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Introduction: Time and Materiality: What Is at Stake in the Materialization of Time and Time as a Materialization?

*Francois-Xavier de Vaujany, Nathalie Mitev, Pierre Laniray, and
Emmanuelle Vaast*

This edited book concentrates on the materiality of artefacts, practices, and organizations and on their historical dimensions. The book combines the recent scholarly interest on sociomateriality with a deep fascination with time and a secular perspective. It adds a time dimension that complements the spatial focus of the first book on “Materiality and Space” published by Palgrave Macmillan in 2013.

The stream of research related to sociomaterial practices is influenced primarily by Latour (2005), Suchman (1987), Pickering (1995), and Orlikowski (2005, 2007) and has attempted to overcome the dichotomy between social and material worlds by concentrating on the practices within organizations. These practices are constituted by, but also produce, material, and social dynamics. This movement is currently having an important impact on the fields of management and organization studies.

This second book is based on the 3rd *Organizations, Artefacts and Practices* workshop¹ that took place at the London School of Economics in June 2013. This workshop was organized jointly by the Information Systems and Innovation Group in the Department of Management, and the Department of Accounting, both at the London School of Economics and the Groupe de Formation et Recherche in Management and Organization at the Université Paris-Dauphine. The workshop encompassed themes related to historical perspectives on materiality; historiographies, data, and materiality; social and material entanglements across time; information technology and materiality in organizations; measuring and accounting for time in organizations; space and time in organizations; theoretical and methodological perspectives on time in organizations; identity and materiality in organizations; accounting, time, and

materiality; institutions, institutionalization, and materiality in organizations; critical perspectives on time and materiality; and artefacts, organizations, and time. The event gathered 120 participants from the United Kingdom, Europe, the United States, and elsewhere to present and discuss 42 papers. The track chairs and the workshop organizers selected the best papers. Additionally, two keynote speakers provided a chapter, and two senior figures who attended the workshop offered a preface and an epilogue.

There are many books on materiality in the social sciences, going back to Arjun Appadurai's (1986) *The Social Life of Things: Commodities in Cultural Perspective*. The author examines how things are sold and traded in a variety of social and cultural settings and bridges the disciplines of social history, cultural anthropology, and economics. Another example in social anthropology is Daniel Miller's (2005) *Materiality (Politics, History, and Culture)*. He explores the expression of the immaterial through material forms and aims to de-centre the social to make room for the material. More recent examples drawing on cultural anthropology are Tilley, Keane, Kuchler-Fogden, Rowlands, and Spyer's (2013) *Handbook of Material Culture*. This book is concerned with the relationship between persons and things in the past and in the present and in urban, industrialized, and small-scale societies across the globe. Harvey et al.'s (2013) *Objects and Materials* focuses on object-mediated relations and investigates the capacity of objects to shape, unsettle, and fashion social worlds.

Time, Consumption and Everyday Life: Practice, Materiality and Culture, edited by Elizabeth Shove, Frank Trentmann, and Richard Wilk in 2009, focuses on the changing rhythms and temporal organization of everyday life that relates to our book more closely, particularly its time dimension. Their book brings together experts from management, sociology, history, anthropology, and philosophy to follow routines and rhythms, their emotional, and political dynamics, and shows how they are anchored in material culture and everyday practice. Studying practice, temporality, and material culture together opens up new intellectual agendas and resonates with our approach, although our book specifically focuses on organizations and management, rather than everyday life and consumption.

The social study of science and technology has also studied materiality for some time, for instance in *Chasing Technoscience: Matrix for Materiality* by Evan Selinger, Donna Haraway, Don Ihde, Bruno Latour, and Andrew Pickering (2003). This book aimed to rectify the lack of consideration of the material dimension by philosophers, sociologists, and anthropologists in the practices of the sciences. Indeed, Andrew Pickering was a contributor to our previous book on *Materiality and Space*.

A concern with materiality has slowly migrated from the social sciences to management and organization studies. One seminal contribution in this regard has been Pratt and Rafaeli's (2006) *Artifacts and Organizations*. Since then, the

following were published within the last year that clearly show a growing interest in this theme from different angles. *How Matter Matters: Objects, Artifacts, and Materiality in Organization Studies* is edited by Paul Carlile, Davide Nicolini, Ann Langley, and Haridimos Tsoukas (2013). This book is rooted in *process studies* and aims to better understand sociomateriality by organizing and exploring the sociomaterial dimensions of organizational life. Daniel Robichaud and François Cooren edited *Organization and Organizing: Materiality, Agency and Discourse* (2013). The strength of this volume is the combining of organizational *communication theory* with organizing and organization to conceptualize materiality, agency, and discourse. Similarly, Jeremy Packer and Stephen Crofts edited *Communication Matters: Materialist Approaches to Media, Mobility and Networks* (2013), that aims to rethink communication as material and situates materialist approaches to communication within the broader “materiality turn” emerging in the humanities and social sciences. Perhaps the book closest to ours is *Materiality and Organizing: Social Interaction in a Technological World* edited by Paul Leonardi, Bonnie Nardi and Jannis Kallinikos in 2013. This book focuses on materiality and sociomateriality in the study of technology and is situated at the junction of technology and social practice. By contrast, our book focuses on the complex relationship between materiality and time in organizations.

With a key focus on time and *longue durée*, *business history* studies have long populated the management research landscape, see for example *The Oxford Handbook of Business History* (Oxford Handbooks in Business and Management) by Geoffrey Jones and Jonathan Zeitlin (2009). Business historians study the historical evolution of business systems, entrepreneurs, and firms, as well as their interaction with their political, economic, and social environments. A classic example is *Inventing the Electronic Century* (Harvard Studies in Business History) by Alfred Chandler (2005) that traces the origins and worldwide development of consumer electronics and computer technology companies.

Organizational and Management History is a more recent movement in management studies that draws on philosophical and sociological conceptualizations of time, such as George Herbert Mead’s (*The Philosophy of the Present*, 1932) seminal work on the structure of temporality and consciousness and the character of both the present and the past. The scholars in this vein include Hayden White (*Narrative Discourse and Historical Representation*, 1987) who examines the production, distribution, and consumption of meaning in different historical epochs; Alex Callinicos’s (*Theories and Narratives: Reflections on the Philosophy of History*, 1995) exploration of the relationships between social theory and historical writing; or David Carr’s (*Time, Narrative, and History*, 1991) work on narrative configurations of everyday life and their practical and social character. Another example is Robert Hassan and Ronald Purser’s edited book on *24/7: Time and Temporality in the Network Society* (2007). They examine

how the regimes firstly of the clock and then of the networked society have changed individuals and organizations.

Adding a time perspective has benefited other disciplines, in particular anthropology, as illustrated in *Time and the Other: How Anthropology Makes Its Object* by Johannes Fabian (1983). This classic study changed the way anthropologists relate to the “here and now” and the “there and then” of their objects of study. The researchers in management and organizational history have started bringing similar changes to organization studies; however, they tend to publish in academic journals, and this new field has not fully integrated the importance of the material into its remit. Our book therefore endeavours to bring together these various strands of existing research together into a unique outlook on organizations, materiality, and time.

The relationship between time and the materiality of everyday practices is by itself an old and well-trodden theme in the analysis of societies and organizations. Among the founding fathers of social sciences, Karl Marx, through what he called historical materialism (see Marx et al., 1974 or Giddens, 1985²), considered that the history of our societies and their material underpinnings should be the key focus of social studies. Unsurprisingly, to develop an alternative post-Marxist vision of societies and their structuration, Giddens (1984, 1985) has also reconceptualized the relationship between the materiality of our societies (e.g., facilities and rules) and the human agency to think about their constitution in the context of different spatio-temporal dynamics.

From a more methodological perspective, some social sciences, in particular History, have considered that analyzing traces of materiality provides strong hints of past times and historical contexts. Thus, exploring the way time is materialized (whether to “show” the time it is or the broader historical time) is a key issue in the analysis of societies and organizations (Giddens, 1985; Le Goff, 1960; Bluedorn & Denhardt, 1988). In his illustrious research on mechanical clocks, medievalist Jacques Le Goff showed the social and symbolic dimensions of the materialization of time. According to Le Goff (1960, 2011³), the invention of the mechanical clock between the 13th and 15th century is a defining event of the Middle Ages. Two different times, and two related materializations, were then in opposition with each other: that of the country (rang by church bells) and that of towns (rang by mechanical clocks). From this point and this new accountability of time, societies and organizations experienced major changes. Employees’ labour and wages began to be counted in hours. People realized what was at stake (e.g., their autonomy, the visibility of their work) and in some cases revolted against the use of mechanical clocks (perceived as a control tool) and went on strike (e.g., in the context of vineyards in Burgundy in the 14th century)⁴.

Time and its relationship with organizational materiality have also been a key focus in management and organization studies, in particular for the exploration of organizational change (Bluedorn and Denhardt, 1988; Lee and Liebenau, 1999; Roe et al., 2009; Goodman et al., 2001; Ancona et al., 2001; Child and Kieser, 1981). Time can be seen as a grid or scheme to make sense of organizations and their dynamics (see, e.g., Child and Kieser, 1981). It is then an abstraction required to make sense of movement and organizational change. Since the late 1990s, time has also been conceptualized as something which needs to be performed or materialized in organizations (Ancona et al., 2001; Orlikowski & Yates, 2002). Time does not appear any more as an ontological construct that is exterior to collective action and organizational dynamics. It is no longer a “variable”. As a materialization, or performance, *time is organization and its dynamics*. Paradoxically, time (often thought as abstract only) has or can have a “matter” for organizational stakeholders (see Bergson, 2001, on the issue of “duration”). It also becomes a key strategic stake. For instance, the schedule, planning, and temporal orientation of projects are seen as a matter of control and power in organizations (Gersick, 1988, 1989). For some researchers, this possible plurality of time and its materialization introduces the possibility of conflicts between temporalities, what Norbert Alter (2000) calls “organizational dyschronies”.

Management historians have also influenced organization research by adopting longer term perspectives related to societies and their material dynamics inspired by Braudel’s “longue durée” (Kieser, 1989, 1994; Üsdiken & Kieser, 2004; Mitev & de Vaujany, 2012). Üsdiken and Kieser (2004) distinguish three possible approaches for the incorporation of History and *longue durée* in management and organization studies:

- Supplementarist approach, where the historical “context” is simply added and is only a complement to common positivist approaches that still focus on variables, although with a longer time span than usual. It *adheres to the view of organization theory as social scientific and merely adds History as another contextual variable, alongside other variables such as national cultures* (Booth & Rowlinson, 2006, 8).
- Integrationism, or a full consideration of History with new or stronger links between organization theory and history. The aim is *to enrich organization theory by developing links with the humanities, including history, literary theory and philosophy, without completely abandoning a social scientific orientation* (Ibid., 8).
- Reorientationist, or a post-positivist approach, that examines and repositions dominant discourses including our own (such as progress or efficiency) and produces a critique and renewal of organization theory itself, on

the basis of history. This *involves a thoroughgoing critique of existing theories of organization for their ahistorical orientation* (Ibid., 8).

Both integrationism and reorientationism have interesting implications for the study of materiality and materialization in organizations. They imply a more subjective investigation of time, for example, on the nature of collective representations of people in the past and their evolution. They also imply a deeper understanding of materiality and materialization. The study of the institutional evolution of an organization implies long time spans and is shown more clearly through the inclusion and comparison of material traces of past actions. Materiality and the matter of organizational and collective actions, that is, the organizational space and its specificity, appear more clearly from a *longue durée* perspective (see de Vaujany & Vaast, 2013).

In the context of this edited book, we propose a reorientationist stance on three key topics related to time and materiality. We first need (Part I) to understand how time is materialized and performed in organizations, that is, how IT artefacts, standards, and material space perform time and temporal dynamics in organizations (*ontological vision of time*). This is necessary (Part II) to then explore how organizations and organizational members are constituted *by* and constitutive *of* material artefacts (*subjective and sociomaterial visions of time*). This leads us (Part III) to finally reflect on what a historical perspective on these materializations can bring to the study of organizations (*historical – longue durée – vision of time*).

- *Topic I*: how is everyday time materialized and performed in organizations? What is at stake in its materialization through time schedules, time-oriented managerial techniques, vestiges, enactment of old artefacts, etc.? This topic is the concern of the first three chapters of our book.
- *Topic II*: how are organizations and organizational members constituted through time by material artefacts? In turn, how are material traces of past actions used and incorporated into present dynamics? How are material and social dimensions (e.g., at the level of agency) imbricated through time? Chapters 4, 5, and 6 deals with these issues.
- *Topic III*: how can we make sense specifically of *longue durée* (in terms of organizational and societal histories), long-term processes, and their materialization in organizations? This third focus is at the core of Chapters 7, 8, 9, and 10.

Our book is organized according to these three topics in management and organization studies as Figure I.1 shows.

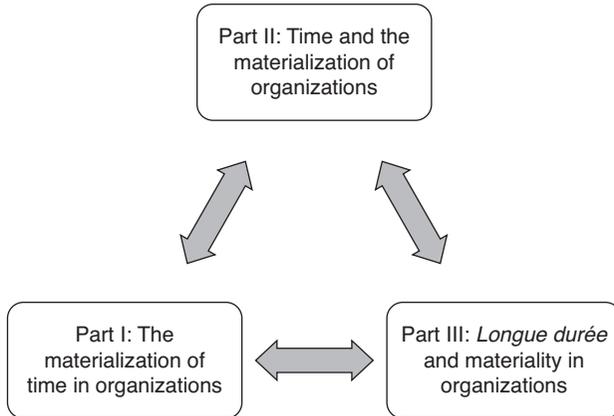


Figure I.1 Logical structure of the book

Part I: Materializing Time and History in Organizations: What Is at Stake?

In Chapter 1 (“Time, History, and Materiality”), *JoAnne Yates* suggests that a discussion about time, history, and materiality brings together three themes that have been central to her research, both historical and contemporary. Throughout her career, she has studied change, whether over short (a couple of months) or long (e.g., 150 years) periods of time. Much of her work is explicitly historical and addresses long stretches of time with a historical eye. It has also been mindful of the material implications of information and communication technologies. In this chapter she explains her vision of the relationship between time, *longue durée* and materiality, in particular in the context of the history of voluntary consensus standard setting activities. Using examples related to standardization, she illustrates her three themes and speculates about their implications, both individually and as they interact with each other.

In Chapter 2 (“Dual Iconographies and Legitimation Practices in Contemporary Organizations: A Tale of the former NATO Command Room”), *François-Xavier de Vaujany and Emmanuelle Vaast* suggest that organizing is highly iconographical and related to historical symbolic imageries. Their chapter draws on *Baschet’s* (2008) historical distinction between “object-images” and “screen-images”, originally applied to the religious iconography of the Middle Ages and argues for their relevance and critical significance in organizations’ legitimation practices. By means of an ethnographic case study of a former NATO command room repurposed as a meeting room by a French university, the authors reveal how these two iconographies coexist and interrelate in legitimation practices. Various historical periods (NATO, post-May

1968, or the more recent “corporate” momentum) are frequently re-enacted and performed during meetings in front of external stakeholders to guide their interpretations of events and space. Materializing the past therefore contributes to legitimating organizational activities. The authors also reveal the extent to which the relationships between these iconographies (which rely on different foundations in terms of materiality and visibility) legitimate the organization in complementary ways.

In Chapter 3 (“Evolution of Non-Technical Standards: The Case of Fair Trade”), *Nadine Arnold* suggests examining non-technical standards as artefacts that evolve in accordance with their contextual and historical setting. In the past, organization scholars studying standards and standardization tended to ignore material aspects of the phenomenon. An analysis of the Fair Trade Standardization System shows how its underlying rules changed from guiding criteria to escalating standards. Taking an evolutionary perspective, Arnold outlines four major trends in the written standards and relates them to the history of fair trade. Detected modifications were either meant to legitimate the standardization system through the content of standards or to enable legitimate standardization practices. Overall the exuberant growth of non-technical standards leads to critical reflections on the future development of fair trade and its standards.

Part II: Temporal Dynamics of Artefacts and Materiality in Organizations: The Importance of Material Traces

In Chapter 4 (“Making Organizational Facts, Standards, and Routines: Tracing Materialities and Materializing Traces”), *Christine McLean and Jeremy Aroles* discuss how we can become sensitive to the many different connections and traces of action that emerge and engage with other actions. She studies how these intensive forces become foregrounded while others may appear to fade away. In contrast to a process of linearity and continuity where traces exist “out there” in some simple cause and effect form, the cauldron of becoming is an entangled mesh of complex foldings, relations, and discontinuous links with connections emerging from diverse and heterogeneous forms.

In Chapter 5 (“Management Control Artefacts: An Enabling or Constraining Tool for Action?”), *Émilie Bérard* questions the definition and uses of the concept of affordances from a perspective on management control. Sociomateriality research studies organizational practices by examining how the material and the social mutually and constitutively shape each other. In this perspective, the concept of affordance is of particular interest when studying the role of management tools in the transformation of an organization’s activities. Objects offer affordances for action, which depend both on its materiality and on the actors’ perception for action. However, the concept of affordances has

not spread far beyond the field of information systems and technology studies, and its interpretative scope is still open to discussion for studying the role of objects in organizations. The aim of this chapter, therefore, is to examine the definition of the concept as well as its potential use and benefit in the field of management control.

In Chapter 6 (“Clocks, Clerks, Customers: Queue Management Systems, Post-Socialist Sensibilities, and Performance Measurement at a Retail Bank”), *Zsuzsanna Vargha* investigates how the digitalization of queuing has been touted by its proponents as a solution for the problems of both efficiency and equitability. She argues that this more rational allocation of services may effectively change *time* itself. By studying how queues for intangible financial services are managed by information technology and yet involve physical entities (people and spaces), she gains insight into how organizations and their constituents try to perform time from moment to moment, conceptualizing this “ontological vision of time”.

Lastly, in Chapter 7 (“When the Omerta is Broken: Sociomateriality and the History of Hazing in French Universities”), *Hélène Lambrix* uses the story of student hazing in French universities to illustrate how material traces of an unethical behaviour are used to construct and destruct corporate reputation. The study focuses on multiple stakeholders’ perceptions and practices over time. Using data collected through semi-structured interviews, observation, and archives on the Web, she explains the different processes used by a university and its key constituents (students and alumni) to protect and maintain the organizational reputation, and by external observers to destruct it. This chapter contributes to the recent literature on reputational crisis by providing empirical results and exploring the relationship between reputational crisis and legitimacy costs.

Part III: Stretching Out Time and Materiality in Organizations: From Presentism to *Longue Durée*

In Chapter 8 (“The Historian’s Present”), *François Hartog* highlights that the conditions of the historian’s craft have changed over the last 30 years or so and that they continue to change in front of our eyes. For Marc Bloch (1997, 65), history is a “science of men in time”, that “needs to unite continuously the study of the dead with that of the living”. Today, should the historian practice his or her craft uniquely within the confines of the present? Hartog focuses on the extended present, that is, the new field of Memory. In order to be admitted into the public sphere, recognized by civil society, must the historian make him or herself “relevant” to this present, so to speak to make him or herself present to the present? François Hartog enters into the debates by suggesting elements of answers related to his vision of a regime of historicity.

In Chapter 9 (“The Role of History in Information Systems Research: Beyond Presentism”), *Nathalie Mitev* begins by outlining historical research in information systems which has been mainly based on traditional business history and economic history. She then draws upon historical studies in related fields and concentrates on the history of business computing, the history of technology, and the social and political histories of technology. This leads her to illustrate how some elements of historiography can be used to open up the research agenda to social histories of information. This is also finally discussed in relation to how organization studies have integrated the “historical turn” and how this could be transposed to IS research.

In Chapter 10 (“The Principles of Campus Conception: A Spatial and Organizational Genealogy. What Knowledge Can We Use from a Historical Study in order to Analyse the Design Processes of a New Campus?”), *Caroline Scotto* explores the Campus Paris-Saclay project in France. She questions what is included in the notion of campus by looking at the hypothesis that a historical approach can generate knowledge through the link between a context, academic and planning principles, functions, actors, planning tools, spatial organizations, and geographical situations. Caroline Scotto proposes to focus on the principles of campus development in order to establish a morphological and functional genealogy of this object. The idea is to represent the relationship between the different models and the campus in construction by using the genealogy as a comparative tool in order to question the link between institutional changes and spatial organization.

As a Conclusion, we summarize the key contributions of all of the authors with regards to the materialization of time (e.g., historical time) and the material dynamic of organizations. We also suggest a set of avenues for further research in the field of management and organization studies. This is followed by an epilogue by Peter Clark (“Strategic Coordination Information Technologies and Europe-USA’s Organizations. Time-and-History Regimes in Refolding Long-Term Elective Affinities”). His aim is to acknowledge the emergence of strategic coordination information technologies through time and history by outlining the waves of intermingling in the study of organizations in Europe-USA since 1945 and by bringing national and supra-national temporal regimes to the fore. He classifies them into four generations in order to explicate the *longue durée* with time and history, and he argues that we require more attention to an exploratory calibrating of how and why time-place-periods can be interchanged and regarded as similar or dissimilar.

Notes

1. For more information: <http://workshoap.dauphine.fr/fr.html>
2. According to Giddens (1985, 2) “Historical materialism connects the emergence of both traditional and modern states with the development of material production (or

what I call ‘allocative resources’). But equally significant, and very often the main means whereby such material wealth is generated, is the collection and storage of information, used to coordinate subject populations.”

3. See also Dohrn-van Rossum (1997) on this issue.
4. Le Goff (2011) even sees mechanical clocks as a more important invention than printing techniques: “JL: I think that the mechanical clock has been much more important than printing. The former has had immediate consequences on everyday life, which has not been the case of the latter. Firstly, because many works had been disseminated through the form of manuscripts for a long period. Then, because what was printed, let’s say till the mid-16th century, most books were Bibles or religious books: their diffusion targets an elite and is not at all a breakthrough for everyday life. That is why I see the mechanical clock as a major invention in the History of Mankind.”

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