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# **SOCIOMATERIALITY – MORE THAN JARGON MONOXIDE? QUESTIONS FROM THE JESTER TO THE SOVEREIGNS**

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## **Abstract**

*The notion of ‘Sociomateriality’ has recently gained in popularity among information systems (IS) scholars in their search for providing new ways of investigating and theorizing about IS in organizations and society at large. While some scholars put forward arguments and research accounts that lead to new insights, others expose a cursory treatment and partial appreciation of the idea. In addition, sociomateriality as a new worldview has been criticized for introducing yet more academic jargon monoxide. Although existing research and debates show some potential for progressing the theorizing of ‘man-machine’ reconfigurations, we point to the necessity of a deeper exploration of the term. Inspired by the call for papers of the Alternative Genres Track at ECIS 2012, the purpose is to “take a fresh look, to evoke new insights and to gain deeper understanding” of the notion of sociomateriality in IS. Towards this aim, the reader is invited to attend a prolonged monologue – characterized by honesty, frank observations and wit – delivered by the court jester and directed to the sovereigns based on their writings. The intention is to contribute with a stimulating recital that builds on open-minded questions in the pursuit of key reflections to inform our research discipline.*

*Keywords: Sociomateriality, Imbrication, Information systems, Alternative genre.*

# 1 Preface

The notion of sociomateriality has recently gained in popularity among information system (IS) scholars in their search for providing new ways of investigating and theorizing about IS in organizations and society at large. Sociomateriality highly challenges and expands the prevailing *modus operandi* of IS scholarship and practice by inviting IS scholars to question and rethink “the supposed ontological separation among the social and the technological,” as expressed by Cecez-Kecmanovic et al. (2010) in their call for a special issue on the topic in *Management Information Systems Quarterly* (MISQ).

To date, a number of influential ideas on sociomateriality has been published (see e.g., Leonardi and Barley, 2008; 2010; Leonardi, 2010; Leonardi, 2011; Orlikowski, 2006; 2007; 2009; Orlikowski and Scott, 2008; Scott and Orlikowski, 2009). These writings have inspired scholars in the IS community to offer a sociomaterial perspective on various IS-related topics such as enterprise system implementation (Wagner et al., 2010), mobile IT usage (Leclercq et al., 2009), work collaboration in *Second Life* (Orlikowski, 2009), digital innovation (Svahn et al., 2009), computer simulation technology for automotive design (Leonardi, 2011), the impacts of social media (Scott and Orlikowski, 2009), software usability (Riemer and Vehring, 210), digital entrepreneurship (Davidson and Vaast, 2010) and plagiarism detection systems (Introna and Hayes, 2011). Recent use of sociomateriality goes as far as proposing it as a basis for a definite identity in the IS field (Hassan and Hovorka, 2011), as well as for theorizing new ways of understanding information within the IS discipline (Boell and Cecez-Kecmanovic, 2011). In addition, we currently observe a number of activities that search for advancing the sociomateriality research agenda, e.g., conference workshops that discuss this new worldview and call for papers for special issues in highly profiled journals such as MISQ.

The use of sociomateriality introduces a new vocabulary with concepts such as ‘sociomaterial assemblage,’ ‘constitutive entanglement,’ ‘performativity,’ ‘relationality,’ as well as ‘imbrication.’ While some scholars argue that these concepts lead to potential contributions for progressing the theorizing of ‘man-machine’ reconfigurations, other scholars argue that sociomaterial analyses expose a cursory treatment and partial appreciation of the idea. Furthermore, sociomateriality as a new concept has been criticized for introducing yet more academic jargon monoxide (Sutton, 2010): “... it [sociomateriality] appears to be on an important subject, but I hope the authors can find a simple word or two to explain what they mean by it to normal human beings.”

A discussion of sociomateriality and how it can inform IS research becomes essential in a field where scholars struggle to reconcile the human/social and the technological dimensions of IS, and to investigate them in an inclusive and coherent way. Inspired by the call for papers of the *Alternative Genres Track* at the *European Conference on Information Systems 2012*, the purpose of this paper is thus to pursue the opportunity to “take a fresh look, to evoke new insights and to gain deeper understanding” (Avital and Mathiassen, 2011, p. 1) of the notion of sociomateriality in the IS field.

Towards this aim, we invite the reader to attend a constructive dialogue about the usefulness of sociomateriality in our field. As IS scholars, we have worked with sociomateriality in our own work and have reached new valuable insights from integrating a sociomaterial view on IS matters, but at the same time, we have been surprised by some of the challenges this entails. In our search for new insights on the usefulness of a sociomaterial perspective in the IS field, we believe that a constructive dialogue which builds on honesty, frank observations and wit is useful. Thus, the chosen genre is that of a dialogue between the court jester and the sovereigns:

*The jester is symbolic of common sense and of honesty...the court jester is a character used for insight and advice on the part of the monarch, taking advantage of his license to mock and speak freely to dispense frank observations and highlight the folly of his monarch. This presents a clashing irony as a "greater" man could dispense the same advice and find himself being detained in the dungeons or even*

*executed. Only as the lowliest member of the court can the jester be the monarch's most useful adviser* (Wikipedia).

In fact, we provide a very special dialogue, namely that of a jester's **monologue** where the jester takes both the role of the sovereigns, by presenting their position based on their writings, and that of a 'devil's advocate' by exposing these positions through provocative questions. The first part of the monologue is based on citations of the writings by Orlikowski (2007; 2009), Orlikowski and Scott (2008) and Scott and Orlikowski (2009) to represent the queen's view on sociomateriality. The second part refers to writings by Leonardi and Barley (2008) and Leonardi (2010; 2011) to represent the king's view. While the king aims mainly to make a contribution to a better understanding of the 'materiality' of IS, we consider his writings as crucial as they have frequently been cited in the context of the sociomateriality discussion. Through the monologue, it is our hope that the court jester gathers insight and advice from the sovereigns regarding the usefulness of sociomateriality and in this context of the concept of materiality in the IS research discipline. Based on current observations and a general curiosity of how the concept of sociomateriality is treated in the IS research field, the overall questions that the jester puts forward to the sovereigns are: *What is sociomateriality and how consistent is its worldview? How can sociomateriality inform IS research, and is the notion just another academic jargon monoxide? How do we study sociomaterial issues in practice?*

We believe that engaging in a discussion, instigated by the jester's monologue, will help initiate a refreshing debate where open-minded questions about sociomateriality can be asked. The aim of the paper thus is not to come up with specific answers to the questions but rather to serve as a starting point for a conceptually challenging, practically relevant and inspiring debate, contributing to and stimulating advancement of knowledge in our field. Dealing with such a challenge within the limitations of a conference paper however comes at a price: this paper is not an introduction to sociomateriality, but presupposes some familiarity with and knowledge of the concept and the most prominent literature on the topic to appreciate the issues raised in the monologue.

The rest of the paper is organized as follows. In the next section, we present the jester's monologue in the outlined form. Section 3 contains a brief discussion and summary of the main issues that the jester brings up in his monologue as a starting point for further dialogue. We finish the paper with conclusions and possible directions for IS research concerning how to approach the problems at the heart of the IS discipline, which Orlikowski (2007) frames as 'the recursive intertwining of humans and technology in practice' and which Leonardi and Barley (2008) see as 'the entwining of the material and the social.'

## 2 Jester's Monologue

In what follows, we provide a jester's monologue. In his recital, the jester addresses the sovereigns, both the queen and the king, who have different positions on the issue in question. As mentioned, the monologue is based on citations of the following writings by Orlikowski (2007; 2009), Orlikowski and Scott (2008) and Scott and Orlikowski (2009) for the queen's part, as well as Leonardi and Barley (2008) and Leonardi (2010; 2011) for the king's part. For the sake of readability and in the spirit of the 'alternative genre,' we will not provide the exact references of the citations in the respective writings; these are, of course, available on demand. The jester's monologue is based on a literature study of what we consider seminal writings on 'sociomateriality' in the mainstream IS literature only. We do not directly refer to literature in reference fields which authors such as Barad (2003)<sup>1</sup> or Suchman

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<sup>1</sup> None of these writings, including those mentioned in the direct citations made from the sovereigns' writings, is listed in the reference list, as they are not part of the argument which is solely directed to the queen and the king. The references to Barad (2003) and Suchman (2007) are: Barad, K. 2003. Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter. *Signs* (28:3), 801-831; Suchman, L. A. 2007. *Human-Machine Reconfigurations: Plans and Situated Actions*, Cambridge, UK: Cambridge University Press.

(2007) (in other parts of the IS field) represent, but acknowledge their importance for the formulation of the queen's and the king's positions. We also reviewed literature beyond the main authors to whom we assigned the queen and the king's role; however, these writings mainly apply the concept without further discussing it, and we therefore do not refer to them in the monologue.

## **2.1 Monologue part 1: asking the queen for her position on 'How to take seriously the recursive intertwining of humans and technology in practice' - This is how she frames the problem!**

Dear Queen, you say that:

'The challenge for organizational scholars is to figure out how to take seriously the recursive intertwining of humans and technology in practice. A number of particularly interesting ideas for doing so have been emerging in sociology, and science and technology studies over the past decade: for example, *actor-networks* (Callon 1986; Latour 1992, 2005), *sociotechnical ensemble* (Bijker 1995), *mangle of practice* (Pickering 1995), *object-centered sociality* (Knorr Cetina 1997), *relational materiality* (Law 2004) and *material sociology* (Beunza et al. 2006).'

And based on this tradition you want:

'... to propose a shift in our conventional framing ... seeing organizational practices as 'sociomaterial' – to borrow a term given recent currency by scholars such as Mol (2002) and Suchman (2007) ... what Suchman (2007) calls 'a creative sociomaterial assemblage'.'

My question is<sup>2</sup>:

*Why do you choose 'sociomaterial' over 'sociotechnical' – and 'sociomaterial assemblage' over 'sociotechnical ensemble'?*

You argue that we shouldn't revert to:

'...a limiting dualism that treats them [the social and material] as separate (even if interacting) phenomena.'

And you continue that the sociomaterial approach:

'... advances the view that there is an inherent inseparability between the technical and the social.'

In this way you put forward that the term 'sociomateriality' can overcome the dualism, but:

*Why do you consider this dualism as limiting?*

You pursue the move away from dualism by using the following three definitions of what sociomateriality stands for:

- 'the recursive intertwining of humans and technology in practice'
- 'the constitutive entanglement of the social and the material in everyday organizational life,'

quoting Pickering (1995)

- 'the constitutive intertwining and reciprocal interdefinition of human and material agency.'

*Are these definitions synonymous? Are humans synonymous with the social, and technology with the material?*

You also argue against separability and interaction in your examples of Google-based searches and the use of BlackBerrys:

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<sup>2</sup> The jester's questions will in the following be in *italics*.

‘These temporally emergent results are not dependent on either materiality or sociality, nor on some interaction between them (to the extent that these are seen as distinct domains). Rather, the performance and results of a Google-based search are sociomaterial ... we see that the communication changes enacted at Plymouth emerge from the performativity of the BlackBerrys as engaged in members’ everyday practices ... The performativity of the BlackBerrys is sociomaterial.’

*So, in the examples do you, after all, separate the human (engagement) and the artefact (performativity)? Doesn’t the notion of ‘enactment’ in fact entail some sort of interaction between the two and, thus hinting at dualism?*

Another notion to which you attach some importance is that of ‘performativity.’ You refer to Barad (2003) to talk about performativity, and you say that:

‘a central idea entailed in sociomateriality is the notion of *performativity* (Barad, 2003). While related to the notion of performance, performativity is not synonymous with it. Where “performance” refers to the doing of some activity (as when a physician “performs” a medical examination...), performativity refers to enactment ... the notion of performativity draws attention to how relations and boundaries between humans and technologies are not pre-given or fixed, but enacted in practice.’

*Then, do you actually claim here that ‘doing’ is related to something pre-given and fixed?*

You look for support by Latham and Sassen:

‘... on a relational ontology, Latham and Sassen (2005) point to the emergence of whole new sociotechnical relations and domains – *digital formations* – which they argue need to be constructed as objects of study. These “sociodigitized” structures exhibit dynamics of their own that derive from technological capacities that enable specific patterns of interaction (Latham and Sassen, 2005, pp. 3-5).’

*But you keep with the concept of sociomateriality and non-interaction - why?*

You say that:

‘people and things only exist in relation to each other,’

and cite Slife (2005, p. 159) who argues that:

‘They start out and forever remain in relationship.’

Then you continue by stating that:

‘entities (whether humans or technologies) have no inherent properties, but acquire form, attributes, and capabilities through their interpenetration. This is a relational ontology that presumes the social and the material are inherently inseparable.’

*If they are in relation, don’t they have to be separated to be recognized as part of a relation?*

Of course, you might say that:

‘Any distinction of humans and technologies is analytical only, and done with the recognition that these entities necessarily entail each other in practice.’

and that:

‘“sociomaterial” (no hyphen) attempts to signal ... ontological fusion.’

*But, what does this mean in terms of research practice? Why do you juxtapose ontology with an analytical distinction and not with epistemology? Isn’t the analytical distinction part of a different ontology?*

You say, citing Wikipedia, that:

‘Technology is a broad concept that deals with a species’ usage and knowledge of tools and crafts, ... “technology” can refer to material objects of use to humanity, such as machines, hardware or utensils, but can also encompass broader themes, including systems, methods of organization, and techniques.’

And you continue:

‘While we learn much by considering technology as a specific organizational event or process, such a view also obscures ways of seeing how all organizational practices and relations *always* entail some sort of technological (or material) mediation.’

*Based on this view of technology - is technology then the same as material? And to take the argument further, what then is information technology – is it a material object? And what exactly is material?*

In the pursuit of defining materiality, you require that we:

‘...replac[e] the idea of materiality as ‘pre-formed substances’ with that of ‘performed relations’ and you claim:

‘... that a considerable amount of materiality is entailed in every aspect of organizing, from the visible forms – such as bodies, clothes, rooms, desks, chairs, tables, buildings, vehicles, phones, computers, books, documents, pens and utensils – to the less visible flows – such as data and voice networks, water and sewage infrastructures, electricity and air systems.’

*So just to understand you correctly, are you then saying that data are material? - not a pre-formed substance, but a performed relationship?*

I wonder how to take this. You say:

‘... that additional and alternative ways of examining these entailments are required’ and that:

‘...a grounding in relationality, performativity, and sociomaterial assemblages (rather than either discrete entities or mutually dependent ensembles) may afford some empirical and conceptual innovations that will increase our understandings of the practices of contemporary organizational life.’

In that respect, you argue that:

‘The challenge in these examples is to find ways of establishing a corpus of data under fieldwork conditions that are distributed, constantly reconfiguring, fragmented into enclaves, or restricted by partial access (Law & Urry, 2004). Possibly promising approaches for addressing these include work on narratives (Czarniawska, 1998; Pentland & Feldman, 2007).’

You also discuss the language used by arguing that:

‘... part of the difficulty in discussing the new perspective is that our language makes it difficult to express indissolubility. We are used to dividing, separating, and distinguishing. Thus, even terms such as “mutual constitution,” “entanglement,” “assemblage,” and “relationality” allude to separateness, even as they try to move beyond it.’

and you continue:

‘Part of the problem, as we have noted, is linguistic. Suchman (2007, p. 263) suggests that “our language for talking about [...] persons or artefacts presupposes a field of discrete, self-standing entities”.’

*I wonder whether the narrative approach is an acceptable way to present theory... Are narratives really an alternative to existing research approaches? And how do we include the ‘voice’ of the material in a narrative?*

*If language is limited, should we then maybe consider other media as a vehicle for communicating research and research findings? Do we need to use a whole new vocabulary? And if language is the problem, why don't you provide a new precise and understandable language?*

You write:

‘A Web search conducted with the Google search engine is sociomaterial “all the way down,” entailing computer code written and updated by software engineers, executing on computers (configured with particular hardware and software elements which were designed and built by computer engineers and production workers), whose operation depends on the millions of people who use computers to create and update Web pages every day, and the millions of people around the world who enter particular search criteria into their Web browsers running on still other computers designed and built by yet other people, and so on.’

*Why are your examples so general and hardly provide narratives in which the key concepts are explicitly recognizable? Enough!*

## **2.2 Monologue part 2: asking the king - who has a different take on the topic - for his position on ‘How to handle the entwining of the material and the social?’ - This is how he frames the problem!**

Dear King, you contend that:

‘The materiality of information technology remains grossly under-theorized.’

and that:

‘...individuals in a wide variety of occupations and organizations routinely interact not only with people but with information technologies. The latter indisputably have material properties.’

and:

‘...a technological artifact is a “bundle of material and symbol properties packaged in some socially recognizable form, e.g., hardware, software.” Because most information technologies are software rather than solid physical objects, it may seem odd to say that information technologies have “material properties.” But, when material properties are construed as features that provide opportunities for, or constraints on, action, the metaphor seems warranted.’

*Well, you talk about material properties, but what is materiality? And when you say that people interact with information technology, do you then disagree with the queen on the notion of separateness? You explain what a technical artefact is, but why do you reduce your deliberations to information technology and software, rather than extending them to information systems?*

You say:

‘Although it has no physical properties, software clearly does not exist in the conceptual domain because it provides hard constraints and affordances in much the same way as physical artifacts do. Indeed, many researchers suggest that software, intangible though it may be, can be described in terms of its materiality (Hutchby, 2001; Jackson, 1996; Leonardi, 2007; Orlikowski, 2007; Suchman, 2000; Volkoff, et al., 2007).’

You guide us further by providing:

‘... three definitions of materiality ... materiality as (1) matter; (2) practical instantiation; and, (3) significance. I argue that if materiality is defined simply as matter, that digital artifacts cannot be said to have materiality. However, when materiality is understood to represent the practical instantiation and the significance of an artifact, digital artifacts can clearly be seen to have materiality.’

In other words, you use:

‘these two alternative definitions as lenses through which to understand the influence of “digital materiality” in the organizing process.’

*Does this mean that ‘to materialize’ is ‘to make it happen’? If this is so, what then characterizes digital materiality, or for that matter, materiality?*

You say that:

‘... the adjective “material” seems to refer to some property of the technology (in these cases, software) that provides users with the capability to perform some action. Calling these properties with the adjective “material” seems a ploy to remind the reader that the software–in–use does things that cannot be reduced to human intention or action ... calling something material emphasizes its performativity – the notion that it provides people with capabilities that they can use to accomplish their goals (Pickering, 2001) ... there is something important about software or other intangible artifacts that distinguish them in key ways from patterns of interaction, talk or other social practices, and that the word “material” points to that distinction.’

You further explain:

‘... perhaps what matters most about an artifact is not what it’s made out of, but what it allows people to do ... No matter whether those artifacts are physical or digital, their ‘materiality’ is determined, to a substantial degree, by when, how and why they are used. These definitions imply that materiality is not a property of artifacts but a product of the relationships between artifacts and the people who produce and consume them.’

*So, based on your definition of materiality, you define performativity and relationality slightly different than does the queen... And what about sociomateriality, you hardly mention it?*

You say that:

‘Although we may make the ontological claim that routines and technologies are indistinguishable phenomena because they are both constituted by human and material agencies, we must be mindful that the ways in which those agencies are weaved together produce empirically distinct figurations. Latour (2005, p. 53) defines figuration as the process by which agencies take on observable properties.’

*So it’s not about sociomateriality, but about agencies that are woven together? Interesting!*

You emphasize that:

‘Human agency is typically defined as the ability to form and realize one’s goals... [and the] human agency perspective suggests that people’s work is not determined by the technologies they employ.’

‘Material agency is defined as the capacity for nonhuman entities to act on their own, apart from human intervention. As nonhuman entities, technologies exercise agency through their “performativity” (Barad 2003; Pickering 1995); in other words, through the things they do that users cannot completely or directly control.’

and you argue that:

‘People who have goals and the capacity to achieve them (human agency) confront a technology that does specific things that are not completely in their control (material agency). In the enactment of their goals, then, people must contend with the material agency of the technology ... Taylor and colleagues (2001, p. 71) argue that although human and material agencies both influence people’s actions, their influence is disproportionate because human agency always has a “head status,” while material agency has a “complement status”.’

*In this sense, in agreement with Taylor and colleagues, you do not privilege humans over non-humans, but human agency over material agency. Isn’t this the easy way out?*

You argue that:

‘By treating the relationship between human and material agencies in this way, Taylor et al. are able to successfully incorporate into the human agency approach the recognition that technologies have a material agency that transcends changes in context while still giving primacy to the people who design and use them. The ability to do this rests on the use of a metaphor of *imbrication*.’

and refer to Sassen (2006, p. 345) who suggests:

‘the term imbrication to capture the simultaneous interdependence and specificity of each the digital and the nondigital. They work on each other but they do not produce hybridicity. Each maintains its distinct irreducible character.’

and continue:

‘... the imbrication metaphor asserts a slightly different relationship: people have agency and technologies have agency, but ultimately, people decide how they will respond to a technology. As Cooren (2004, p. 377) suggests, “To say that nonhumans *do things* does not mean that human contributions are passed over ... Humans can appropriate what nonhumans do”.’

Accordingly,

‘... the metaphor of imbrication [is] a way of recognizing that human and material agencies are distinct phenomena but that they are fundamentally interdependent.’

*So, again you disagree with the queen, suggesting that imbrication recognizes separation. I wonder what else it entails...*

You talk about the:

‘Interweaving of human and material agencies as a process of *imbrication*.’

and explain that:

‘The verb *imbricate* is derived from names of roof tiles used in ancient Roman and Greek architecture. The tegula and imbrex were interlocking tiles used to waterproof a roof ... To imbricate means to arrange distinct elements in overlapping patterns so that they function interdependently.’

and continue:

‘Human and material agencies, though both capabilities for action, differ phenomenologically with respect to intention. Thus, like the tegula and the imbrex, they have distinct contours, yet they form an integrated structure through their imbrication.’

You then talk about affordance by mentioning that:

‘The concept of affordance is useful in explaining why human and material agencies become imbricated: Technologies have material properties, but those material properties afford different possibilities for action based on the contexts in which they are used.’

and you put forward that:

‘Taylor and his colleagues (2007, p. 399) suggest that this integrated structure is an organizational structure: “... we consider [imbrication] to be the way that interagency relationships are interweaved to form...infrastructure”.’

*So, since imbrication is really different from sociomateriality, is there also a difference between ‘interweaving’ and ‘interlocking’?*

You finish with the argument that:

‘... routines and technologies, although distinct empirical phenomena, are ontologically related in the sense that they are both constituted by imbrications of human and material agencies.’

and:

‘As the imbrication framework suggests, structuring involves simultaneous and interactive changes between the features and routines of the technology. By mapping these changes over time, we may be able to gain new insights into the dynamics of socio-technical change and its role in the constitution of organizations.’

and:

‘...as scholars begin to push us to think about organizing as a sociomaterial process, the imbrication metaphor helps us to explain how the social and the material become interwoven in the first place and continue interlocking in ways that produce the infrastructures that people use to get their work done.’

*Are the concepts of imbrication, sociotechnique and sociomateriality compatible after all, or do you just go piecemeal with the concept of sociomateriality? Thank you, that’s enough!*

### **3 Discussion and Conclusion**

The purpose of the jester’s monologue was to question what sociomateriality is and how consistent its worldview is. We were also interested in investigating if and how it can inform the work of IS scholars. Related to this was an inquiry into how to treat sociomaterial issues in practice.

The works of especially Orlikowski on sociomateriality are valuable, as they have renewed and redirected the interest of IS scholars to tackle the problem at the heart of the IS discipline, which Orlikowski (2007) frames as ‘the recursive intertwining of humans and technology in practice’ and which Leonardi and Barley (2008) see as ‘the entwining of the material and the social.’ Orlikowski provides a new vocabulary with key concepts such as ‘constitutive entanglement,’ ‘relationality,’ ‘performativity,’ and ‘sociomaterial assemblages.’ Leonardi supplements with the metaphor of ‘imbrications’ and the concept of ‘digital materiality.’

The jester’s monologue identified two schools within the writings on sociomateriality: that of ‘constitutive entanglement,’ which subscribes to an ontology of inseparateness, and that of ‘imbrication,’ which subscribes to an ontology of separateness; thus, from this outset, it is in contradiction with the idea of sociomateriality - that is, if sociomateriality is defined as describing the inseparability of the material and the social. If sociomateriality presumes the ontology of inseparability, and imbrication the ontology of separability, the confusion about what ‘sociomaterial imbrication’ is, as introduced by Introna and Hayes (2011), becomes even greater.

There are also other issues with the concept of sociomateriality that require further discussion. A sharp tongue might argue that the ontology of inseparateness and a relational ontology which presumes the existence of separate things are incommensurate, and that the argument of sociomateriality thus is inconsistent. Sociomateriality claims that the separateness is analytical only, which would presume that the mode of inquiry is different from the ontology in which the inquiry takes place. Is this possible? The argument that our language is limited and that we are used to a vocabulary that entails separateness could be taken as an excuse to cover over the inconsistencies. But if this is the case, then should sociomateriality not provide us with a language that allows for overcoming these problems?

Within the existing studies, little methodological advice for how to perform a sociomaterial analysis is provided. It is very difficult to see how relationality and performativity can be described and identified in practice. In addition, we argue that Orlikowski’s concept of materiality remains obscure. This is clearer in Leonardi’s writings, as he introduces the term of ‘imbrication’ and the concept of digital materiality, and talks about human and material agency. As such, in our experience, the imbrication metaphor and digital materiality are particularly useful in the sense that they provide a language that is both clear and recognizable for IS scholars; that is, human and material agencies are distinct phenomena, yet fundamentally interdependent. But as identified in the jester’s monologue, the terms that Leonardi uses and the studies he conducts might not be sociomaterial.

The lack of a concise and clear language might also be a reason that the examples presented in the sociomaterial writings are very general, and why it is difficult to identify in them what sociomateriality means, as well as what consequences they might have not only for the use, but also the development and design of 'sociomaterial assemblages.' Development and design are topics that deserve more attention in the future from such a perspective.

A (holistic) ontology which acknowledges relations and thus transcends (Cartesian) dualism, while recognising that "things" exist as identifiable parts of a whole (holon), might provide a solution for the problem of 'the recursive intertwining of humans and technology in practice' and 'the entwining of the material and the social.' One might argue that such approaches already exist in the IS field; and these approaches even distinguish between information systems and information technology which does not seem to be the case in the writings by Orlikowski and Leonardi – another issue identified in the jester's monologue.

Some might argue that approaches such as systems thinking (Checkland, 1981; Checkland and Scholes, 1990) and the concept of sociotechnical systems (Mumford 1987), as discussed by Bijker (1995), in the field of general studies on science and technology - when used appropriately and not misunderstood as a representative of dualist ontology - already provide a solution towards 'the recursive intertwining of humans and technology in practice' and 'the entwining of the material and the social.' The answer might already be present in the writings by organizational and management researchers of the software tool and material approach (Budde and Züllighoven, 1992; Ehn, 1988), which is based on Heidegger's phenomenological analysis of tools and materials (1927; 2006). But we also have the actor-network theory (see e.g., Callon, 1986; Latour, 1991; 2004; 2005; Law, 1988), which has been used in the IS field for some time now. Still others might argue that further analysis and discussion is needed to support this claim.

If the new vocabulary, which is provided through the sociomaterial approach, is hardly used and does not lead to clearer analysis of the development and use of information systems, is it then really necessary and useful for our discipline? Does it advance the field beyond the insights gained through the application of system thinking, sociotechnical, phenomenological, and actor-network thinking – or are they in fact satisfactory? This remains a judgement call we leave to the reader. Our jester's monologue is a starting point for such a judgement and further dialogue. For Sutton (2010), at least, it is no more than jargon monoxide.

## References

- Avital, M. and Mathiassen, L. (2011). ECIS 2012 – Track on Alternative Genres. Call for Papers for the European Conference on Information Systems, Barcelona 2012.
- Bijker, W. E. (1995). *Of Bicycles, Bakelites, and Bulbs: Toward a Theory of Sociotechnical Change*. MA: MIT Press, Cambridge.
- Boell, S. and Cecez-Kecmanovic, D. (2011). *Theorizing Information – From Signs to Sociomaterial Practices*. In *Proceedings of the 22nd Australian Conference on Information Systems*, Sydney.
- Budde, R. and Züllighoven, H. (1992). *Software Tools in a Programming Workshop*. In: Floyd et al., (Eds.). *Software Development and Reality Construction*, Springer Verlag, Berlin, 252-268.
- Callon, M. (1986). *Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fisherman of St. Brieuc Bay*. In: Law, J. (Ed.). *Power, Action and Belief: a New Sociology of Knowledge?* Routledge, London.
- Cecez-Kecmanovic, D., Galliers, B., Henfridsson, O., Newell, S. and Vidgen, R. (2010). *On Sociomateriality of Information Systems and Organizing*. *MIS Quarterly*, Call for Papers MISQ.
- Checkland, P. (1981). *Systems Thinking, Systems Practice*. John Wiley and Sons Ltd, Chichester, UK.
- Checkland, P. and Scholes, J. (1990). *Soft Systems Methodology in Action* *Soft Systems Methodology in Action*. John Wiley and Sons Ltd, Chichester, UK
- Davidson, E. and Vaast, E. (2010). *Digital Entrepreneurship and its Sociomaterial Enactment*, In *Proceedings of 43rd Hawaii International Conference on System Sciences*, 1-10.

- Ehn, P. (1988). *Work-Oriented Design of Computer Artifacts*. Arbetslivscentrum, Stockholm, Sweden, (international distribution by Almqvist & Wiksell International).
- Hassan, N. and Hovorka, D. (2011). Sociomateriality and IS Identity. In *Proceedings of the 22nd Australian Conference on Information Systems*, Sydney, 1-10.
- Heidegger, M. (1927, 2006). *Sein und Zeit (Being and Time)*. Niemeyer Verlag, Tübingen, Germany.
- Introna, L. D. and Hayes, N. (2011). On Sociomaterial Imbrications: What Plagiarism Detection Systems Reveal and Why It Matters. *Information and Organization*, 21, 107-122.
- Latour, B. (1991). Technology is Society Made Durable. In: Law, J. (Ed.). *A Sociology of Monsters - Essays on Power, Technology and Domination*. Routledge, London: 103–131.
- Latour, B. (2004). On Using ANT for Studying Information Systems: a (Somewhat) Socratic Dialogue. In: Avgerou, C., Ciborra, C. and Land, F. (Eds.). *The Social Study of Information and Communication Technology: Innovation, Actors and Contexts*. Oxford University Press: 62–76.
- Latour, B. (2005). *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford University Press, Oxford.
- Leclercq, A., Carugati, A., Giangreco, A., Da Cunha, J.V. and Jensen, T.B. (2009). A Sociomaterial View of the Scaffolding of Work Practices with Information Technology. In *Proceedings of the International Conference on Information Systems (ICIS)*, Phoenix, Arizona.
- Leonardi, P. M. (2010). Digital Materiality? How Artifacts Without Matter, Matter. *First Monday*, 15(6).
- Leonardi, P. M. (2011). When Flexible Routines Meet Flexible Technologies: Affordance, Constraint, and the Imbrication of Human and Material Agencies. *MIS Quarterly*, 35(1), 147-167.
- Leonardi, P. M. and Barley, S. R. (2008). Materiality and Change: Challenges to Building Better Theory about Technology and Organizing. *Information and Organization* (18), 159-176.
- Leonardi, P. M. and Barley, S. R. (2010). What Is Under Construction Here? Social Action, Materiality, and Power in Constructivist Studies of Technology and Organizing. *The Academy of Management Annals*, 4(1), 1-51.
- Mumford, E. (1987). *Sociotechnical Systems Design: Evolving Theory and Practice*. In Bjerknæs, G., Ehn, P. and Kyng, M. (Eds). *Computers and Democracy*, Brookfield, VT: Avebury.
- Orlikowski, W. J. (2006). Material Knowing: The Scaffolding of Human Knowledgeability. *European Journal of Information Systems* (15), 460-466.
- Orlikowski, W. J. (2007). Sociomaterial Practices: Exploring Technology at Work, *Organization Studies*, 28(9), 1435-1448.
- Orlikowski, W. J. (2009). The Sociomateriality of Organisational Life: Considering Technology in Management Research. *Cambridge Journal of Economics*, 10, 1-17.
- Orlikowski, W. J., and Scott, S. V. (2008). Sociomateriality: Challenging the Separation of Technology, Work and Organization. *The Academy of Management Annals*, 2(1), 433-474.
- Riemer, K. and Vehring, N. (2010). It's Not a Property! Exploring the Sociomateriality of Software Usability. In *Proceedings of the International Conference on Information Systems (ICIS)* Phoenix, Arizona, 1-19.
- Scott, S. V., and Orlikowski, W. J. (2009). "Getting the Truth": Exploring the Material Grounds of Institutional Dynamics in Social Media. *Working Paper Series*, London School of Economics and Political Science, 177.
- Sutton, R. I. (2010). Sociomateriality: More Academic Jargon Monoxide, Expert Blog.
- Svahn, F., Henfridsson, O. and Yoo, Y. (2009). A Threesome Dance of Agency; Mangling the Sociomateriality of Technological Regimes in Digital Innovation. In *Proceedings of the International Conference on Information Systems (ICIS)*, Phoenix, Arizona.
- Wagner, E., Newell, S. and Piccoli, G. (2010). Understanding Project Survival in an ES Environment: A Sociomaterial Practice Perspective. *Journal of the Association for Information Systems*, 11(5), 276-297.