaterial Practices, Relational Ontologies, and Information Technology: Gilbert Simondon’s Theory of Individuation

Alexander Styhre, University of Gothenburg, Gothenburg, Sweden

ABSTRACT

The recent interest in sociomaterial practices and forms of imbrication of social and material resources in e.g., studies of the use of information technology and information systems in organizations has called for new theoretical developments to enact and fully understand materiality. This article examines the work of French philosopher Gilbert Simondon as an important, yet to date little explored resource in organization studies. Following Orlikowski’s (2010) call for a relational ontology apprehending the enfolding of materiality and social resources, Simondon’s analytical framework which includes key concepts such as individuation, transduction and relations, is presented. The article contributes to the recent debates regarding how to theorize and examine material resources such as information and communication technologies used in organizations.

Keywords: Gilbert Simondon, Individuation, Information Technology, Information Systems, Ontogenesis, Transduction

INTRODUCTION

It seems that ‘constructivism’ is passé, the linguistic turn has reached a dead end and a rhetoric of materiality is almost obligatory. Nikolas Rose (2013: 4)

This article aims to introduce the work of Gilbert Simondon as an important and still to date largely unexplored resource in the recent interest for materiality and its relations in organization studies. The works of Simondon are only translated in parts into English, and the secondary literature is dispersed, but Simondon offers a genuinely original theoretical framework for the understanding of both technological artifacts and biological organisms. Simondon’s contribution to a materialist theory would be useful for organization researchers being concerned about the role of e.g., information technology and information systems.

The study of information technology and information systems has from the very outset been based on an understanding of the
distinction between the artifact, the hardware (Orlikowski and Iacono, 2001), and abstract, intangible resources such as data (Frandsen, 2009; Thacker, 2003), information (Kallinikos, 2006; Ciborra, 2002), code (Galloway, 2006; Ullman, 1997), and protocols (Galloway, 2004; Galloway and Thacker, 2007), etc., and how the two resources constitute and mutually stabilize one another. In addition, Kallinikos, Aaltonen, and Marton (2013: 358) suggest that what they refer to as “digital artifacts” such as homepages, computer games, mp3-files, etc. are “ontologically ambivalent” inasmuch as they are (1) editable, i.e., they are “pliable” and always possible, at least in principle, “to modify and update continuously and systematically,” (2) interactive, providing “alternative pathways along which human agents can activate functions embedded in the object, or explore the arrangement of underlying information forms” (Kallinikos, Aaltonen, and Marton, 2013: 358), (3) accessible through the means of other digital objects, and (4) distributed and are thus “seldom contained within a single source or institution.” (Kallinikos, Aaltonen, and Marton, 2013: 360). Under normal conditions, the composite nature of IT/IS is concealed for the user as the technologies serve the role of what Star (1999) calls infrastructures (see e.g., Halavais, 2009; Galloway and Thacker, 2007), that is, as long as they work as intended, the technological systems are “invisible to the user” (Ribes and Bowker, 2009: 204). As suggested by Galloway (2006), speaking about computer-language code, the code wants to be “overlooked,” ignored as what is underlying to the operating of the information technology. In order to function properly, the social embedding of information technologies needs to be concealed. That is why the demonstrations of new software—the salespitch—examined by Smith (2009) are “universally disliked” by software engineers: there is always the risk that the software fails and the artifact suddenly no longer appears as what seemingly runs all by itself but on basis of the expertise of the engineers operating behind the scene. In other cases, certain groups of expertise take advantage of the fluid line of demarcation between artifact and the software, and position themselves as legitimate spokesmen of the technology (Bloomfield and Danieli, 1995). In this view, the IT/IS are at the same time material and abstract, making the conventional analytical boundaries enacted in the social sciences complicated to maintain. “[T]he boundary between what is regarded as technical and what is seen as social is . . . inherently flexible: a ‘social’ or ‘organizational’ problem may be constituted or translated as a ‘technical’ one; or a ‘technical’ problem may be translated into a ‘social’ one,” Bloomfield and Danieli (1995: 26) suggest. Orlikowski and Iacono (2001) add that IT artifacts are complicated to define as they are not “static or unchanging, but dynamic”: “Even after a technological artifact appears to be fixed and complete, its stability is conditional because new materials are invented, different features are developed, existing functions fail and are corrected, new standards are set, and users adapt the artifact for new and different uses,” Orlikowski and Iacono (2001: 135) argue.

In order to understand this “ontological ambivalence” of information technology, scholars need to abandon social constructivist and constructivist theories, Kallinikos (2006) suggests, echoing Rose’s (2013) recent claim that constructionism is becoming unfashionable. Such theories deliver, in Kallinikos (2006: 144) formulation, “a rather trivial message.” This rejection of constructivist framework does however not imply that anything that can be treated as being “social” in nature should be abandoned. Instead, Kallinikos (2006: 144) suggests, “social agents are not disembodied spirits; instead, they are complex ensembles of skills, proclivities, and roles, some of which are brought into being by technology itself.” In addition, the technology these social agents employ is not just an “[e]xterior force that encroaches upon local, technologically ‘unspoiled’ contexts”; instead, most of the time, “technology partakes in the constitution of local contexts and agents,” Kallinikos (2006: 144) says (see also
Enhancements to the Localized Genetic Algorithm for Large Scale Capacitated Vehicle Routing Problems
International Journal of Applied Evolutionary Computation (pp. 17-38).
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