

PERSPECTIVES ON PROCESS ORGANIZATION STUDIES SERIES EDITORS: ANN LANGLEY & HARIDIMOS TSOUKAS

HOW MATTER MATTERS

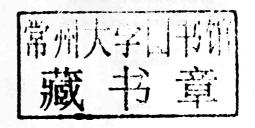
Objects, Artifacts, and Materiality in Organization Studies

Edited by PAUL R. CARLILE, DAVIDE NICOLINI, ANN LANGLEY, HARIDIMOS TSOUKAS

How Matter Matters

Objects, Artifacts, and Materiality in Organization Studies

Edited by Paul R. Carlile, Davide Nicolini, Ann Langley, Haridimos Tsoukas





OXFORD UNIVERSITY PRESS

Great Clarendon Street, Oxford OX2 6DP United Kingdom

Oxford University Press is a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide.

Oxford is a registered trade mark of Oxford University Press in the UK and in certain other countries

© Oxford University Press 2013

The moral rights of the author have been asserted

Reprinted 2014

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, without the prior permission in writing of Oxford University Press, or as expressly permitted by law, by licence or under terms agreed with the appropriate reprographics rights organization. Enquiries concerning reproduction outside the scope of the above should be sent to the Rights Department, Oxford University Press, at the address above

You must not circulate this book in any other binding or cover And you must impose this same condition on any acquirer

> British Library Cataloguing in Publication Data Data available

Library of Congress Cataloging in Publication Data Data available

ISBN 978-0-19-967153-3

Acknowledgments

We would like to express our great appreciation to the following colleagues who have generously offered their time to act as reviewers for the papers published in volume

Paul R. Carlile, Davide Nicolini, Ann Langley, Haridimos Tsoukas

Reviewers listed alphabetically

Brian Bloomfield, University of Lancaster; Arne Carlsen, SINTEF Technology and Society; Samia Chreim, University of Ottawa; Peter Clark, Queen Mary University of London; Anne Laure Fayard, Polytechnic Institute of New York University; Jennifer Howard-Grenville, University of Oregon; Ruthanne Huising, McGill University; Matthew Jones, Cambridge Judge Business School; Dan Kärreman, Copenhagen Business School; Natalia Levina, New York University Stern School of Business; Philippe Lorino, ESSEC Business School; Alexandre Mallard, Centre de Sociologie de l'Innovation, Mines Paris Tech; Jeanne Mengis, University of Lugano, Switzerland; Carsten Østerlund, iSchool, Syracuse University; Nikiforos Panourgias, Warwick Business School; Susan Scott, London School of Economics and Political Science; Viviane Sergi, HEC Montréal; Barbara Simpson, Strathclyde Business School; Inger Stensaker, NHH Norwegian School of Economics; Elden Wiebe, King's University College; Dvora Yanow, University of Amsterdam & Wageningen University; Mike Zundel, University of Liverpool.

List of Contributors

Karen Barad Karen Barad is Professor of Feminist Studies, Philosophy, and History of Consciousness at the University of California at Santa Cruz. Her Ph.D. is in theoretical particle physics. She held a tenured appointment in a physics department before moving into more interdisciplinary spaces. She is the author of *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Duke University Press, 2007) and numerous articles in the fields of physics, philosophy, science studies, poststructuralist theory, and feminist theory. Her research has been supported by the National Science Foundation, the Ford Foundation, the Hughes Foundation, the Irvine Foundation, the Mellon Foundation, and the National Endowment for the Humanities. She is the Co-Director of the Science & Justice Graduate Training Program at UCSC.

Paul Carlile An overall theme in Paul's work is how knowledge is developed and valued in contexts of cross domain innovation. The question of value reveals the problematic nature of knowledge itself; that is knowledge can be both a source of and a barrier to innovation. He has empirically examined these issues across a spectrum of products from software to new drug treatments and in a variety of settings from community based to large industrial firms. Paul brings a very unique approach to his study of innovation by focusing on the capacity of artifacts and how people use them to create, share, and value knowledge as they work with others. This provides a diagnostic stance to better understand the sources as well as the barriers to innovation. His research interests include product development, new models of innovation, and the potential for information technology to accelerate innovative outcomes in firms and communities. He has published on these topics in a variety of academic and practitioner outlets. Paul earned his Ph.D. at the University of Michigan and was an Assistant Professor of Organization Studies at MIT's Sloan School of Management. Paul studied Philosophy and Anthropology at Brigham Young University and also earned a Masters in Organizational Behavior there. Paul has also founded two information technology companies developing tools for creating and sharing knowledge.

Paul Dourish Paul Dourish is a Professor of Informatics in the Donald Bren School of Information and Computer Sciences at UC Irvine, with courtesy appointments in Computer Science and Anthropology. His research focuses primarily on understanding information technology as a site of social and cultural production; his work combines topics in human-computer interaction, ubiquitous computing, and science and technology studies. He was elected to the CHI Academy in 2008 in recognition of his contributions to Human-Computer Interaction. He is the author of two books: Where the Action Is: The Foundations of Embodied Interaction (MIT Press, 2001), which explores how phenomenological accounts of action can provide an alternative to traditional cognitive analysis for understanding the embodied experience of interactive and computational systems; and, with Genevieve Bell, Divining a Digital Future: Mess and Mythology in Ubiquitous Computing (MIT Press, 2011), which examines the social and cultural aspects of the ubiquitous computing research program. Before coming to UCI, he was a Senior Member of Research Staff in the Computer Science Laboratory of Xerox PARC; he has also held research positions at Apple Computer and at Rank Xerox EuroPARC. He holds a Ph. D. in Computer Science from University College, London, and a B.Sc. (Hons) in Artificial Intelligence and Computer Science from the University of Edinburgh.

Nada Endrissat Nada Endrissat is Assistant Professor at Bern University of Applied Sciences, Switzerland. She studied psychology at Free University of Berlin and received her Ph.D. in management from the University of Basel in Switzerland. Her current research interests include materiality, leadership, and the creative industries.

Silvia Gherardi Silvia Gherardi is full Professor of Sociology of Work and Organization at the Faculty of Sociology of the University of Trento, Italy, where she coordinates the Research Unit on Communication, Organizational Learning, and Aesthetics (www.unitn.it/rucola). Areas of interest include the exploration of different "soft" aspects of knowing in organizations, with a particular emphasis on aesthetic, emotional, symbolic, and discursive aspects in workplace practices. Her most recent book, co-authored with Antonio Strati, *Knowing and Learning in Practice-based Studies* (Edward Elgar, 2012), is devoted to the theme of practice-based studies

Lucas D. Introna Professor Lucas D. Introna lectures in Technology, Organisation and Ethics at the Centre for the Study of Technology and Organisation, Lancaster University. Previously he lectured in Information Systems at the London School of Economics and Political Science. His research interest is the social study of technology and its consequences for society. In particular he is concerned with the ethics and politics of technology and sociomateriality more generally. He is co-editor of

Ethics and Information Technology and acted as associate editor for Management Information Systems Quarterly and Information Systems Research. He is also a founding member of the International Society for Ethics and Information Technology (INSEIT) and an active member of IFIP WG 8.2, the Society for Philosophy in Contemporary World (SPCW), and a number of other academic and professional societies. His most recent work includes a book Management, Information and Power published by Macmillan, and various academic papers in journals and conference proceedings on a variety of topics such as: sociomateriality, phenomenology of technology, information and power, privacy, surveillance, information technology and postmodern ethics, and virtual organizations.

Matthew Jones Matthew Jones is a University Lecturer in Information Management at the Judge Business School and the Department of Engineering at the University of Cambridge. He previously held postdoctoral positions at the University of Reading and the University of Cambridge where he was involved in the development of computer-based models for public policy decision-making. His current research interests are concerned with the relationship between information systems and social and organizational change and theoretical and methodological issues in information systems research.

Ann Langley Ann Langley is Professor of Management at HEC Montréal and Canada research chair in strategic management in pluralistic settings. Her research focuses on strategic change, leadership, innovation, and the use of management tools in complex organizations with an emphasis on processual research approaches. She has published over 50 articles and two books.

Paul M. Leonardi Paul Leonardi is the Pentair-Nugent Associate Professor at Northwestern University where he teaches courses on the management of innovation and organizational change in the School of Communication, the McCormick School of Engineering, and the Kellogg School of Management. His research focuses on how companies can design organizational structures and employ advanced information technologies to more effectively create and share knowledge. He is the author of *Car Crashes Without Cars: Lessons about Simulation Technology* and *Organizational Change from Automotive Design* (MIT Press, 2012).

Melissa Mazmanian Melissa Mazmanian is Assistant Professor in the Department of Informatics at the Donald Bren School of Information and Computer Sciences at the University of California, Irvine. Melissa's interests revolve around the experience of communication technologies as used in-practice within personal and organizational contexts, specifically in relation to identity projection and the nature of personal and professional time in the digital age. Past research includes analyzing an organizational change effort oriented around increasing predictable time off in a

consulting firm; tracing the emergence of shared expectations of availability as wireless email devices were introduced into a footwear manufacturing company; and studying the ways in which the material experience of new communication technologies resonates with the elite identities of knowledge professionals. Melissa earned a Ph.D. in Organization Studies from the MIT Sloan School of Management and a Masters in Information Economics, Management and Policy from the University of Michigan, School of Information.

Davide Nicolini Davide Nicolini is Professor of Organization Studies at Warwick Business School where he co-directs the IKON Research Centre and the Warwick Institute of Health. Prior to joining the University of Warwick he held positions at the Tavistock Institute in London and the University of Trento and Bergamo in Italy. His work has appeared in journals such as Organization Science, Organization Studies, Journal of Management Studies, Human Relations, Management Learning, and Social Science and Medicine, From 2009 he is associate editor of Management Learning. Davide is actively involved in developing a practice-based approach to the study of organizational phenomena and for several years he has explored the implications of this novel approach for the understanding of knowing, collaboration and change. His new book Practice Theory, Work, and Organization will be published in 2012 by Oxford University Press. Although these days most of his work is carried out in healthcare organizations where he tries to understand how hospitals learn from incidents and how top managers mobilize knowledge in their day-to-day work, he has also studied construction sites, factories, public organizations, hospices, pharmacies, and scientific labs.

Claus Noppeney Claus Noppeney works as a research professor at Bern University of the Arts and at the Business Department at Bern University of Applied Sciences. He studied economics and management at the University of St. Gallen and the Fuqua School of Business. The field of artistic perfumery is part of his interest in organizing practices in creative industries.

Bjørnar Olsen Bjørnar Olsen is Professor of Archaeology at the Department of Archaeology and Social Anthropology, University of Tromsø, Norway. He has written a number of papers and books on Northern prehistory and history, museology, material culture, and archaeological theory. His latest books are *Archaeology: The Discipline of Things* (2012) (with M. Shanks, T. Webmoor, and C. Witmore), *Hybrid Spaces: Medieval Finnmark and the Archaeology of Multi-Room Houses* (2011) (edited with P. Urbanzcyk and C. Amundsen), *In Defense of Things: Archaeology and the Ontology of Objects* (2010), and *Persistent Memories: Pyramiden—a Soviet Mining Town in the High Arctic* (2010) (with E. Andreassen and H. Bjerck).

Wanda J. Orlikowski Wanda J. Orlikowski is the Alfred P. Sloan Professor of Information Technologies and Organization Studies in the Sloan School of Management at the Massachusetts Institute of Technology. Her research examines the dynamic relationship between organizations and information technologies, with particular emphases on organizing structures, cultural norms, communication genres, and work practices. She is currently exploring the sociomaterial entailments of social media.

Manuela Perrotta Manuela Perrotta received a Ph.D. in Sociology and Social Research from the Faculty of Sociology of the University of Trento, Italy. Currently she is postdoctoral research fellow at the Department of Interdisciplinary Studies of Culture, Norwegian University of Science and Technology. Her main research interests concern innovation and technological change; knowing and learning in organizations; construction of the body in medicine and life science; and the sociomateriality of scientific and biomedical practices.

Susan V. Scott Susan V. Scott is Senior Lecturer in the Information Systems and Innovation Group, Department of Management, at The London School of Economics and Political Science. Her research focuses on technology, work, and organization from a management studies perspective. She has published on: the implementation of information systems for risk management; electronic trading; the strategic organization of post-trade services; organizational reputation risk; enterprise resource planning and best practice. She is currently involved in research projects exploring the sociomateriality of rating and ranking mechanisms.

John Shotter John Shotter is Emeritus Professor of Communication in the Department of Communication, University of New Hampshire, and a tutor on the Professional Doctorate in System Practice in KCCF, London. He is the author of Social Accountability and Selfhood (Blackwell, 1984), Cultural Politics of Everyday Life: Social Constructionism, Rhetoric, and Knowing of the Third Kind (Open University, 1993), Conversational Realities: The Construction of Life through Language (Sage, 1993), Conversational Realities Revisisted: Life, Language, Body, and World (Taos Publications, 2009), and 'Getting It':'Withness'-Thinking and the Dialogical... in Practice (Hampton Press, 2010).

Haridimos Tsoukas Haridimos Tsoukas holds the Columbia Ship Management Chair in Strategic Management at the University of Cyprus, Cyprus and is a Professor of Organization Studies at Warwick Business School, University of Warwick, UK. He obtained his Ph.D. at the Manchester Business School (MBS), University of Manchester, and has worked at MBS, the University of Essex, the University of Strathclyde, and the ALBA Graduate Business School, Greece. He has published widely in several leading academic journals, including the *Academy of Management*

Review, Strategic Management Journal, Organization Studies, Organization Science, Journal of Management Studies, and Human Relations. He was the Editor-in-Chief of Organization Studies (2003–2008). His research interests include: knowledge-based perspectives on organizations; organizational becoming; the management of organizational change and social reforms; the epistemology of practice; and epistemological issues in organization theory. He is the editor (with Christian Knudsen) of The Oxford Handbook of Organization Theory: Meta-theoretical Perspectives (Oxford University Press, 2003). He has also edited Organizations as Knowledge Systems (Palgrave Macmillan, 2004 (with N. Mylonopoulos)) and Managing the Future: Foresight in the Knowledge Economy (Blackwell, 2004 (with J. Shepherd)). His book Complex Knowledge: Studies in Organizational Epistemology was published by Oxford University Press in 2005. He is also the author of the book If Aristotle were a CEO (in Greek, Kastaniotis, 2004). He writes regularly on political and social issues for the leading Greek newspaper Kathimerini. E-mail: htsoukas@ucy.ac.cy and Hari. Tsoukas@wbs.ac.uk

Series Editorial Structure

Editors-in-Chief

Ann Langley, HEC Montréal, Canada, ann.langley@hec.ca **Haridimos Tsoukas**, University of Cyprus, Cyprus and University of Warwick, UK, process.symposium@gmail.com

Advisory Board

Hamid Bouchikhi, ESSEC Business School, France Michel Callon, CSI-École des Mines de Paris, France Robert Chia, University of Strathclyde, UK Todd Chiles, University of Missouri, USA François Cooren, Université de Montréal, Canada Barbara Czarniawska, University of Gothenburg, Sweden Martha Feldman, University of California, Irvine, USA Raghu Garud, Pennsylvania State University, USA Silvia Gherardi, University of Trento, Italy Cynthia Hardy, University of Melbourne, Australia Robin Holt, University of Liverpool, UK Paula Jarzabkowski, Aston Business School, UK Sally Maitlis, University of British Columbia, Canada Wanda Orlikowski, MIT, USA Brian T. Pentland, Michigan State University, USA Marshall Scott Poole, University of Illinois, USA Georg Schreyögg, Freie Universität Berlin, Germany Kathleen Sutcliffe, University of Michigan, USA Andew Van de Ven, University of Minnesota, USA Karl E. Weick, University of Michigan, USA

Editorial Officer & Process Organization Studies Symposium Administrator

Sophia Tzagaraki, process.symposium@gmail.com

XVI

Endorsements

"As we become more willing to convert reified entities into differentiated streams, the resulting images of process have become more viable and more elusive. Organization becomes organizing, being becomes becoming, construction becomes constructing. But as we see ourselves saying more words that end in 'ing', what must we be thinking? That is not always clear. But now, under the experienced guidance of editors Langley and Tsoukas, there is an annual forum that moves us toward continuity and consolidation in process studies. This book series promises to be a vigorous, thoughtful forum dedicated to improvements in the substance and craft of process articulation."

Karl E. Weick, Rensis Likert Distinguished University Professor of Organizational Behavior and Psychology, University of Michigan, USA

"In recent years process and practice approaches to organizational topics have increased significantly. These approaches have made significant contributions to already existing fields of study, such as strategy, routines, knowledge management, and technology adoption, and these contributions have brought increasing attention to the approaches. Yet because the contributions are embedded in a variety of different fields of study, discussions about the similarities and differences in the application of the approaches, the research challenges they present, and the potential they pose for examining taken for granted ontological assumptions are limited. This series will provide an opportunity for bringing together contributions across different areas so that comparisons can be made and can also provide a space for discussions across fields. Professors Langley and Tsoukas are leaders in the development and use of process approaches. Under their editorship, the series will attract the work and attention of a wide array of distinguished organizational scholars."

Martha S. Feldman, Johnson Chair for Civic Governance and Public Management, Professor of Social Ecology, Political Science, Business and Sociology, University of California, Irvine, USA

"Perspectives on Process Organization Studies will be the definitive annual volume of theories and research that advance our understanding of process questions dealing with how things emerge, grow, develop, and terminate over time. I applaud Professors Ann Langley and Haridimos Tsoukas for launching this important book series, and encourage colleagues to submit their process research and subscribe to PROS."

Andrew H. Van de Ven, Vernon H. Heath Professor of Organizational Innovation and Change, University of Minnesota, USA

"The new series—Perspectives on Process Organization Studies—is a timely and valuable addition to the organization studies literature. The ascendancy of process perspectives in recent years has signified an important departure from traditional perspectives on organizations that have tended to privilege either self-standing events or discrete entities. In contrast, by emphasizing emergent activities and recursive relations, process perspectives take seriously the ongoing production of organizational realities. Such a performative view of organizations is particularly salient today, given the increasingly complex, dispersed, dynamic, entangled, and mobile nature of current organizational phenomena. Such phenomena are not easily accounted for in traditional approaches that are premised on stability, separation, and substances. Process perspectives on organizations thus promise to offer powerful and critical analytical insights into the unprecedented and novel experiences of contemporary organizing."

Wanda J. Orlikowski, Alfred P. Sloan Professor of Information Technologies and Organization Studies, Massachusetts Institute of Technology, USA

"The recent decades witnessed conspicuous changes in organization theory: a slow but inexorable shift from the focus on structures to the focus on processes. The whirlwinds of the global economy made it clear that everything flows, even if change itself can become stable. While the interest in processes of organizing is not new, it is now acquiring a distinct presence, as more and more voices join in. A forum is therefore needed where such voices can speak to one another, and to the interested readers. The series *Perspectives on Process Organization Studies* will provide an excellent forum of that kind, both for those for whom a processual perspective is a matter of ontology, and those who see it as an epistemological choice."

Barbara Czarniawska, Professor of Management Studies, School of Business, Economics and Law at the University of Gothenburg, Sweden

"We are living in an era of unprecedented change; one that is characterized by instability, volatility, and dramatic transformations. It is a world in which the seemingly improbable, the unanticipated, and the downright catastrophic appear to occur with alarming regularity. Such a world calls for a new kind of thinking: thinking that issues from the chaotic, fluxing immediacy of lived experiences; thinking that resists or overflows our familiar categories of thought; and thinking that accepts and embraces messiness, contradictions, and change as the sine qua non of the human condition. Thinking in these genuinely processual terms means that the starting point of our inquiry is not so much about the being of entities such as 'organization', but their constant and perpetual becoming. I very much welcome this long overdue scholarly effort at exploring and examining the fundamental issue of process and its implications for organization studies. Hari Tsoukas and Ann Langley are to be congratulated on taking this very important initiative in bringing the process agenda into the systematic study of the phenomenon of organization. It promises to be a path-breaking contribution to our analysis of organization."

Robert Chia, Professor of Management, University of Strathclyde, UK

"This new series fits the need for a good annual text devoted to process studies. Organization theory has long required a volume specifically devoted to process research that can address process ontology, methodology, research design, and analysis. While many authors collect longitudinal data, there are still insufficient methodological tools and techniques to deal with the nature of that data. Essentially, there is still a lack of frameworks and methods to deal with good processual data or to develop process-based insights. This series will provide an important resource for all branches of organization, management, and strategy theory. The editors of the series, Professors Ann Langley and Hari Tsoukas, are excellent and very credible scholars within the process field. They will attract top authors to the series and ensure that each paper presents a high quality and insightful resource for process scholars. I expect that this series will become a staple in libraries, PhD studies, and journal editors' and process scholars' bookshelves."

Paula Jarzabkowski, Professor of Strategic Management, Aston Business School, UK

Contents

List of List of List of Series	owledgments of Figures of Tables of Contributors s Editorial Structure orsements		viii viii ix x xvii xvii
i1	How Matter Matters: Objects, Artifac n Organization Studies: Introducing Perspectives on Organization Studie Paul R. Carlile, Davide Nicolini, Ann Lang	the Third Volume of s"	1
R	Ma(r)king Time: Material Entanglemete-memberings: Cutting Together-Aparana		16
P	deflections on Sociomateriality and I Organization Studies: From "Inter-" t Performing Practices John Shotter		32
a	Materializing the Immaterial: Relatio Perfume's Becoming Jada Endrissat and Claus Noppeney	nal Movements in	58
F	Media as Material: Information Represoundations for Organizational Pract aul Dourish and Melissa Mazmanian		92
ir	Inowledge Eclipse: Producing Socion the Hospitality Sector	naterial Reconfigurations	119

Contents

7.	The Emergence of Materiality within Formal Organizations Paul M. Leonardi	142
8.	Reclaiming Things: An Archaeology of Matter Bjørnar Olsen	171
9.	Untangling Sociomateriality Matthew Jones	197
10.	Doing by Inventing the Way of Doing: Formativeness as the Linkage of Meaning and Matter Silvia Gherardi and Manuela Perrotta	227
11.	Otherness and the Letting-be of Becoming: Or, Ethics beyond Bifurcation Lucas D. Introna	260
Inde.	x	289

List of Figures

3.1	Alternative worlds	42
3.2	The flow of everyday life	50
4.1	Overview of the perfume-making process	66
4.2	Overview of empirical approach and focus	69
4.3	The making of the visual concept	71
4.4	The visual concept in use by the perfumers	77
4.5	Interplay between situation-specific challenge (boundary), object, and actor	83
8.1	Mass-produced, cold and inhuman: Rows of finished jeeps at the Willys-Overland facility in Toledo, Ohio, June 1, 1942 (photo: Dmitri Kessel/Getty Images # 50598573)	176
8.2	Not all that is solid melts into air. Persistent past at Walltown Crags (Hadrian's Wall), Northumberland (photo: Alfredo González-Ruibal)	183
8.3	Stubbornly present: Lenin still alert in the abandoned High Arctic mining town of Pyramiden, Svalbard (photo: Bjørnar Olsen)	186
8.4	Street scene Teriberka, Kola Peninsula, Russia, July 2011: Wooden garages and Khrushchev and Stalin era apartment houses (photo: Þóra Pétursdóttir)	188