
Reclaiming Meaning in IS Theory: Theory for Why, not What

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Abstract

This paper presents an alternative perspective on theory in Information Systems (IS). We argue that the orthodox view of theory as modelistic representation does not fulfil the criteria for ideal theory when applied to IS viewed as a social sciences. By looking to what theory does rather than what theory is, we open the possibility for an alternative kind of theory that makes the human world comprehensible by grasping the sociality of human affairs. By laying bare the underlying commitments of the orthodox notion, we reveal what the alternative must provide to theorize how the social world becomes meaningful to actors in the course of everyday practices. We develop an account of this alternative kind of theory and provide an exemplar on trust formation to demonstrate how a narrative form can be considered as theory. We conclude by indicating its value for theorizing IS in new ways, particularly in the current world of pervasive technology.

1. Introduction

A. Castells: What is a human tower?

...the basic structure of a castell, as they are called in Catalan, having barely changed. Such a tower always consists of three parts. The basis is the so-called "Pinya", a relatively large ring, onto which the weight of the load above is distributed, and which stabilizes the structure. This ring also softens the fall of the castellers, when the tower falls apart. Depending on the height of the tower, one or two additional ring-shaped floors ("Manilles") are put on top of the pinya. The "tronc", Catalan for trunk, consists of several levels with a specific number of people. Depending on the number and distribution of the up to 9 people of a ring, each castell has a name of its own. Climbing to the top of the tower is only allowed for kids, because of their low weight. They form the "pom de dalt", the tower dome (Barcelona.de 2014).

B. Castells: Why build a human tower?

Human towers are medicine for the soul. You risk your life for a moment of sublime camaraderie and community. Trust is paramount. All it takes is one shaky foot and the entire tower falls, sending you and hundreds of others tumbling into the air, onto each other and then onto the pavement. Building human towers is more than a quirky attraction, more than an international sport and more than a refuge for lost youth. It's more even than a thirst for the glory of winning. A human tower, when done right, represents an unparalleled passion for human connection that goes beyond race, borders and ages. In this sense, the world's best human tower builders represent all of us—in our hope for a better future (Devineni and Rojas 2014).

Castelling: Two Accounts

This paper presents an alternative perspective on theory and theorizing in Information Systems (IS). Information Systems is a discipline that necessarily talks about human social practices – the social practices of appropriating and using information and technology in organizations and society, the practices of social interaction which rely on technology, and the opening of new potentialities for human action through technology. Yet the sociality which underlies social practices is frequently absent from the orthodox view of IS theories.

To illustrate this point, we have opened our paper with two very different accounts of the same social practice – the erection of human towers (Castelling) as practiced by the Catalan people of Spain. Account A describes Castelling by what a human tower is. It outlines a causal-mechanical process of tower building. It is clear that the elements of the tower are living, thinking human beings, but the mode of description treats these bodies as so many objects that arrange themselves in certain relations to create a tower structure.

Account B aims to convey “why” Castellers engage, and continue to engage, in the Castelling practice. What is the point of Castelling? What is its meaning and purpose for the participants (over and above the mechanical goal of creating a tower)? What would they anticipate and experience during Castelling? It is critical to grasp the meaning that Castelling has for the Castellers if we want to comprehend why they do it at all, why Castelling persists as a practice, how the practice evolves and what the significance of the practice is to the Catalan people. Comprehending the “mutual intelligibility of action as a mundane, practical accomplishment of members of the society ...is the social scientists problem or subject matter” (Suchman 1987 p. 1).

The aim of this research essay is to explicate an alternative *kind* of theory which complements the dominant conception of theory in the IS field. We argue that the dominant approaches to theory that are espoused in Information Systems are grounded upon an external, descriptive and explanatory stance that is echoed in the first account of Castelling, because such a

distanced and mechanistic stance is the hallmark of scientific explanation. In taking this approach to theories about human practices of using information technologies, theorists are taking an “outside view” of these practices and of the context in which they occur.

To make our argument for the possibility of theory of a different *kind* that still has currency as theory, requires us to bring to the fore the overarching function of theory, which is to provide comprehension of the world. By this we mean that theories enable comprehension by revealing normally obscured regularities, illuminating novel observations and creating new distinctions, enabling the transfer of knowledge, and creating coherence, by affirming anticipations, and thereby enabling actions. Using this starting point we will consider an alternative kind of theory that is different in structure and nature but shares the overarching function of theory to make the world comprehensible. This requires that we identify what is unique in social practices that the orthodox view of theory neglects. We will argue in this paper that for many IS practices, meaning matters, and that to comprehend the meaning of a practice for participants requires vicariously grasping the practitioner’s “inside view” of those practices. Consequently, we will raise the question of what taking an inside view of social practices means for theory in IS.

We will demonstrate that the outside view, which is the hallmark of influential discussions of theory in IS, is inadequate to understand why IS phenomena occur and what role technology plays in providing meaning for the participants within such practices. As with the first account of Castelling above, we argue that any outside view will only be able to explain certain mechanistic aspects of these practices but the topic of the second account - what motivates and sustains them - will remain unaddressed. To achieve authentic theory of social phenomena in IS we argue that an alternative “inside view” is needed.

That an accounting of an inside view be considered a theory is critical given the political prominence with which theory is held in the IS community. Reclaiming meaning in IS theory will encourage specification of phenomena that depend on meaning and context. By reclaiming theory for certain kinds of research which are currently labeled as description an account of an inside view can inform the evaluation of socially-oriented IS research contributions. An inside view of everyday experience with information systems both old and new, and open space for seeing differences and similarities and for phenomena differently.

The need for information systems to take an inside perspective on practices involving technology is becoming more urgent as information systems become ubiquitous in business and everyday practices. The reduction in separation between humans and information systems (e.g. wearable computing, embedded IT, and mobile computing) and the immersion in IS-enhanced environments means that information systems are playing an increasingly entwined role in our social engagements. Meaning and place-making (Riemer and Johnston 2012) are particularly critical in comprehending emergent phenomena such as information sharing among digital natives (the Facebook phenomenon), large-scale, software development practices (the Opensource movement), or phenomena such as hacker culture and file-sharing communities.

We begin by explicating the dominant form of theory in Information Systems research. In doing so, we discuss the underlying assumptions about the role and position of the researcher, the nature of the world and the ways in which the phenomenon under study is typically represented. Hence, we spell out in detail what we have referred to as the outside view. We then challenge the appropriateness of an outside view for theorizing in IS as a discipline centrally concerned with social practices. We argue that the overarching function of theory – comprehension – allows us to contrast the dominant view with an alternative *inside view*. We then present a case study that illustrates theorizing from an inside view. We will discuss the implications that an *inside view as theory* will yield for IS research practice, before we conclude by indicating its

value for theorizing in IS and its implications for enterprises and society in the current world of pervasive technology.

2. Theory as Modelistic Representation

While we recognize that discussions of theory in IS are diverse and ongoing, we argue that an orthodox view dominates research and thinking in the discipline. On this view, theories are considered to be representational objects, models about the world, which explain and predict events in the world. For example, Weber views theory as a particular kind of “*model*, ... an abstracted, simplified, concise *representation* of something else in the world” (Weber 2012 p. 5). As representations that correspond to the world, theories assist people to explain and predict phenomena, which are perceptions “of facts in the real world – the existence of things, the properties these things possess, the states these things experience, and the events these things undergo” (Weber 2012 p. 5). Consistent with this sense of theory, Gregor (2006) developed a taxonomy of theories in which five types of theory are identified: theories for analysis, for explanation, for prediction, for explanation and prediction; and for design and action. Each of these types is categorized by the way in which they achieve representation, using primary constructs, relationships among constructs and causal explanations, thus aligning with the modelistic view. For example, Type IV “explanatory/predictive theory implies both understanding of underlying causes and prediction, as well as description of theoretical constructs and the relationships among them” (Gregor 2006 p. 626).

2.1 Modeling IS Theory on Physical Science

It is critical to recognize that this account of theory is modeled on the natural sciences. Consequently, it brings with it inherent assumptions about the nature of the world as consisting of independently existing things with properties (Weber 2012). Causal associations among the things and their attributes exist in the world and can be discovered and represented using such a modelistic notion of theory. Importantly, under this worldview humans can equally be conceived of as things with certain properties (Weber 2012), including internal mental states such as beliefs, motivations, and intentions.

Returning to our opening scenario A, we see that it is describing the action from a distance as though one were watching some kind of mechanical “automata” achieving a complex and challenging goal. This goal is to collectively produce a certain configuration or state in the world – a human tower. To move such an external description toward an explanatory and predictive theory, we would have to postulate that these automata have internal states such as knowledge about the world (e.g. of physics, of balance, of human capacities) and of other’s knowledge and intentions. This holds out the seductive possibility of subsuming human behavior under the same general framework as the physical sciences. Nevertheless, such an account would remain a description of Castelling as a physical and mechanical phenomenon, albeit the achievement of a very complex “machine”. However, to complete this move it is necessary to assume that the human subjects themselves interact with objects in the world in the same way as the theorist would like to describe it, namely by employing representations; otherwise there is no guarantee that theories correctly predict behaviour.

This is the view of human behaviour is prevalent the cognitive sciences (Gardner 1985). Gardner argues that the defining characteristic of the cognitive sciences is the assertion of the explanatory status mental representations. On this view, humans take in the external world via their bodily senses and hold in their mind mental representations of the world and the objects from which it is composed. Based on their mental representation of the external world they are then able to compute intentions and plans, make decisions, and from these perform actions in the world (Agre 1997). The mind is “in here”, and by perceiving and representing things in the

world “out there”, it directs the body to act in the world. Hence, on this view perception and thinking precede and make possible action. On this view, the real world cannot be directly accessed, so mental copies or abstractions are required to mediate between perception and action. (Putnam 1980; van Fraassen 2008).

Moreover, representation is central to the idea of information and the information system artifact itself (Weber 1997) and is embedded across the spectrum of IS research topics more broadly: “Information systems provide an artifactual *representation* of real-world systems (as perceived by someone)” (original emphasis; Wand and Weber 1995 p. 208). These assumptions are pervasive need to be questioned because “we take the assumptions as given simply to give us leverage ... much as researchers in economics and psychology make assumptions of people (regarding rationality and symbol processing), not because they are perfectly true, but because they give researchers leverage in understanding human behavior” (Burton-Jones and Grange 2013 p. 11).] Even IS systems themselves are thought of as intending to faithfully represent “things including properties and types of things; states assumed by things; events and transformations occurring on things; and systems structured around things” (Recker et al. 2007 p. 129).

2.2 Existing Critique of Modelistic Theory in the Social Sciences

The modelistic approach to theory has been highly successful in the natural sciences such as physics, chemistry, geology and biology. Yet, at the same time, challenges to the efficacy of the modelistic approach in the social sciences have surfaced. It is not self-evident that the world of humans, the social world, can be reduced to independently existing parts that are causally related, as assumed by the worldview exposed above. Because Information Systems as a discipline focuses on the intersection of people, organizations and technology, it is also open to these critiques of the efficacy of a modelistic approach in social science.

Research addressing this issue of the status of modelistic theory in the social sciences (Dreyfus 1986; Flyvbjerg 2001) has focused on the failure of “the would-be sciences (social sciences *modeled upon the natural sciences*) [to] predict and explain everyday activities using decontextualized features” (Flyvbjerg 2001 p 40 emphasis added). These authors advance arguments for the impossibility of theorizing the human-social, when theory is taken to be the kind of external, context-free, representation of the world that that is traditionally held up as the hallmark of theory in the natural science. In short they argue that a “view from nowhere” cannot capture the nature of social practices. Notably, Flyvbjerg (2001) argues for “the deadly paradox of social theory” in the following way. Drawing on the Socratic origins of theorization and subsequent supplements by Descartes, he argues that the received ideal type of scientific theory is characterised by the criteria of being explicit, universal, abstract, discrete, systematic, complete, and predictive. Therefore a scientific theory of the natural world and of the social world must explain and predict in terms of context-independent features abstracted from the everyday world.

The paradox lies in the importance of context in social life versus the demand that scientific theory be context-independent. As each situation is unique, no context-free representation can capture all that may be relevant to situated action (Suchman 1987). Without denying that humans use representations and plans as resources for real-time action, Flyvbjerg and Dreyfus argue that such mental plans representations cannot be determinate of actions. Indeed what becomes relevant can vary even in seemingly identical situations. As a result, the range of elements contained in a representational theory of human action may not match the elements actually selected by specific humans in specific situations. So predictions may sometimes be

correct but will be unreliable, particularly under conditions of change, disruption or innovation. The exclusion of context makes the explanatory and predictive goals of theory impossible as contexts become unstable. Yet these are the very circumstances in which theory is most vital.

This line of argument leads these authors to the conclusion that a scientific theory of the social world is impossible (Dreyfus 1986; Flyvbjerg 2001). The paradox of decontextualizing the context-dependant appears insurmountable. As Dreyfus puts it:

“[On this view] We will not have understood behavior... until we can specify that behavior in terms of unique and precisely definable reactions to precise defined objects in universally defined situations. Thus Western thought has already committed itself to what counts as an explanation of human behavior. It must be a theory of practice, which treats man as a device, an object responding to the influence of other objects according to universal laws or rules” (1992 p. 232 context added).

While this line of reasoning appears to preclude social theories, we contend that both Flyvbjerg (2001) and Dreyfus (1986) are arguing from within a closed system by critiquing the possibility of social theory using the precepts of the particular *kind* of theory that is characteristic of natural science. Essentially, their argument that theory in the social sciences is impossible is based on the definition of what theory must be from within the worldview held by the natural sciences. But what if there were theory of a different kind? Against this background, we propose to break out of the paradox by looking to the overarching function of theory. Rather than to ask what a theory *is* (e.g. a certain kind of object, when seen in the image of the natural science worldview) we reframe the problematic by asking what a theory is *for*.

3. The Function of Theory: Comprehending the World

In the most general sense, the function of theory is to provide comprehension: to enable humans to better *comprehend* the world. Accordingly, the ideal type of scientific theory presented in Flyvbjerg (2001), as well as informing mainstream theorising in IS, is theory *for* explaining and predicting. It achieves this by representing an independently existing “world out there” and discovering the mechanisms at work that permit prediction of what will happen next. We term this *comprehending-about*, where knowledge claims are made about a world existing independent of the knower, with the aim to know what things are, how they interact and what will happen in the future. As such, *comprehending-about* is akin to the way humans engage with the world when they reflect and engage in abstract reasoning about the world.

Our point of departure in making our argument is the observation that *comprehending-about* is only one way humans can engage with and know the world. *Comprehending-about* is achieved by viewing the world at a distance, by taking an “outside view”. In the scientific, representational worldview, there is no ‘in’ the world, the world is ‘out there’, external to the human actor. Yet, there is another kind of engagement with and comprehension of the world: by being involved in the world, knowing the world practically by using it.

Comprehending-in captures how situations and things (including technologies) become *meaningful* to people in the course of their everyday, ongoing activity, when they act fluently without the need for reflection, and how this form of comprehension allows them to act in appropriate ways, even in new situations. Humans do not always comprehend the world at arm’s length. The most common mode of human engagement is participating in and experiencing the world directly. Thus, the engagement of people in a social world identifies another kind of comprehension, a practical form of knowledge deriving its efficacy from the regularity in ways of using tools, in doings and sayings, and in pursuit of a common enterprise/purpose that becomes shared within a given community of people – what is often

referred to as a *practice* (Nicolini 2013; Schatzki 2010). Without such shared social practices, people lack the capacity to act appropriately in a given situation, and their actions, language, and values may be incomprehensible to others. *Comprehending-in* thus depicts how actors comprehend the world from the *inside* of these shared social practices and how, by way of sharing this world, they are able to act together, empathize with, and understand each other's actions.

In our everyday existence, we encounter large parts of the world not as things that require attention and reflection but in a non-reflective and entirely practical way through using the material world. For the most part we are absorbed in our practices in such a way that the world and all its contents, including objects, our body and others, are both invisible and subordinate to the activity we are engaged in. For example, any proficient driver will be able to effortlessly cruise in traffic and manipulate the controls of the car without any need for thinking or reflecting, while being able to engage in conversation with another person at the same time. Equally, a writer engaged with writing a text with a word processor will, if everything goes well, not experience the computer or the keyboard or the word processing program, but will be fully engaged with writing the text. In both activities engagement with the world is based on embodied skill, not the execution of mental plans or rules following, to the extent that it is often impossible to recall or explain how exactly such activities are performed. This non-reflective expertise challenges the foundational assumption of the representation worldview that human action is always based on mental representation.

While one might dismiss these examples as merely describing habit, where representation and rule-following happen subconsciously, a careful phenomenological analysis of the way people acquire expertise demonstrates that there is indeed a difference in kind between reflective rule-following and the way experts engage with the world (Dreyfus and Dreyfus 2005). This is true for specialist skills as much as for everyday activities. According to this analysis (Dreyfus 1996) novices start out by consciously following instructions that consist of largely de-contextualized rules. Gradually, as they become more proficient they begin to notice more and more meaningful additional aspects of different situations. An expert finally comes to discern whole families of situations on the basis of what has or has not worked over an extended history of practical engagement. As Dreyfus (1996) notes: "rules and principles will gradually be replaced by situational discriminations accompanied by associated responses" (p.3); fluency in a task domain is demonstrated by "immediate intuitive response to each situation which is characteristic of expertise" (p. 4). A true expert is able to respond to each unique situation and do the appropriate thing as judged by other experts in the practice, an ability that is not based on internal representation of the situation and cannot be captured in any set of explicit rules.

This form of unreflective, skilful engagement is by no means simply a characteristic of an individual's engagement with the material world. It characterises our way of engaging with our social world more generally, and is best captured by the notion of a social practice. Importantly, the notion of practice employed here is different from the common usage that denotes 'routines', 'a collection of actions' or simply 'what people do'. Rather, practice is described as the "site" (Schatzki 2002) or "house of the social" (Nicolini 2013) and thus as an encompassing entity. When people enroll into a new practice (such as a profession or trade), this involves acquiring skills, learning what is the right thing to do and how to respond appropriately in a given situation against the social expectations of the practice. As such, practices involve "forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge" (Reckwitz 2002).

This conception of practice points to a fundamental difference in the notion of a social 'world' when compared to the notion of an objective external *world* as an independently existing collection of objects and other subjects 'out there' characteristic of the representational

worldview. *World* under this view is synonymous with 'practice'. Acting in the world result from being enrolled in various professional and general life practices. We want to stress however that the notion of 'in' is different to the way for example, coffee is in a cup; 'in' captures how we are *involved* in our social practices. Thus, practices are not just a set of activities, but co-define who people are and what is meaningful to them. For instance, a doctor not only practices medicine but is a doctor because s/he practices medicine.

A further implication of this worldview is that there is no view from nowhere. We are always coming from somewhere and thus bringing some perspective (Schatzki 2010) to every situation. The consequence is that any dealing with entities in the world is always given meaning against the background of the existing practice (Taylor 2006). Even as we engage in reflection about objects in the world, this is always done from within a world, against the background of the existing practice, its norms, identities and material configurations, which influences what shows up and makes sense in any given situation. Being engaged in and knowing a social world in this way, by being enrolled and involved in social practices that co-constitutes who one is, and thus gives meaning to one's existence, is what we mean by *comprehending-in*.

To summarise, there are two distinct ways in which humans engage with the world: 1) at a distance through reflecting *about* the world and 2) directly by being involved *in* a social world. Those two modes of engagement correspond to the two ways humans can comprehend the world, through *comprehending-about* the world and through *comprehending-in* the world.

4. Toward IS Theory of a Different *Kind*

If we accept that the meta-theoretical function of theory is to make the world comprehensible, and that *comprehending-about* and *comprehending-in* the world are two distinct kinds of human engagement with and comprehending of the world, than there will also be two corresponding, *natural kinds* of theory. Each *kind* will function as theory, by illuminating novel observations, creating new distinctions, enabling the transfer of knowledge, and creating coherence, which are functional characteristics of good theory (Kuhn 1977; Lakatos 1973).

Our project is thus to demonstrate that theory of the modelistic kind, that aims to provide abstract representation from a distance, is not the only kind of theory and that a different kind can usefully be formulated. Natural science theories and social science theories *modelled on* the natural sciences, (including most traditional IS theories) are then distinguished from another conception of a social theory modelled on a particular appreciation of social practices and meaning. This kind of theory would be sensitive to and account for the uniqueness of social situations and situated actions, by providing an account of the shared background practices that give meaning to these actions. Based on this distinction we argue that social science entails different claims to knowledge and that social science theories achieve the function of comprehensibility in a different way, which should not be judged on criteria derived from the natural science view.

For the natural sciences, and the human science that seek to emulate this approach, *Kind I theories* seek abstract, universal, context-free generalizations for explaining/predicting phenomena (Flyvbjerg 2001). In contrast, *Kind II theories* would seek to evoke in the reader knowledge-gaining and knowledge-using capabilities (Bruner 1991) and context-oriented knowledge of social phenomena transferable to new situations analogous to the way social actors gain knowledge of their own world within practices. Kind II theory would entail grasping the actor's world from an inside view and communicating its importance and meaning such that someone not enrolled in that world can comprehend and appropriate a part of that formerly alien world in new or changing situations. Thus the function of identifying regularities remains, but Kind II theories achieve this by surfacing the taken-for-granted background world of practices

against which the foreground of meaningful situations and objects appear for actors in their situated world.

For example, within IS, Kind II theorizing might provide narrative accounts of the way information technology becomes intelligible within particular use practices, how such understandings shape its use, discontinuance or re-design, and how this knowing can be transferred to new situations. Whereas validation for explanatory theory lies in testing of predictions, the validity of Kind II theorizing lies in its potential for transferring comprehension from those fluent in a practice to others, thus enabling people outside the practice to undertake appropriate action.

Earlier, we equated Kind I theory with comprehending-about the world. We are now able to characterize the activity of Kind I theorizing as an activity that trades in abstracting and decontextualizing, or what Heidegger terms “de-worlding” (Dreyfus 1991; Heidegger 1962), by which abstract and decontextualized theoretical statements are derived. While such a stance can lead to an account of the mechanistic aspects of human action, and thus may be useful in providing a parsimonious model which helps us “comprehend the world by representing only those major features of the world that are important for our purposes” (Weber 2012 p. 5), we can now see that Kind I theory is problematic for comprehending *why* people act the way they do within a practice. Once “de-worlded”, the rich situated knowledge inherent in comprehending-in the world cannot be recovered (Dreyfus 1991). It is this insight that leads us to propose Kind II theory, a form of theory which aims to capture situational experience and how local action becomes meaningful to participants. Such a kind of theory would enable the transfer of comprehending-in across situations, as the basis for comprehension and appropriate action by non-participants.

5. Kind II Theory: Theories of Situated Practice

Having established an opening for theory that takes sociality and meaning seriously, we posit an alternate *kind* of theory that discloses the human social world and functions to transfer comprehension to new situations. As we have argued, it is necessary to consider a different ontological and epistemological basis for social worlds, a position that runs contrary to the dominant discourse in IS which privileges the processing of information over the construction of meaning. But it is the latter which is needed to comprehend “the rich and messy domain of human interaction” (Bruner 1991 p. 4) if we consider people as agentic, feeling, and telic. Instead of how we discover the existing world, we ask how we enact our world as we inhabit it. We must then specify what is unique to the social world that theory of Kind II must make comprehensible and what form(s) such a theory may take. In this section we argue that *narrative* can function to transfer comprehending-in and thus can be an instantiation of Kind II theory.

In alignment with the work of Bruner (1991) and Ricoeur (1973) we argue that comprehension of everyday encounters in the world is intertwined with the meaning(s) people place on their own and other participants’ situated actions and discourse. All human action and discourse are situated and thus meanings are disclosed against background taken-for-granted practices that endow them with meaning/intelligibility. Meanings are not pre-assigned to actions or messages, instead “there are agreed-upon canonical relationships between the meaning of what we say and what we do in given circumstances and such relationships govern how we conduct our lives with one another” (Bruner 1990 p. 19). Actions become meaningful by being practiced and situated in relation to the background against which they are performed. What must be made comprehensible is the manner in which “a normal person experiences the world as already interrelated and full of meaning” (Dreyfus 1992 p. 270).

Comprehending-in the world is a distinct *kind* of comprehension, realized through active involvement with and within it and creating narratives of meaning (Bruner 1991) which we tell ourselves and others. Bruner (Bruner 1990 p. 89) describes a child's narration as having a constitutive function which creates "an integral structure that could encompass what she had done with what she felt with what she believed". Bruner (1991) argues that narrative is "one of the most ubiquitous and powerful forms in human communication" (p.77). In addition, because "we organize our experience and our memory of human happenings mainly in the form of narrative-stories, excuses, myths, reasons for doing and not doing..." (Bruner 1991 p.4), narrative is fundamental to the way we learn and how we act in new situations.

Narrative, in its broadest sense, is intimately linked with socially meaningful actions as it is required to comprehend the world. We *enter into meaning* (Bruner 1990) through internalization of a system of signs which have symbolic meaning in a standing-for relationship. Narrative structures comprised of agentivity, sequential order, canonical expression and a narrator's perspective (i.e. an "inside view") are "inherent in the praxis of social interaction even before it achieves linguistic expression" (Bruner 1990 p. 77). For example, children look at things, talk about them and then look to their parents and others to determine whether what they have said is appropriate. This is how they are enrolled into material, ideational, discursive culture and grasp or appropriate the *sayings and doings* which constitute shared background.

Ricoeur (1973) argues that to grasp the meaning of a narrative or text is to appropriate the background. It is the background, the *situatedness*, upon which the actions of the narrative's participants are comprehensible. Appropriating this background is not a cognitive act: rather, it is to alter one's own background incrementally in ways that allow for action in unanticipated situations. Thus, one form that Kind II theory may take is a stylized instance of the kind of narrative that made the social phenomenon comprehensible to the actors in the first place. Creating such a theory would "unconceal" a world (a specific set of practices) which the participants inhabit and sharing the theory makes that world more comprehensible to those on the outside. By unconcealing the inside view we can disclose the basis on which participants see things at all (e.g. objects, meaning, value, worthiness) and it is this background that shapes actions. Returning to the short narrative in the opening example, through such kind II theory we would begin to comprehend not what a human tower is or how to build one but what being part of Castelling is like – we would become sensitized to the situational and changing concerns, passions and connectedness in which the actions of Castellars make sense and have meaning. If we internalize that awareness we can transfer our comprehension of that world to other situations.

Under this view, how IS are designed, adopted, appropriated, and used depends directly on how the local world becomes *intelligible* to people within the particular IS-enhanced social practices. A theory of kind II for comprehending-in would enfold the inside view of the participants and would transmit the sayings and doings and the background against which actions and technologies become meaningful thus permitting appropriate action. Theories based on an inside view stand in stark contrast to the epistemology of separation, where theoretical knowledge of the world is an external, context-free representation of "being nowhere while claiming to see comprehensively" (Haraway 1991 p. 196). The goal of theorizing an inside view is to capture how people comprehend and act in the world by *making sense of* activities such as design-in-use, technology appropriation and non-appropriation, and application of information technology in organizing human activities such as collaboration. In contrast to an emphasis on explanation, theorizing the inside view aligns with *understanding* and *phronesis*, or practical judgment.

6. Proof of Principle

We have made an argument that Kind I theory does not exhaust the possibilities for comprehending social phenomena and that an alternative Kind of theory more suited to enabling comprehension of practices should be possible. We have also argued that such a Kind II theory might take the form of a narrative. But can we point to an example of a narrative presentation of an IS phenomenon that can be said to function as a (Kind II) theory exposition? In other words, can we show that the set of Kind II theories is not empty?

We will take for this purpose a paper (Kelly and Noonan, 2008) from the IS literature on the role of trust in offshore software development that we will argue theorises through narrative. The paper argues that trust should be viewed as an on-going social accomplishment established through the enactment of certain practices, particularly communicative practices. According to our argument, making such a case about social practices should require the authors to allow the reader to comprehend the phenomenon from the inside view of these practices, for which a narrative form would be appropriate.

6.1 Trust as a Topic for Theory is IS

We begin by briefly reviewing conceptions of trust found in the IS, organisational and management literature. This review is not meant to be exhaustive but simply to set the stage for or discussion of our example paper, in particular by highlighting how a Kind I theory approach has dominated the field.

6.2 Dominant Views of Trust

Trust has increasingly become a topic of IS research in such areas as outsourcing (Lee, Huynh and Hirschheim, 2008), offshore software development (Sabherwal, 1999), virtual project teams (Jarpenpaa and Leidner, 1999; Pinjani and Palvia, 2013) and electronic financial transactions (Knights et al, 2001). As governance of internal and inter-firm interactions moves away from established hierarchies mediated by physical co-presence toward spontaneous markets mediated by electronic media, trust assumes a greater role in mitigating the risk of loss - material loss (money and time), psychic loss (negative emotion), existential loss (identity damage) - due to possible opportunistic behaviour.

An influential definition of trust is given by Mayer, Davis and Schoorman (1995 p. 712) as “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party”. A number of characteristic themes occur in this definition: trust is a relationship between parties (individuals or organisations), there must be a vulnerability or risk for trust to be relevant, and the parties must be willing to accept this risk in the face of incomplete guarantees of others’ actual behaviour. Some authors distinguish between unilateral trust and mutual trust (Schoorman et al. 2007). Feedback from the outcome of trust episodes to the conditions for trust formation provides a simple account of the dynamics of trust (Mayer, Davis and Schoorman, 1995) but deliberate processes of trust building are also considered (Williams, 2007)

There are a number of ways that trust has been conceptualised in the IS, management and organisation literatures (McCallister 1995; Sabherwal 1999; Zucker 1986):

1. Trust as a calculative decision. On this view trust is a decision to enter a relationship based on a rational assessment of potential punishments and rewards (Dasgupta 1988). An important means of engendering such trust is the legal contract specifying penalties and formal controls (Sabherwal 1999). This view treats humans as rational calculators,

albeit with bounded rationality and access to information. Transaction Cost Economics and Principle Agent frameworks take this view of the origin of trust, and game theory is common form of expression of these ideas (Dasgupta 1988).

2. Trust as a cognitive assessment. On this view trust results from a cognitive assessment of the competence of the other party (McAllister 1995; Sabherwal 1999), the most direct case being when parties (firms or individuals) have previously worked together in comparable situations. However, knowledge of a previously unknown party might be gained through a gradually expanding scale of interaction (or “courtship”) from initial engagement to more consequential interaction (Sabherwal 1999).
3. Trust as a psychological contract. This view treats trust as an outcome of attributes of the trusting parties (propensities toward trusting in the case of the trustor, and attitudes indicating trustworthiness in the case of the trustee) (Mayer et al. 1995). Related is the view that this psychological commitment fills in the gaps inevitably present in formal contracts and controls (Sabherwal 1999). Being an “act of faith” such a contract has a strong affective dimension (McAllister, 1995).
4. Trust as a social production. On this view (Knights et al. 2001) trust is a solution to the basic problematic of society: how is order possible amongst a collection of free and self-interested agents. Rather than a discrete event or decision, trust on this view is a condition that makes society possible and is intimately linked to how orderly behaviour is reproduced and institutionalised in human societies.

In the literature, the first three conceptions of trust are most often theorised through the modelistic approach of Kind I theory. Calculative approaches can be expressed and evaluated through formal mathematical models of the risk and payoff of the decision (e.g. Dasgupta 1988). Cognitive models are formulated in terms of publicly inspectable characteristic of the behaviors of the parties (e.g. Sabherwal, 1999). Following a long tradition in behavioural psychology of correlating mental states (such as beliefs and emotions) to operational constructs, theorists also feel no barrier to treating psychological attributes on the same footing as externally inspectable attributes of human behaviour in variance theories (e.g. Mayer et al. 1995) or process theories (e.g. Williams 2007). Consequently, these three approaches to trust are amenable to the ‘box and arrows’ form of modelling common in IS and that is what we see by and large in the literature. However, theories of trust as a social production are not readily amenable to a modelistic formulation because they require an inside description of the social practices in which trust is implicated, as we will illustrate below with our example paper that comes from this perspective.

6.3 A Story about the Practice of Trusting

Our example paper (Kelly and Noonan 2008) relates the experiences of the CEO of NetTrade, an Irish financial services firm, as they entered what for them was the unfamiliar territory of off-shore development of their mission critical software tools. Of concern is how they established a trusting relationship with this previously unknown Indian software house (IndiaSoft) across distance and time barriers. In this research project the authors conducted an in-depth, longitudinal case-study of the development of this relationship using typical ethnographic field-study methods, data recording and data analysis with an interpretive orientation. For the purposes of our paper we do not want to focus on the research methods employed in this work but rather on the mode of presentation of the insights gained which the authors refer to as a “theoretical framework”. We are thus presenting this paper as a case in which the narrative form of a story constitutes doing theory in the light of our discussion above.

The authors begin their paper by arguing for a particular orientation to trust derived from Giddens's (1990) work on globalization, which emphasizes that "trust should be understood as a sense of emotional comfort, a device that can be used to 'bracket out' potential risks" (Kelly and Noonan 2008 p. 234). Trust is thus a "continuous state rather than a discrete decision, and a key mode of trust production are stable institutionalized routines" (*ibid* p. 235). However, "the construction of a shared set of stable social practices among people who are strangers or mere acquaintances can be problematic and calls for the balancing of 'trust, tact and power'" (*ibid* p. 235, quoting (Giddens 1990)), which help "bring about the mutual accommodations required to develop and sustain any stable collaborative order" (*ibid* p. 235). Ultimately, "it is through the establishment of trust in people and systems that agents can be psychologically comfortable enough to 'bracket' risk and productively engage with an inherently insecure world" (*ibid* p. 236).

In terms of our earlier review, the orientation in the paper is toward trust as a social production or what the authors refer to as "trust as habitus". Trust refers to a condition produced by routinized practices of trust production and maintenance that allows competent social actors to make a "leap of faith" and ignore risk in order to get on with the job at hand. The core theoretical concepts, which are introduced in the early theoretical sections, but also used as touch points in the narrative part, are the ideas of "trust production practices" sustaining a "collaborative social order" and "bracketing risk".

The narrative part of the paper begins by setting the scene for the story. NetTrade had enjoyed 4 years as a successful financial services start-up company built on a software platform leased from a UK provider. For strategic reasons and to continue growth, they wished to own their own bespoke solution. However, such a direction brought with it considerable risk because the estimated cost of the software would exceed the net value of the company at the time. Additionally, the joint CEOs of NetTrade had no experience of contracting major development, let alone off-shore development. Thus, with this risk came a high level of anxiety derived from the need to trust another party in circumstances that were unfamiliar and difficult to monitor directly. While some risk and anxiety could be offset by explicit means, such as a contract and staged development, "a key source of anxiety in the offshoring project was the difficulty in establishing trust in the expert systems of technical and professional knowledge upon which IndiaSoft drew (i.e. to provide 'guarantees' with respect to the 'correctness' of the technological solution that would be delivered across distanced time-space (from India to Ireland))" (Kelly and Noonan 2008 p.138).

Despite this risk and anxiety the project did run smoothly. Frustrations and anxieties were encountered along the way, but these were addressed and repaired in a "relatively calm and mature" manner. So the key objective of the narrative in the paper is to "argue that a key factor in understanding this smooth running of the project was the way in which trust was produced and sustained over time" (Kelly and Noonan 2008 p. 238).

The paper presents a selection of events and learnings that occurred over an 18 month period in the form of a story in order to articulate how this trust was produced and sustained. The story begins with a "Courtship phase" which narrates how sufficient trust in the possibility of an off-shoring process was created such that the signing of an agreement could go ahead. Although NetTrade did "due-diligence" using tangible reliability indicators, the story shows Niall, the joint CIO of NetTrade from whose point of view the story is largely told, relying heavily on less tangible attributes of the particular IndiaSoft people present in early face-to-face dealings, such as "their general demeanor and their care and attentiveness" (*ibid* p. 139). In this phase, trust was built on the basis of a sense of "value congruity" of these representatives with values Niall holds dear.

In a second “Cohabitation Phase”, the story narrates the tentative development of certain on-going practices of interaction (particular communicative practices) between the parties to produce and maintain trust through the “stability and predictability that such practices would confer on the project interactions” (*ibid* p. 240). This story is told by narrating a number of small incidents, and one large incident, that resurface anxiety about risk, and the various measures that were enacted to remedy these and bring the relations back on keel. Amongst these learnings was that the written contract had little significance for relieving anxiety, and that what really managed anxiety so that everyone could get on with the actual job of specifying and building the software system, was the continual enactment of what the authors call a “stable collaborative order” through which trust suppresses anxiety. The point that the story is getting at, a certain shared trusting condition, is well described by the following statement from Niall, “Nobody is trying to screw anybody. We are all honourable and we will come to an agreement” (*ibid* p. 145).

6.4 Analysis of an Example

The following points comprise our argument that the narrative presented in the paper functions as theory:

1. This middle section of the paper, which we have referred to as the story, does not stick to a pure story-telling form. The narrators include a number of asides to the reader, including a tabulated time-line, commentary on what certain aspect of extant theory might say about events, and delineation of recurring tactics, outside of the narrative flow. These techniques are not uncommon in narrative forms and we contend that a good deal of the revelatory power of this presentation of the case material derives from its use of a story form, as we argue below.
2. Superficially, the case narrative might be read as a mere description of a particular set of events that happened to particular people at a particular place and time. This would open the piece to standard criticisms of single case research concerning the generality of the data. We reject this “mere description” interpretation of the narrative. Such a reading misses the story-telling techniques that the piece deploys – the modulation of time into phases of activity kind, the hint of a canonical plot of struggle to uphold core values, the gradual revelation of the character of Niall, the use of “strife” to reveal underlying motives and wisdom, and the encapsulation of the message into a didactic “take-home”, or “moral” (Bruner 1991).
3. Because of these devices, the story reads not as an external description of particulars but rather as a vivid depiction from the inside of the (social) world that the focal characters inhabit. In getting this effect the reader is aided by their own sense of “been there, made that mistake” even if they have not been precisely *there* or made *that* particular mistake. The authors and reader thus collaborate to recreate the world upon which the character’s actions draw sense and also make sense for the reader.
4. The paper does not present a theory in the usual (Kind I) sense and then test it against the empirical data of the case. Nor does it present the case as raw data and from this data derive a theory in the usual (Kind I) sense. Thus, it is clear that the work does not fit either of the canonical research genres associated with Kind 1 theory. The authors are clear that “the emphasis has not been on ‘theory generation,’ where this enterprise is conceived of as the development or refinement of a set of testable propositions” (*ibid* p. 244), that is, Kind I theory. What kind of theorising they do adopt is left a little unclear. They use “theoretical perspective” (Kelly and Noonan 2008 p. 236) in the summary of what they draw from extant literature, which is used to “to make sense of the NetTrade–IndiaSoft case” (*ibid* p 234). They describe their own output as “a theoretical lens” and “theory as sensitizing device” (*ibid* p 244). We argue that their paper presents a Kind II

theory in a narrative form. However, we stress that this is entirely our interpretation. We also point out that we could interpret other extant IS papers with an ethnographic orientation and a narrative mode of presentation this way, so the paper is exemplary, not unique.

5. Furthermore, we would claim that the story which is the centre-piece of the paper is simultaneously the data *and* the theory of the paper. These must be presented together because they rely on each other for their mutual intelligibility. The core theoretical concepts “trust producing practice”, “collaborative social order” and “bracketing risk” are introduced and named in the early sections of the paper that precede the story. Even the linked phrase - “trust production practices” sustaining a “collaborative social order” and “bracketing risk” - which appears in variants throughout the paper implies certain relations between these concepts. But we cannot know what this means until we have been able (at least vicariously through the story) to enter the world inhabited by a businessman anxious about risking his entire creation on a relationship that is untested (and difficult to test by familiar means) and in which the social practices that provide relief are enacted. It is only through the narrative approach that we can know the relation between these “constructs” as a relation of mutual meaning-making, rather than one of cause/effect, or change of state.
6. The data that might be presented to support such a theory cannot be a set of de-worlded traces of events or of attributes of the actors. For the reader to recognise the story/theory as lifelike, and thus to become open to a transfer of knowledge by identification and empathy, these events and characters must appear to the reader as they would in life – coming from somewhere (having motivation) and going toward something (pursuing projects) and being simultaneously individual and a *familiar type* (Bruner 1991). This can only be done if the data that support the theory are presented in context - in the genuine social sense of the term “in context” as “dwelling in”.
7. It is only because the case is told effectively as a *story*, and when it is read as a story about the world these characters inhabit, that we can appreciate the point of the quote “Nobody is trying to screw anybody. We are all honourable and we will come to an agreement” which conveys what it is like to dwell in a “collaborative social order” enacted through “trust producing practices” which “brackets risk” for the sake of getting on with the job at hand.

The paper divides the narrative into two parts: the courtship phase and the cohabitation phase. It might be tempting to interpret these phases as signalling an ontological change in the nature of trust. Indeed, in the courtship phase the story tells how Niall made use of cues about his counterparts’ attitudes, evidence about their competence, and even a calculative orientation to the contract and to the staging of development. The authors explicitly discourage this reading though, stating “the mechanisms for developing trust discussed above were not confined to one identifiable period of the project, but extended throughout the duration of the relationship. While a good basis for trust had been developed in the earlier period, both parties now had to collectively establish communal social practices to enable them to work closely together” (Kelly and Noonan 2008 p. 240). In other words, the courtship is presented as a *condition* for trust as habitus, which is made particularly clear by the narrative presentation. It is only by taking calculative, cognitive or psychological aspects of trust out of the whole practice context in which they arise, that they might present as ontologically individual and self-sufficient forms of trust. It is precisely this kind of de-worlding of social practices that characterises Kind I theory and that Kind II theory seeks to overcome.

7. Conclusion

We set out to demonstrate that the orthodox formulation of theory in IS has the function of making the world comprehensible to people. But to be theory, this orthodox view requires that people and their actions be 'de-worlded' thus rendering such theories incomplete and unstable. By shifting our focus from what theory is, to what theory does, we open the possibility for a different kind of theory based upon different ontological and epistemological commitments. Kind II theory provides comprehension of and access to, the background of the worlds in which people conduct their day-to-day practices. Having made our argument for Kind II, and providing an exemplary instance with a case, we have established the legitimacy of Kind II theory. As this leaves the question of what becomes of Kind I theory we now provide three possible stances, and outline that each stance carries specific commitments that may be regrettable.

The first option is, we could accept a limited role for Kind I theory in the social sciences, including IS, while recognizing that the more one takes an outside view, the more one loses what is social about the world. On this view, Kind I theory can provide mechanistic comprehension of certain phenomena, and will be useful in some cases, but its predictive power is reduced. Despite the success of Kind I theory in the natural sciences, proponents of Kind I theory in the social sciences are at risk, however, of overstating the claim that representational theory fulfils the criteria for scientific theory. In particular, there is a risk that the instability of Kind I theory could be mistaken for the usual statistical variability of data. As Kind I theory assumes humans are machine-like (albeit machines augmented with internal mental states), this approach might be reliable in mechanical operations, but in genuinely social practices the incomplete representations may cause predictions to fail in circumstances where situations are changing. Ironically, these are the circumstances where theory is most required and which arguably characterise our current era of disruptive technologies. Jettisoning meaning and sociality reduces the ability of such theory to make human activity in a technologically-laden world comprehensible.

The second option is, we could accept that Kind I has some role for social science, but since Kind I theory applied to social phenomena cannot establish stable explanation and prediction, it should be seen as a model, but not as a legitimate theory candidate. This approach fits the definition of a model as providing "only an approximate account of the complexity that exists in the real-world phenomena they cover. They compromise precision to achieve cognitive economy" (Weber 2012 p. 5). But we must also recognize that a model of a social phenomenon which leaves out social meaning, does not have the same legitimacy for social science, as a model of the physical world has in physical science. There is no possibility that such a model could become a theory even with increased definitional precision and acceptance because an external description is fundamentally distinct from an inside view and can never become one.

Lastly, we could strictly adhere to the argument that "would be social sciences modeled upon the natural sciences using decontextualized features.... will not be reliable" (Flyvbjerg 2001 quoting Dreyfus 1986), in which case Kind I theory cannot make social phenomena comprehensible in the way we have come to expect Kind I theory to function. It is largely inappropriate and infeasible in the social sciences. Like building a tall tower in an effort to reach the moon, it is an approach that cannot succeed even with advances in data collection, information processing, and analysis. We need a different kind of theory that provides comprehensibility of the distinctive sociality of social phenomena and that enables people to grasp and appropriate the background upon which actions, speech, and practices become meaningful. The significance is that Kind II theory enables people outside the practice to empathize with, and undertake appropriate action within practices in which they are not fluent. Thus the value of Kind II theory is the transferability of comprehension and the ability to act in

different instantiations of practice. In considering these possible reactions to our argument, it is necessary to commit to what one believes the IS discipline to be about. We may continue along the path set by cognitive science and consider IS to focus on information processing and computability as models for human action. In this effort, one can only hope that IS will have the success in accounting for social phenomena that has so far eluded other social sciences. Importantly, this stance makes certain questions inaccessible, leaving them for other disciplines to address.

As an alternative we have offered a contrasting stance which would open new research avenues and theorizing as we recognize that the physical, emotional and social separation between technologies and human affairs is decreasing and that technology is becoming more pervasive and more disruptive of our shared practice backgrounds. We have opened up a space for a new kind of theory by identifying ways of comprehension as the basis for theorizing in IS. We may continue to create and use models in controlled operational environments where we want humans to behave in a machine-like manner. But in our account, IS research becomes increasingly about the shaping of sociality and practices in worlds infused with information systems and about reclaiming meaning by which humans act and experience the everyday world in our theorizing. By recognizing the ways that people comprehend their worlds we can make an IS discipline that is itself more comprehensive and comprehensible.

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