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*IFIP is the global non-profit federation of societies of ICT professionals that aims at achieving a worldwide professional and socially responsible development and application of information and communication technologies.*

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Lucas Introna · Donncha Kavanagh  
Séamas Kelly · Wanda Orlikowski  
Susan Scott (Eds.)

# Beyond Interpretivism? New Encounters with Technology and Organization

IFIP WG 8.2 Working Conference  
on Information Systems and Organizations, IS&O 2016  
Dublin, Ireland, December 9–10, 2016  
Proceedings

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## Preface

The papers in this volume constitute the proceedings of a working conference organized by the IFIP Working Group 8.2 whose brief is “The Interaction of Information Systems and the Organization.” The conference, entitled “Beyond Interpretivism? New Encounters with Technology and Organization,” was held during December from 9–10 at University College Dublin, Ireland.

The Call for Papers resulted in a total of 75 submissions. Of these, 12 full papers, ten panel papers, and 24 poster papers were finally selected for presentation at the working conference. The submissions were selected through a blind review process involving two reviewers and the editors. Authors of submissions that were selected for the next round were requested to revise their contributions in accordance with the reviewers’ and the editors’ recommendations. The revised submissions were then reviewed for publication in this volume. An introductory paper by the editors provides a thematic overview of these papers.

The papers published in this volume are complemented by contributions from the two plenary speakers at the conference: an invited paper from Karin Knorr Cetina (University of Konstanz and the University of Chicago) and a conversation with Tim Ingold (University of Aberdeen) based on his published interviews.

Karin Knorr Cetina is the Otto Borchert Distinguished Service Professor and Chair of the Department of Sociology at the University of Chicago. Karin’s research has made seminal contributions to the field of science and technology studies (STS). She has conducted major studies on the financial markets, knowledge and information, as well as in globalization, theory, and culture. Her current projects include a book on global foreign exchange markets and on post-social knowledge societies. She continues to do ground-breaking research on the information architecture of financial markets, on their “global microstructures” (the global, social, and cultural form these markets take) and on trader markets in contrast to producer markets. Karin has won numerous awards that acknowledge her original sociological thought including the John Desmond Bernal Prize from the Society for Social Studies of Science for her distinguished contribution.

Tim Ingold is Chair in Social Anthropology at the University of Aberdeen, having previously been the Max Gluckman Professor of Social Anthropology at the University of Manchester. In his recent work, he has sought to forge a distinctive approach to understanding the relation, in human social life and experience, between movement, knowledge, and description. This has inspired him to examine the use of lines in culture, and the relationship between anthropology, architecture, art, and design – conceived, in ecological terms, as ways of exploring the relations between human beings and the environments they inhabit. Tim continues to provide provocative, fresh insights into the world of social anthropology and is a pioneer in boundary-crossing within the social sciences. He was elected to a Fellowship of the British Academy in 1997 and of the Royal Society of Edinburgh in 2000.

The editors would like to take this opportunity to thank all the contributors to this volume. We are also very grateful to all the members of the Program Committee who participated in the review process. We would like to acknowledge the assistance provided by University College Dublin, and the support of Lancaster University (UK), Massachusetts Institute of Technology (USA), and the London School of Economics (UK). We thank Gemma Marren for her careful copy-editing of this volume, Bill Doolin, Kevin Crowston, Brian Fitzgerald, and Ulrike Schultze from IFIP WG 8.2 for their advice and support throughout the process, and Erika Siebert-Cole and her colleagues at Springer for their help in producing these proceedings. We give special thanks to Allen Higgins and Maura Mulvey for all their hard work on the conference organization. We would also like to thank the UCD College of Business and the Fáilte Ireland Conference Ambassador program for their support in hosting and sponsoring the conference.

October 2016

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# Organization

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# Introduction

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The IFIP Working Group 8.2 has a distinguished history in shaping research agendas around information technology and organization. The 1984 Manchester Working Conference [1] has been long regarded as a key moment in the movement to embrace more pluralistic, post-positivist research approaches within the Information Systems (IS) field. Subsequent working conferences built on this by promoting and developing interpretive modes of enquiry into IS and organizational phenomena, thus shaping the formation of a generation of IS researchers. Now, more than three decades after the landmark Manchester event, the Dublin Working Conference presents an opportunity to contemplate a re-gathering and re-focusing of attention on possible new kinds of research encounters with technology and organization.

To suggest a move “beyond” interpretivism is not to deny or diminish its importance; rather we want to build on and extend this tradition in novel and interesting ways. Specifically, if the interpretivist turn drew its legitimation primarily from the philosophical field of epistemology – where the distinction between truth and meaning making was explored – less attention was placed on other philosophical domains, such as ontology, ethics and aesthetics. Thus, we invited contributors to explore a broadening of “conventional” interpretivist approaches to understanding techno-organizational phenomena. For example, we were interested in what we might learn by shifting attention from what specific technologies “mean” to what sociomaterial assemblages “do” in their becoming. More broadly, we invited submissions to explore the implications of the many “turns” – e.g. ontological, material, practice – that have been announced in social theory over the last twenty years in areas such as social anthropology, science and technology studies, feminist theory, geography and philosophy. What interested us was how these “turns” might offer alternative ways of encountering/enacting/performing techno-organizational phenomena.

Mapping “turns” in social theory is a perilous exercise, but our call for papers included a list of suggested topics, that we reproduce here:

- Process philosophy and ontologies of becoming [2, 3, 4]
- Practice theory [5, 6]
- Performativity [7, 8, 9, 10]
- Agential realism [11, 12]
- Non-representational theory [13]
- Materiality, embodiment and spatialization [14, 15, 16]
- Affect and the body [17, 18]
- Post-humanism and sociomateriality [9, 19, 20]
- Phronetic social science [21]
- Ecological approaches [22]
- Object-oriented ontology [23, 24]

Not all of these topics were addressed in the submissions received, but many received particular interest: affect, agential realism, becoming, embodiment, materiality, performativity, post-humanism, practice, process philosophy, and sociomateriality.

We received a broad-ranging set of papers from researchers in different fields who collectively share an interest in technology and organization. We clustered the twelve papers accepted for publication in this volume into four groups: *doing process research*; *exploring affect and affordance*; *considering communication and performance*; and *examining knowledge and practice*. In what follows, we provide a brief introduction to these four clusters of papers, but we begin with the contributions from our two invited keynote speakers.

## **Contributions from Our Keynote Speakers – Karin Knorr Cetina and Tim Ingold**

In her speculative contribution “What If the Screens Went Black? The Coming of Software Agents”, Karin Knorr Cetina enquires about a trading world where trading screens go ‘half black’. That is, a world where algorithms become an increasingly significant actor in the enactment of trading decisions and transactions. Karin explores the differences between human agency and algorithmic agency to tease out some of the potential implications of such a postsocial world - a world in which algorithmic agency (trading algorithms) and human agency (human traders) become entangled in complex and more or less significant ways. After considering these differences, carefully, she concludes that it is of course trivial to say that algorithms are not human, that they ‘lack soul’. However, it is perhaps less trivial to discover what our postsocial relations with algorithms might look like in the future - when algorithms do the ‘touching’. In such a world, they, the algorithms, may ‘touch’ us in rather significant ways - ‘as competitors and antagonists, as counterparties, as objects of attachment,’ and so forth. The questions she raises, about the nature of the postsocial, are indeed at the centre of many of the contributions in this volume.

In the chapter that follows, “Thoughts on Movement, Growth and an Anthropologically-Sensitive IS/Organization Studies: An Imagined Interview with Tim Ingold”, we present the outcome of an imagined dialogue with our other invited keynote speaker, Tim Ingold. Our aim, in producing this chapter, was to try to convey some of the strangeness and freshness that we have found in Tim’s thought, with a view to stimulating IS/OS scholars to engage further with his work and ideas. The piece takes the form of an imagined Q&A session with Tim, which we have synthesized as a mash-up of excerpts from previously published interviews and writings. Tim was good enough to review and edit the chapter a number of times in the course of its production, which we think has contributed greatly to capturing his authentic voice.

## Doing Process Research

The papers in this group all share a commitment to process ontology, offering three complementary discussions considering such an ontology historically, theoretically, and empirically. Each then effectively suggests how engaging in process research can provide valuable and novel insights to the study of IS phenomena.

The first paper in this cluster by Dubravka Cецez-Kecmanovic, “From Substantialist to Process Metaphysics: Exploring Shifts in IS Research”, offers a historical and philosophical consideration of process metaphysics by comparing it to the more dominant approach of substantialism. Tracing the key assumptions informing IS research over time, the paper demonstrates that much of prior IS scholarship is rooted, explicitly or implicitly, in substantialist metaphysics. The value of adopting an alternative process metaphysics in the IS field is then discussed, and linked to the emergence of sociomaterial research that is strongly resonant with process metaphysics. By carefully articulating the implications of the two different metaphysics, this paper persuasively invokes the possibilities of new ways of seeing and studying contemporary IS phenomena.

The second paper by Chris McLean and Jeremy Aroles, “Critical Realism and Actor-Network Theory/Deleuzian Thinking: A Critical Comparison in the Area of Information Systems, Technology and Organizational Studies”, offers a comparative assessment of two distinctive approaches to addressing the issues of process, performativity, materiality, stability and change. Focusing specifically on the notion of morphogenesis, the paper offers a useful comparison of two alternative approaches to enacting a process ontology: the ideas of critical realism on the one hand, and those of actor-network theory and Deleuze on the other. By attending critically to these two approaches and highlighting some of their different commitments, this paper offers helpful insights into the doing of process research.

The third paper in this group, “Affordance Lost, Affordance Regained, and Affordance Surrendered: The Becoming of Reachability on Social Media Platforms”, is by Divya Sharma, Biswatosh Saha and Uttam Sarkar. The paper explores the notion of technological affordance through reinterpreting it in terms of a process ontology. Viewed in this way, affordances lose their essentialist character and emerge instead as accomplishments of ongoing flows and material movements. Drawing on process philosophy and

actor-network theory, the paper traces the becoming of affordances when the various agents involved in their enactment are not proximally co-present. This is illustrated with a reference to the use of Facebook for advertising, branding and marketing communication. This paper usefully demonstrates how ideas from process philosophy can provide fruitful means of extending the vocabulary of actor-network theory.

## Exploring Affect and Affordance

Two of the papers in this group are concerned with the affective dimensions of social practices – urging us to take affect seriously in our studies of IS and organization, and offering some promising conceptual tools with which we might do so. The third paper gives detailed consideration to the concept of affordance, an idea which has been particularly influential in IS research in the last decade.

The first paper, “Ideological Materiality at Work: A Lacanian Approach”, by Edouard Pignot, argues for the importance of attending to affect and ideology, and their respective materialities, in practice-based studies of technology and organization. To this end it introduces the work of a range of writers such as Lacan, Althusser, Butler and the so-called Lacanian Essex School, as a conceptual resource for exploring the relationship between the affective, the discursive and the material. In particular, the paper offers an account of “ideology as materiality” – i.e. as something that is embodied in our behaviour and rituals. As such, it points to promising new theoretical directions that might contribute to enriching practice-based studies.

This is followed by a paper by Alexandra Toll and Melissa Mazmanian, entitled “Inscribing Individuals into a Formalized System: The ‘Labour’ Performed by Affective Spaces”. In this piece, the authors take up the challenge of foregrounding the affective dimensions of organizational life, by offering a fascinating description of the Family Law unit of a Californian court system as an “affective space”. The focus is upon processes of formalization in which unique, and often emotionally highly charged, circumstances are rendered legible and inscribed into institutionalized ways of knowing and doing. In particular, it deftly illustrates how an affective structuration of the social is accomplished through the temporal-spatial regulation of organizational practices, and points to the skilful forms of “affective labour” that this involves.

The final paper in this group by Arto Lanamäki, Devinder Thapa and Karen Stendal, “When Is an Affordance? Outlining Four Stances”, seeks to flesh out the idea of affordance which has become an important concept in information systems research over the last decade or so. Inspired by James Gibson’s original idea, the concept appears extensively in various literatures, including information systems, though this proliferation has, the authors suggest, created a certain amount of conceptual confusion. The authors’ contribution is to bring much-needed clarity to the concept, which they do by framing their inquiry around two key questions: what kind of relationship is an affordance and when is it? This, then, provides the basis for a novel taxonomy structured around four understandings of affordance: canonical affordance, designed affordance, potential affordance and affordance as completed action. The paper complements another paper on affordance by Sharma, Saha and Sarkar.

## Considering Communication and Performance

The papers in this group have in common a concern with communicative practices and their sociomaterial performance in specific settings (e.g. museums, virtual worlds), examining how these enact particular identities and roles for certain audiences. By discussing empirical applications of their ideas, the papers offer valuable illustrations of some specific ways of doing sociomaterial research.

The first paper in this group by Thomas Martine and François Cooren, “A Relational Approach to Materiality and Organizing: The Case of a Creative Idea”, offers an alternative to the sociomaterial notion of entanglement. Arguing that this term reinstates the separation of the social and the material that it attempts to transcend, the paper introduces the notion of aspectuality whereby materiality and sociality are seen to be two different and intractable aspects of everything that exists. Integrating the notion of aspectuality into fieldwork within the CCO (communication as constitutive of organization) tradition, the paper illustrates how the production of a creative idea by teams participating in a museum event may be understood through examining the enactment of the various relations that materialize it. In so doing, the paper offers an interesting alternative for examining sociomaterial inseparability in practice.

The ongoing conversation about sociomateriality is continued in the paper “Enactment or Performance? A Non-dualist Reading of Goffman” by Ella Hafermalz, Kai Riemer and Sebastian Boell. The paper undertakes the important task of interrogating two of its key concepts: enactment and performance. Using a hermeneutic approach, the paper traces the multiple interpretations of these two terms, cumulating in a relational reframing of Goffman’s treatment of performance. The subtle (re)reading of Goffman evident in the treatment allows for the development of a non-dualist understanding of performance as a complex, collective sociomaterial activity that can be usefully applied to studies of IS phenomena. In offering an alternative rendering of some of Goffman’s ideas, this paper contributes interesting ways to enliven the sociomaterial research agenda.

The third paper in this group, “Performing Cyborgian Identity: Enacting Agential Cuts in Second Life”, by Ulrike Schultze, develops an account of how individuals continually perform their identity as a dialectical synthesis between the actual and the virtual (their physical and digital bodies). Informed by the work of Deleuze (through the account by Shields), the paper understands the virtual as a potential reality that is counterposed to the actual rather than to the real. Drawing on Barad’s agential realism, identity practices are understood to entail specific agential cuts that perform cyborgian identities. Boland’s engine of inquiry analytical framework is then used to generate a number of valuable insights into the identity practices that enact, more or less successfully, the hybrid cyborg identity. In doing so, the paper demonstrates the importance of agential cuts, not merely as epistemic practices, but also as everyday organizing practices.

## Examining Knowledge and Practice

In this group the papers explore knowledge, meaning-making and practice using different conceptual approaches in various settings. The first paper engages with “The

Mangle of Practice”, a science and technology classic by Pickering, the second draws on Knorr Cetina’s innovative sociological work on “synthetic situations”, and finally the third paper combines French cultural historical psychology with the work of developmental psychologist Vygotsky.

In tune with our theme of exploring “other” ways of experiencing theory, the authors of “Performing Research Validity: A ‘Mangle of Practice’ Approach”, Robert Johnston, Kai Reimers and Stefan Klein, challenge us to join them in an exploration of a performative notion of research validity. They bring key principles of Pickering’s theory of mangling into play as they “go to work on and with” a learning community infrastructure. In so doing, they generate process-centred insights into the performance of truth, significance and objectivity that bring us to closer to understanding the distinctions between the performative and representational idioms. Their engagement with the learning community “infrastructuring” serves to theoretically acknowledge and practically advocate strong involvement with our practice research “object”. Thus we are encouraged to reflect on “how connections between knowledge and the world are actually made in the practice of researching”.

Drawing on data from a longitudinal study of the offshore oil and gas industry, Elena Parmiggiani, Eric Monteiro and Thomas Østerlie, in “Synthetic Situations in the Internet of Things”, explore “synthetic situations” a concept authored by one of our keynote speakers, Karin Knorr Cetina. Their findings illustrate how at-a-distance meaning-making is generative rather than representational. This surely inspires further research into the practices through which algorithmic phenomenon constitute the phenomena under inquiry. The authors call for further studies of sociomaterial knowing not only in contexts characterized by physical inaccessibility but other situations where a dependency on Big Data and the Internet of Things may emerge.

In their paper, titled “A Developmental Perspective to Studying Objects in Robotic Surgery”, Laura Seppänen, Laure Kloetzer, Jarno Riikonen and Mikael Wahlström offer an “interventionist activity theoretical approach”, specifically the method of self-confrontation, to study technology-mediated practices – robot surgery in this case. A key point in the paper is that robotic surgery allows for real time video capture of the sociomaterial practices. This then facilitates the process of self-confrontation, where surgeons are shown excerpts from the video stream and asked to describe as precisely as possible the gestures and actions that were observable in the video, whilst also questioning what they see themselves doing in the video record. This facilitates the formation of new relationships between the objects, their actions and multiple other issues in their collaborative sociomaterial work practices. Through the intervention, different kinds of objects (material, psychological and social) become enacted in a concrete, situated, and relational manner, leading to the development of new practices. This paper suggests that this mode of research can contribute to studies of technology and organization by revealing the complexity and evolution of objects in and through sociomaterial practices.

## Conclusion

In the questioning of interpretivism in our call for papers, we sought to invite a rethinking of existing approaches and provoke consideration of new encounters with IS phenomena.

With the contributions in this volume and the conversations at the conference, we hope that ideas and insights have been generated that will help to shift assumed positions and open up new possibilities for researching technology and organization.

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