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Introduction: How Can Materiality Inform Institutional Analysis?

François-Xavier de Vaujany, Anouck Adrot, Eva Boxenbaum, and Bernard Leca

Introduction: Materiality in Institutions

In recent years, scholars of organizations and management have embraced the "material turn" in the social sciences (Boxenbaum et al. 2018; Leonardi et al. 2012; Carlile et al. 2013a, b; de Vaujany and Mitev 2013;

F.-X. de Vaujany (✉) • A. Adrot
Université Paris-Dauphine PSL, Paris, France
e-mail: Francois-Xavier.deVAUJANY@dauphine.fr; Anouck.adrot@dauphine.fr

E. Boxenbaum
Department of Organization, Copenhagen Business School,
Copenhagen, Denmark

Centre de gestion scientifique (CGS), MINES ParisTech - PSL University, i3
UMR CNRS, Paris, France
eb.ioa@cbs.dk

B. Leca
ESSEC Business School, Cergy-Pontoise, France
e-mail: bernard.leca@essec.edu

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Robichaud and Cooren 2013). The material turn seeks to investigate and theorize the unique roles that materiality, including bodies, artifacts and technologies, play in social and organizational dynamics, such as their enabling and constraining influences on a variety of organizational phenomena. The attention to materiality is adding a novel and exciting layer of analysis to scholarship in organization and management theory, which—like the social science more broadly—has been dominated by cognitive and verbal perspectives for several decades (Barad 2003; De Vaujany and Mitev 2015). The integration of materiality is helping to shed light on many organizational and managerial phenomena that were previously neglected because our theories and methods were ill-equipped to capture them. In recent years, several branches of organization and management theory have started to engage with the material turn. Some scholarly communities were created around a shared interest in formulating theoretical accounts and developing empirical methods to decipher how materiality interacts with cognition, discourse and/or behavior in organizational dynamics (Carlile et al. 2013b; de Vaujany et al. 2014; Leonardi et al. 2012; de Vaujany and Mitev 2013).

In line with this view, scholars from multiple subdisciplines have highlighted the need for a more profound consideration of materiality within the areas of organizational communication (Castor 2016; Cooren et al. 2012; Vásquez and Plourde 2017), management of information systems (Robey et al. 2013), and management and organization studies (MOS) (Boxenbaum et al. 2018; Carlile et al. 2013a, b; de Vaujany and Mitev 2015). The objective is not only to grasp tangible, yet overlooked, aspects of materiality, but also to increase the empirical richness of scholarly investigation (Faraj and Azad 2012), in particular, to account better for visible dimensions of materiality in its literal sense (Carlile et al. 2013a; Vásquez and Plourde 2017). This turn to studying more tangible objects relates to growing voices from MOS that question discourses as primary analytical objects for research in MOS (Carlile et al. 2013b; Leonardi et al. 2012; Mitev and de Vaujany 2013; Orlikowski 2007). Gestures, pictures, social media, architectures and spaces are as performative as the verbal texts that often surround them. The heuristic journey to materiality has been frustrating so far due to the separation between the material and discursive worlds (Castor 2016; Cooren et al. 2012; Vásquez and

Plourde 2017) and, in our view, due to the challenges related to investigating materiality without a prior discussion of its methodological, epistemological and ontological underpinnings.

The rising interest in materiality within MOS manifests also in conjunction with the fact that institutional theories have previously paid only limited attention to materiality. Institutions represent a dominant topic of study within MOS and have a pervasive impact on a large spectrum of organizational phenomena. They shape the definition of an organization's mission (DiMaggio and Powell 1991), regulate relationships between organizations (DiMaggio and Powell 1983; Suchman 1995) and contribute either positively or negatively to an organization's success (Meyer and Rowan 1977). They also deeply influence the sustainability of an organizational system (Merton 1938), if not its survival, through trust repairing (Bachmann et al. 2015), role definition (Abdelnour et al. 2017) and complex integration mechanisms (Jourdan et al. 2017). Because institutions correspond to a core matter in organizational life, research on institutions has been attracting a significant proportion of analytical attention within the MOS scholarly community.

Past institutional research has emphasized the discursive and ideational views of institutions and institutional dynamics (Boxenbaum et al. 2016, 2018; Jones et al. 2013; Meyer et al. 2018; de Vaujany et al. 2014). As a result, the analysis of how objects and artifacts contribute to institutional dynamics has been neglected. To better integrate the material dimension of institutions, scholars are increasingly turning their interest toward materiality. Examples of research on the material turn in institutional theory include the material dimensions of institutional work (Lawrence et al. 2013), sensemaking (Stigliani and Ravasi 2012), legitimacy (Puyou and Quattrone 2018), and organizational responses to institutional pressure (Raaijmakers et al. 2018). Other examples include the role of space in organizational legitimation (Jones and Massa 2013; Lawrence and Dover 2015; Lawrence et al. 2013; de Vaujany et al. 2014), bodies and institutions (Martí and Fernández 2013; Stowell and Warren 2018), and the role of technology in institutional dynamics (Petrakaki et al. 2016).

Institutional scholars are also calling for an integration of material dimensions (Boxenbaum et al. 2016; de Vaujany et al. 2014; Jones et al. 2013) into institutional scholarship. Accordingly, institutional scholars

have begun to incorporate artifacts, bodies, gestures, movements, architecture, and buildings in their methodological procedures (see Boxenbaum et al. 2018). Further integration of materiality into institutional theory is likely to not only renew the theory but also broaden our understanding of materiality within social and organizational settings. For instance, recent research suggests that elaborating an institutional approach to materiality leads scholars to embrace a more historical and temporal view of artifacts and movements, including how actors embody symbolic aspects that resonate with broader institutional dimensions (Arena and Douai, this volume; Carlile et al. 2013a, b; Stowell and Warren 2018; de Vaujany et al. 2014).

In this introduction, we discuss three aspects of the ongoing engagement of institutional research with materiality, which collectively represent the specific approach taken in this book. First, we discuss the way the increasing attention to materiality is structuring how institutional researchers think about the main conceptual components of institutional theory, in particular in relation to the two major substreams of institutional research: institutional logics and institutional work. Second, we consider how this material turn opens new questions related to the deeper conceptual layers of institutional inquiry, that is, questions related to the articulation of ontological, epistemological, methodological and, eventually, theoretical positions in institutional theory. This deeper approach stimulates institutional researchers to address the inherent diversity of materiality. Finally, we introduce an encompassing view of materiality within institutional analysis in the form of a reflexive journey, which points to four prominent aspects of materiality: artifacts and objects, space and time, digitality and information, bodies and embodiment. We then detail how the different chapters of the book exemplify the engagements of institutional research with materiality.

Increasing Attention to Materiality from Institutional Researchers

Institutional scholars have in recent years drawn on materiality to investigate institutional phenomena that deeply influence organizational dynamics. In opening this line of inquiry, many institutionalists have

called for an extended investigation of how materiality impacts core theoretical concepts, such as institutional logics and institutional work.

Institutional logics are understood as collective practices and beliefs that root a system wider than an organization and shape the cognition and action of its members at a field level (Friedland and Alford 1991; Ocasio 1997). Institutional logics deeply impact the behavior of organizations and their members (Thornton et al. 2012) by "organizing cognitive frameworks that provide social actors with 'rules of the game' (…) and that operate, often implicitly, as practical guides for action" (Jones et al. 2013, p. 52).

An organization's pattern of development can be deeply influenced by institutional logics combined with local meanings (Binder 2007). More specifically, institutional logics allow groups of actors to question, redefine, refine or legitimate identities, assumptions, practices and so on. By doing so, they frame material, practical and symbolic experiences in a dynamic fashion (Friedland and Alford 1991). Previous research has emphasized that rather than being mere "cultural dopes", actors can use logics as a "tool kit" (Swidler 1986) and employ different logics at different times to achieve certain goals, such as making legitimacy claims. Scholarship has thus increasingly emphasized the importance of exploring how logics are enacted on the ground, assuming that individuals use them in their daily enactments (Thornton et al. 2012).

A traditional method to empirically study institutional logics in organizations is to trace the verbal discourse of organizational members (Reay and Jones 2015). However, some authors have argued that verbal discourse, including rhetoric, is not the predominant expression of institutional logics. On the contrary, institutional logics guide material practices, which can impact "material subsistence, time and space, organization and meaning provided to social reality" (Thornton, Ocasio 1999, p. 804). Therefore, to study how institutional logics permeate everyday practices, scholars have recently begun to acknowledge the need to focus on the material, temporal and spatial dimension of practices and routines as they unfold in the everyday life of organizations (Thornton et al. 2012; Smets et al. 2012).

Institutional theorists are only beginning to take into account the most vivid dimensions of materiality. So far, the material dimension of logics has mostly been conceptualized (and studied) as practices or structures

rather than as actual physical artifacts (Friedland and Alford 1991; Jones et al. 2013), which remain "inert and invisible" (Friedland 2012, p. 590). One can infer the need to examine precisely how institutional logics are sustained or changed through material means (Jones et al. 2013).

The increasing interest in materiality also impacts how authors account for institutional work. Institutional work refers to the "purposive action of organizations and individuals aimed at creating, maintaining, and disrupting institutions" (Lawrence and Suddaby 2006, p. 215). This topic has traditionally been studied through the lenses of actors' discursive strategies, social positions and relational strategies and, to a lesser extent, their use of resources (for a review, see Battilana et al. 2009). While authors acknowledge the importance of materiality (Lawrence et al. 2013; Lawrence and Suddaby 2006), only a few studies have so far analyzed how materiality enables institutional work (Blanc and Huault 2014; Jones and Massa 2013; Lanzara and Patriotta 2007; Patriotta et al. 2011).

These works consider the complex interrelations between the forms of institutional work and materiality. Exploring how Frank Lloyd Wright's Unity Temple became a consecrated exemplar of modern architecture, Jones and Massa (2013) show that the material architecture instantiates ideas by making them "real", stimulating actors to engage in subsequent struggles regarding this reality and the ideas it encompasses. Interestingly, Jones and Massa suggest that it might be in materiality that authors should look for elements that may account for the viscosity of institutional work. A paradox of current research on institutional work is that institutional work is presumed, theoretically speaking, to be difficult and most likely to fail (DiMaggio 1988), yet almost all the documented cases are successful accounts of surprisingly skillful actors who shape social constructions through discourse. Recent research on institutional work suggests that the integration of the material dimension reveals that social reality is far less malleable than previously assumed, showing instead that institutional work needs to address material aspects such as space (Dover and Lawrence 2010), architecture (de Vaujany and Vaast 2016; Rowland and Rojas 2006; Jones and Massa 2013) or, at a more mundane level, existing artifacts and how they affect intra-organizational institutional change (Raviola and Norbäck 2013). This research suggests a certain viscosity of materiality that is different from the symbolic or discursive dimensions of institutions (Boxenbaum et al. 2016).

Another aspect of the institutionalist literature is how actors use artifacts in their institutional work to diffuse their institutional project (e.g., Gawer and Phillips 2013; Hargadon et Douglas 2001). In this view, artifacts do not offer resistance to institutional work for change but are mobilized in favor of this institutional work (e.g., Lanzara and Patriotta 2007). Actors shape artifacts into vehicles conveying their institutional project. Eventually, those different uses raise questions regarding the ontology of artifacts, which is a current topic of debate within institutional theory. At the moment, there is not a single privileged approach to materiality in institutional theory, nor is it clear whether different studies of institutional work share a common view of materiality.

As a case in point, Monteiro and Nicolini (2015, p. 63) argue for the importance of including materiality in institutional analyses, suggesting that it will yield "richer explanations […] that are closer to the reality of social processes". They ground their work in practice theory and explore how material entities take part in institutional work in the context of prizes. They highlight the embeddedness of materiality in institutional processes, such as mimicry, education, and the reconfiguration of normative networks that were previously viewed as largely a-material. Paraphrasing Suddaby (2010, p. 17), Monteiro and Nicolini (2015) argue that the traditional ideal that "institutional work, of course, is conducted by individuals" should be revised and read as "institutional work, of course, is shared between human and materials entities, although how this happens is an issue that needs to be explored empirically on a case-by-case basis" (p. 74). If we consider the traditional definition of institutional work as purposive action, do artifacts then have purposes of their own? This stance, often associated with the social science of technology scholars, exemplifies the diversity of ontological and epistemological questions that are raised in conjunction with the integration of materiality in institutional theory.

To conclude on institutional work, materiality offers a window into how institutions are being maintained and transformed through everyday activities. This process appears to be jointly human and material in nature (Monteiro and Nicolini 2015), embodied (Merleau-Ponty 1945/2003; Stowell and Warren 2018) and central to professional activities and occupational communities (Mäkitalo 2012). More generally,

materiality is grounded into numerous performative mediations and instrumentations that potentially lie at the heart of an institutional analysis (Boxenbaum et al. 2016; Lawrence et al. 2013). Many non-neutral, material elements are involved in the maintenance of particular institutions, such as technologies (e.g., algorithms performing and extending regulations) and the enactment of spatial arrangements (e.g., choice of an open space as a location for future activities). Institutional research has explored this topic through historical analysis, ethnographies and auto-ethnographies, eliciting the micro-foundations of institutions (de Vaujany and Vaast 2016; Delacour and Leca 2017). This line of inquiry has resulted in fine-grained taxonomies of legitimacy claims grounded, for instance, in the use of spatial arrangements in institutional work.

The integration of materiality in institutional inquiry facilitates the identification of practices and dynamics that would otherwise have remained overlooked (see e.g., Dacin et al. 2010). However, materiality does not restrict itself to a simple concept, but opens up the question of what materiality *actually* is, which also implies a careful look at all its implications (Carlile et al. 2013b). A reflexive consideration of materiality in institutional studies compels researchers to adopt an exploratory and reflexive posture, which represents a double challenge. First of all, they confront the need to *go deeper* into the concept of materiality, which literally means the need to appropriate the deeper conceptual layers of the material turn. However, the challenge is not only vertical but also horizontal, as scholars also need to make sense of the increasing diversity of institutional studies on materiality. The rationale underlying this book project stems from the consideration of these two challenges and calls for a reflexive journey through materiality in institutions, both vertically and horizontally.

Digging into the Deeper Layers of the Material Turn

How we define materiality matters crucially from the epistemological and ethical perspectives (Carlile et al. 2013a). Knowledge created with respect to materiality builds on scholars' capacity to define and discuss its ontology

and specify the methods used in an empirical investigation. How scholars define materiality influences society through decision-making in relation to empowerment, work policies, human resource management, innovation, and so on. From this perspective, materiality is not restricted to an intellectual challenge but also plays a significant role in shaping the future of our societies, either by offering opportunities or by constraining organizations and their stakeholders. In line with this view, international scholars have called for increased reflexivity on materiality (Carlile et al. 2013a; Leonardi 2013). Such reflexivity is all the more important in light of the essential role that institutions play in society.

The introduction of materiality in institutional studies is generating questions about the theoretical status of materiality and the position it occupies—or should occupy—relative to other analytical components, such as verbal discourse (Hardy et al. 2003), and the social positions of actors (Battilana 2006). Materiality prompts scholars to engage with broader theoretical and epistemological issues as they contemplate which approaches to materiality are the most compatible with institutional theory (e.g., Jones et al. 2013; Boxenbaum et al. 2016). Relatedly, institutional scholars are struggling with how to study materiality empirically, given that commonly used research methods are adapted primarily to the analysis of verbal discourse (Höllerer et al. 2018; Jancsary et al. 2016). If materiality is to become fully integrated into institutional theory, then the theoretical formulations of materiality must fit conceptually with the ontological assumptions of institutional theory. Moreover, alignment is needed between the methods that scholars use to study materiality and the epistemological assumptions that underpin such methods. In other words, the introduction of materiality into institutional theory depends on the alignment of deeper layers. This alignment is important to ensure consistency within, and across different streams of research within institutional theory, an important quality indicator of theoretical development (David and Bitektine 2009; Suddaby and Greenwood 2009; Greenwood et al. 2008, 2017).

The achievement of consistency between theory, method, epistemology and ontology is a complicated undertaking. Efforts to align these intertwined dimensions of research can be approached in multiple ways. We conceptualize them as layers, similarly to the multiple levels that

compose a building. We further suggest, as indicated with arrows in Fig. 1.1, that efforts to align these layers are not a unidirectional undertaking but one that may work in both directions. Regardless of the direction, researchers need, we argue, to articulate their positions consistently across these layers to justify the pertinence and validity of their methods, and the relevance and salience of their findings for institutional theory development. Such requirements apply not only to the introduction of materiality in institutional theory but also to theory development more broadly, far beyond the specific topic of materiality.

In the sections below, we briefly define and then illustrate the layers in Fig. 1.1. We insist on the importance of establishing solid links between those layers and of aiming for consistency across all the layers. Our treatment of this topic is exploratory and excludes an extensive discussion of different positions that institutional researchers may have on the appropriate content of each layer. The aim of this book is to explore the relationship between layers case by case, and to reflect collectively upon the conceptual foundations of different approaches to the study of materiality in institutional theory.
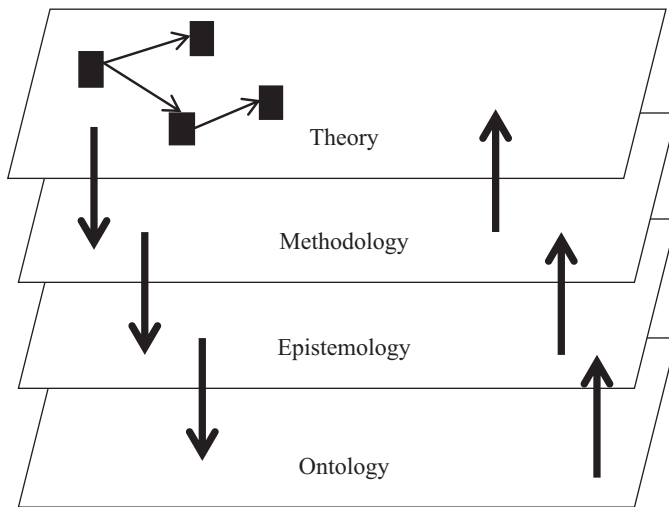

Fig. 1.1 Conceptual layers of theory, methodology, epistemology and ontology

Ontology

Ontology relates to the researcher's assumptions regarding what exists and the nature of the things that exist. Institutional researchers mostly share an ontological position whereby they consider that social structures are social constructions that emerge from interactions among actors and eventually become "taken for granted" (Berger and Luckmann 1967). Yet, within this initial, broadly constructivist approach, substantially different approaches exist (see Edwards 2016 for a more complete discussion). For instance, institutionalists are likely to disagree on the nature of agency. Some will see in it a social construction and the outcome of an institutionalization process, prompting them to engage in a deconstruction of the naturalized notion of individual actorhood (Frank and Meyer 2002). In contrast, others will consider agency to have an ontological reality of its own and explore how actors participate in institutional processes (DiMaggio 1988). Incidentally, discussing what exists, and what its nature is, also implies an agreement on the definitions of the notions used. A potential challenge here is that authors use the same notion to refer to different, sometimes unrelated or even contradictory, social phenomena. For instance, Friedland (2012) points to different definitions of the notion of institutional logics. Contradictory and competing definitions of the same notion are likely to impede theory development, unless authors reflect on the ontology that underpins their chosen definitions. Different ontological positions correspond to different understandings of reality and eventually to different research foci, reflecting a very large spectrum of philosophical streams of work. If scholars are inconsistent in their definition of materiality, in terms of mixing and matching elements from the large spectrum of philosophical perspectives, they might struggle to establish logical ties between their methodology, ontology and the nature of the knowledge created.

Epistemology

Whereas the ontological stance relates to what exists (according to the researcher), epistemology relates to what can be known through research

and science, and how it can (best) be known. As such, the epistemological stance sets the boundaries for what can be known through research, respectively, for what cannot be examined through this form of inquiry. In addition, epistemology relates to what sort of knowledge can be achieved through different forms and techniques of scholarly inquiry. For instance, epistemology is at play when researchers claim that the knowledge produced is either objective or subjective, that is, whether it results from an act of interpretation (Morgan and Smircich 1980). Although ontology and epistemology differ from one another, strong connections exist between the assumptions we make about the nature of reality (i.e., our ontological stance) and how we seek to gain valid knowledge about that reality (i.e., our epistemological stance), including the kind of materiality we encounter in our inquiry (i.e., our situated position). In fact, some authors prefer to use the notion of ontogenesis instead of ontology to stress that the existence of things is intertwined with our knowing about them (see e.g., Ingold 2011). Scholars have different convictions about how to best generate knowledge, for instance, through dialogue, observations or introspection.

Methodology

Methodology refers to the design of research and the methods used to analyze data. The methodology is often the only visible indicator of the deeper layers that readers see when browsing through a research paper. Methodology reveals, often implicitly, the ontological and epistemological positions that underpin a research paper. For instance, assumptions about reality (i.e., ontology) will have an impact on the selection of research methods, such as when researchers conceptualize discourse as the source of institutions (as their ontological stance) and consequently undertake discourse analysis to study institutions (Philipps et al. 2004). In the same way, our epistemological assumptions about how to acquire valid knowledge about reality will have an impact on the methodology that we adopt to gain insight into our object of study.

Theory

The upper layer of our framework, depicted in Fig. 1.1, expresses the theory construction itself. It represents the theoretical relationships that we claim between materiality and other conceptual components of institutional theory. It may be our theoretical starting point for inquiry, or it may emerge as the outcome of a research study as its theoretical contribution. In the latter case, the theoretical relationships are fundamentally shaped by the methodological, epistemological and ontological stances that scholars adopt, more or less consciously, in conducting the research study. The validity of the theoretical contributions depends on the internal consistency of the ontological assumptions, epistemological foundations and methodological approaches, as well as on their compatibility with positions previously adopted in, and characteristic of, institutional theory.

The Importance of Attending to Alignment

The purpose of this book is to illuminate the deeper conceptual layers of institutionalist studies of materiality, draw attention to the importance of their internal alignment and discuss the relevance of different stances for institutional theory. This topic has eluded previous theorizing about materiality in institutional theory, yet it is essential for the credibility and the utility of this emerging stream of research. In fact, extant theoretical formulations, methodologies, epistemological stances and ontological assumptions in institutional theory inspire current research on materiality and shape researchers' approach to the nature of reality and to the creation of knowledge about reality. Significant reflexivity is required if the introduction of materiality into institutional theory is to succeed in substantially advancing institutional theoretical development. In addition to the need for reflexivity related to the conceptual layers of institutional studies of materiality, the inherent diversity of materiality is also challenging for institutional researchers.

Diversity, Emerging Topics and Related Challenges

Diversity among institutional studies on materiality is expanding quickly, which represents an additional challenge for scholars, one that calls them back to the essential questions of what materiality is and how to investigate and theorize it. Diversity does not only concern ontological approaches to the materiality, methodology and epistemological stances but also to the different types of materiality investigated. This book covers four interrelated forms of materiality, namely artifacts and objects, digitality and information, space and time, body and embodiment. These types of materiality are all on the rise in institutional inquiry.

The diverse forms of materiality mean that institutional researchers rely on a broad range of empirical phenomena to develop theory, including campuses, factories, clothes, rooms, webcams, records, protocols, robots, physical bodies or yet other material phenomena. As an illustration, Lanzara and Patriotta (2007) analyze how engineering knowledge becomes institutionalized through an unbounded spectrum of artifacts, including cars, assembly lines, textbooks and spaces. Likewise, Marti and Fernandez (2013) analyze segregation through the growing restrictions that applied to Jewish people's use of artifacts, such as telephones, shops, avenues and clothes, during the Holocaust.

Exploring the inner diversity of the material dimension of institutions has two major implications for future institutional studies. First of all, taking into account the various instances of materiality highlights the power it exerts in institutional dynamics. For instance, institutional logics diffuse through a seemingly unlimited set of artifacts, objects, bodies, gestures, spaces and so on. Secondly, an exploratory approach to materiality facilitates cross-level analyses and favors a more holistic understanding of its role in institutional matters (Huault et al. 2015) by not restricting it to one single type of artifact. A more holistic analysis of institutional dynamics also evidences individuals' meaningful role in institutional work and institutional change by drawing attention to the resources that they already have, or can gain access to. This explorative approach is well suited for a deeper investigation of what materiality is and how to approach it in institutional studies. At the same time, it can

be conducive to focus explicitly on a particular form of materiality rather than trying to apprehend materiality at large, which is why we divide the book into four types of materiality.

Artifacts and Objects

First of all, *artifacts and objects* have attracted the attention of institutional scholars for more than a decade. Institutionalists use the generic term of "artifact" to signify a large spectrum of objects and articulate different institutional effects of artifacts. For instance, Miettinen and Virkkunen (2005) highlight the role of objectification that artifacts play in institutional disruption. Arguing that routine cannot solely account for changes, they advocate for institutional scholars to consider alternate ontologies to build knowledge about the role of artifacts as epistemic objects in institutional disruption. They raise the ontological question of how to draw the boundaries of an artifact from a methodological perspective. Interestingly, Lanzara and Patriotta (2007) adopt a methodology that is adapted to an ontological conception of artifacts as unbounded, reflecting a long-standing tradition in Actor-Network studies. Such an ontological stance is quite unfamiliar in institutional studies, which favor a more bounded conception of artifacts.

Space and Time

Organizations and collective activities have been conceptualized from multiple ontological stances, including topological (Amaeshi and Amao 2009), spatial (Kornberger and Clegg 2004), cognitive and rhetorical (Orlitzky 2011), as well as temporal (Barley and Tolbert 1997; Giddens 1984; Schatzki 2010). Space and spatial practices are expected to convey and embody institutions and organizations (Lefebvre and Nicholson-Smith 1991). Time represents a primary institutional space in our daily lives (Merleau-Ponty 2003), which manifests increasingly in institutional analysis (Granqvist and Gustafsson 2016; Pittz et al. 2017). Time, temporality and temporal work are intricately related to physical spaces and embodied practices (Czarniawska 2004; Schatzki 2010; Grosz 1995).

Time itself can be seen as a materialization as much as materiality can be seen as a temporal process (de Vaujany et al. 2014). From this perspective, *space and time* correspond to a second major form of materiality that institutional studies investigate. In recent years, the conceptualization of space has become significantly enriched and sophisticated. For instance, through an ethnography of institutional work, Lawrence and Dover (2015) explored the role of spaces as signifiers and analyzed the symbolic resources comprised in spaces. From their perspective, a space does not only contain but also constitutes meaningful objects or bodies. Objects and people help spaces gain boundaries that can become institutionalized. However, as a signifier, space can also convey additional meanings that may contradict boundaries and lend support to competing institutional logics. In line with this view, Souto-Otero and Beneito-Montagut (2013) highlight that digital spaces may embody active users that challenge established institutions.

Time can also be conceptualized as a performed and materialized space in everyday activities and technologies (de Vaujany et al. 2014). Recently, some institutionalists have started to draw on a pragmatist philosophy to conceptualize the role of time in institutionalization processes (Granqvist and Gustafsson 2016; Pitz 2017; Reinecke and Ansari 2015). Granqvist and Gustafsson (2016, p. 1009) stress, for instance, that "research has overlooked how temporality, as a negotiated organizing of time, shapes institutional processes, despite the fact that timing, duration, and tenor of relationships are their foundational elements". Time represents a meaningful set of happenings that require continuous activities, flesh and embodiments, visibilities and invisibilities (Merleau-Ponty, 1945/2013, 1964). Sometimes, time is viewed as the archetype of an institution, giving order and seriality to all our happenings as a kind of meta-event (Merleau-Ponty 2003).

The study of spaces and time can be approached from an unlimited spectrum of ideas, events, processes, bodies, artifacts, events, objects and other data sources. Despite being a source of heuristic richness, space can also be conceptualized as a labyrinthic experience (Bachelard 1938), prompting methodological choices, such as the extent to which space should be considered as a set of boundaries or rather approached as a set of bodies and their production.

Digitality and Information

Orlikowski and Barley (2001) advocated for scholars to further investigate the role of technology in institutions. In the same vein, Pinch (2008) called for thorough investigation of the role of technology and its materiality in institutional matters. Since then, institutional studies have increasingly examined digitality and information as a form of materiality and included these features in their definitions of an artifact. In this book we view digitality as the digital culture, semiosis and practices related to information. In fact, *digital(ity)* is currently emerging as a relevant, but also challenging, topic for scholars interested in artifacts and materiality. While Leonardi (2010) encourages scholars to address challenges relating to the analysis of digital materiality, the inclusion of digitality within materiality may not seem obvious at first sight. In his work on virtual teams, Yakhlef (2009) shows that digital organizations actually rely on the physical existence of material resources, such as railroads, offices, and computers. According to Yakhlef, the virtual and the concrete should be considered intertwined, which raises the question of whether seemingly immaterial artifacts should be primarily considered through their materiality or their virtuality. The question expands beyond the scope of digitality, as materiality comprises practices that are not always tangible (Jones et al. 2013). However, this question prompts a deeper reflection on the ontological relationship between visuality and materiality, both of which are relevant for institutions (see Jones et al. 2017 for a deeper discussion of this topic). Alternatively, some studies rely on the notion of space to approach digitality as a whole (Boisot 2013; Souto-Otero and Beneito-Montagut 2016).

Body and Embodiment

Body and embodiment compose the fourth and last major topic that we identified as relevant for institutional studies on materiality. Bodies are the locus of perceptions and emotions and constitute our pre-reflexive relationship with the world (i.e., our perceptions in, below and beyond words and thought) (see Merleau-Ponty 1945/2013). As Jones (2013,

p. 200) explains, "Human action (…) necessarily involves (material) bodies" and bodies draw their assertion from practices that involve routinized body movements (Reckwitz 2002). In his analysis of nursing care, Reckwitz highlights the importance of the body and the physical embodiment of the sociomaterial realm. For example, nurses carry out their mission through repetitive body movements. They also adapt and make sense of their tasks according to the physical constraints of the patients' health situation and their own physical capabilities.

Although bodies and embodiment have been addressed in studies on practices, routines and sensemaking at work, institutionalists have only recently begun to explore the notions of body and embodiment (see e.g., Stowell and Warren 2018). Part of the reason may be that it is difficult to develop methodologies that take embodiment into consideration in relation to institutional dynamics. Bodies and embodiment have been explored through makeup, physical appearance, clothes and so on—but we are still lacking a conceptual definition of what the body is and which boundaries it has. As an example, Czarniawska (2010) analyzed the place of women in the organizing of cities. She outlined how representations and a certain vocabulary about women progressively became institutionalized in cities. However, she focused her analysis on the spatial representation of female bodies (e.g., location, dimensions) rather than on tangible female bodies. Although scholars recognize the relevance of female embodiment in urban representation, this topic remains to be explored from an epistemological and methodological stance. The section of this book that addresses embodiment aims to encourage researchers to reflect on the body, as a form of materiality, through the multiple layers of theory, methodology, epistemology and ontology.

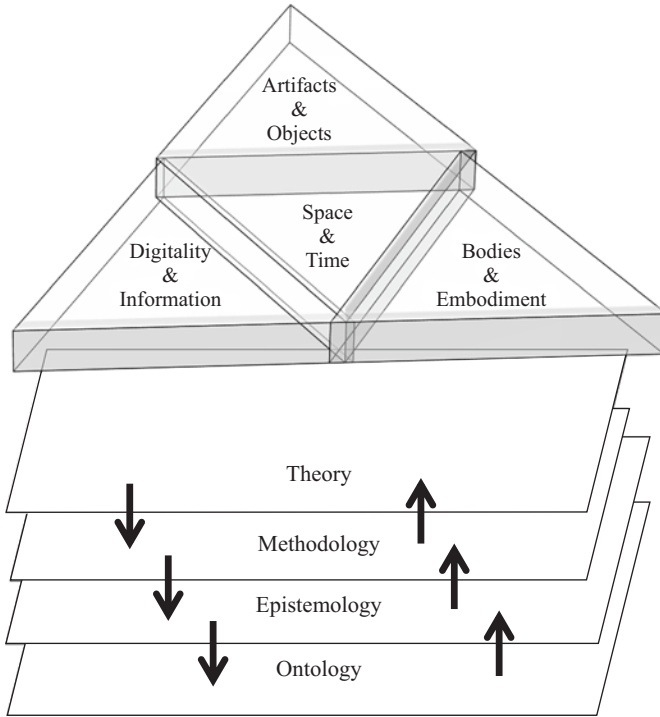## Horizontal and Vertical Challenges

Institutional studies that approach materiality tend to do so through an analysis of the four major types of materiality that are depicted in Fig. 1.2. Previous research has not clarified how these four types relate to one
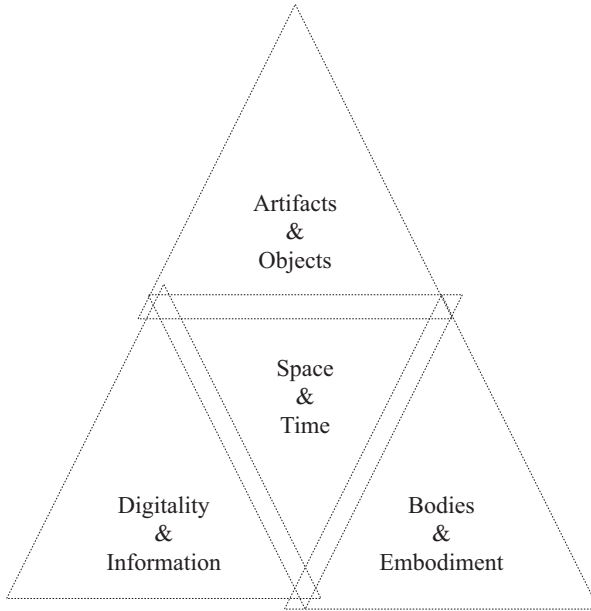
Fig. 1.2 Interrelated topics of materiality in institutions, which are taken into account in this book

another, such as the extent to which they can be clearly distinguished from each other. Figure 1.2 is not exhaustive when it comes to representing different forms of materiality. Rather, it corresponds to the topics primarily investigated in institutional studies, as well as their porosity. It thus does not address the boundaries between them, nor the possibilities that additional forms of materiality may appear (or has already appeared) in institutional research.

Apprehending materiality in institutions confronts researchers with a double challenge. The first challenge pertains to how to theorize materiality and its role in institutional dynamics. To do so, researchers are encouraged to reflect on the consistency between the ontological, epistemological and methodological layers of the material turn. We label this challenge "vertical". The second challenge, which we label "horizontal", refers to the

Fig. 1.3 Materiality in institutions: vertical and horizontal challenges

ever-expanding diversity of the empirical expression of materiality taken into consideration in institutional studies. As an always expanding and diversifying landscape, materiality can become particularly difficult to grasp. We believe that building theory on materiality in institutions can be supported if researchers simultaneously address these two interdependent challenges. On the one hand, the inherent diversity of materiality compels researchers to further elaborate consistency between their ontological, epistemological and methodological stances. On the other hand, reflexivity through conceptual layers of materiality encourages an enriched and open consideration of the essence of materiality and its empirical boundaries. Figure 1.3 represents these challenges spatially.

A Reflexive Journey Through Materiality in Institutions: The Structure of the Book and Its Rationale

This book addresses the vertical and horizontal challenges in an original fashion, through an exploratory and reflexive journey. All four forms of materiality are covered in this book. The chapters explore very diverse empirical settings—from hospital infrastructures to the game industry, firefighting organizations, surgery rooms, education and films—to help the reader understand the essential importance of materiality to institutions. The chapters also venture into the "vertical" conceptual layers of materiality to explore different methodological, epistemological and ontological stances. Exploring materiality in its different expressions with reflexive rigor is challenging, but also enriching. The authors engage in an iterative dialogue between two key questions: (i) what is materiality in institutions? and (ii) How can we develop institutionalist knowledge about materiality? To guide the reader through the journey, the book is divided into four parts, each of which corresponds to one form of materiality. Each chapter contributes to the enrichment of knowledge about materiality in institutions by addressing more than one layer of Fig. 1.3.

In the first part of the book labeled "artifacts and objects" (I), Mélodie Cartel and Eva Boxenbaum use bricolage as a theoretical lens to explore the role of materiality and further our understanding of institutional innovation. Institutional studies have previously considered emergence as a key aspect of institutional dynamics (Czarniawska 2009) but have hardly considered the conceptual avenues brought about by materiality and the notion of bricolage. Bricolage is original from an epistemological stance in as much as it can help generate new knowledge about how materiality contributes to institutional change and renewal. Also from an epistemological perspective, Julien Jourdan builds on the metaphor of footprint to examine the role of traces in institutional conformity, thereby providing new insights into the influence of (material) traces on organizational survival. He also discusses the relevance of this notion for the study of materiality in institutional theory, and consider its ontological and epistemological implications. Finally, Bernard Leca, Frédérique

Dejean, Isabelle Huault and Jean-Pascal Gond examine the early stages of the institutionalization of Socially Responsible Investment in France, highlighting the three institutional effects of artifacts: enabling, constraining and entangling practices. Their work further sheds light on the relations between artifacts, discourse and practices in institutional processes.

In the second part entitled "space and time" (II), Lise Arena and Ali Douai investigate the legitimation of business education through a detailed exploration of the Oxford University campus. Relying on historical methodology, they outline the role of materiality in micro and macro institutional changes. Through three historical episodes, they detail how materiality, in particular space and time, contributes to the progressive hybridization of institutional logics. Space can also represent a valuable lens from an epistemological perspective; Anouck Adrot and Marie Bia-Figueiredo focus on space as a valuable intermediary concept to stimulate reflection in action with respect to information flows shaped by the pursuit for legitimacy by a firefighting organization. Finally, François-Xavier de Vaujany, Sara Winterstorm-Varländer and Emmanuelle Vaast's chapter speaks to the issue of legitimacy and highlights the importance of space for organizations that seek to develop or maintain their legitimacy. Through walking practices, institutions invoke space in legitimacy claims. From an ontological perspective, the chapter questions what space is. Going further, this chapter suggests that from an epistemological perspective, additional knowledge can be created on the role of spaces in legitimation. The authors point to diverse observation units, such as practices—including walking, sitting, moving—and speech acts, as enabling legitimation.

In the third part of the book entitled "digitality and information" (III), Fernando Pinto Santos, through the analysis of websites and the materialization of digital discourse, reveals how entrepreneurs manage to handle tensions between the originality of their business and institutional expectations. He thus discusses the ontological status of materiality in a digital environment. Anna-Morgan Thomas, Agostinho Abrunhosa and Ignacio Canales propose a theoretical contribution that tackles the burning issue of incompatibility between institutional logics and identifies a major role

played by materiality in the institutional processes resulting from it. While European business schools promote the development of Massive Open Online Courses (MOOCs) in business education, they also confront deep contradictions between the open philosophy underlying MOOCs and a growing production of customized but expensive education programs. They describe digitality and its materiality as anchors of institutional logics rather than a simple mirror of it. From this perspective, they analyze the material outcomes of digital artifacts as an avenue for stimulating scholars' reflexivity on ontology. Catherine Felix, Lise Arena and Bernard Conein propose an innovative methodology that takes into consideration the use of digital artifacts at different levels of practices, including the institutional environment, the organizational level and situated action. Their work gives access to recorded sequences of actions that provide a fine grained analysis of the relation between the setting as a local workspace and the arena as a broader institutional context.

Finally, in the section of the book entitled "bodies and embodiment" (IV), Sine Nørholm Just and Line Kirkegaard explore bodies as an essential dimension of materiality in an army institution. In this chapter, they suggest that a dichotomous approach of materiality and discourse can mislead institutional analysis. Rather, to illuminate the role of materiality in institutions, they propose that scholars take into account both bodies and discourses in their analysis. By doing so, they question the ontology of body and discuss, as a theoretical contribution, its symbolical role in institutionalization. They propose that bodies correspond to an original effort to renew our knowledge on institutions and materiality. The authors offer the concept of plasticity as an intermediary concept to investigate the relationship between bodies and institutions. François-Xavier de Vaujany proposes a Merleau-Pontian view on bodies, space and time in legitimation processes, thereby challenging existing epistemological divides in MOS. He proposes three ontologies drawn on Merleau-Ponty's thinking: the ontology of discourse, the ontology of sculpture and the ontology of bubbles. Based on these ontologies, he provides new theoretical perspectives on legitimation processes and organizing.

In the Steps of a Reflexive Journey

This book encourages readers to join a reflexive journey across the various conceptual layers of materiality in institutions and the diverse expressions of materiality in institutional theory: artifacts and objects, digitality and information, space and time, bodies and embodiment. Sharing an interest in the theoretical, methodological, epistemological and ontological aspects of institutional theory development, the contributors to in the present book provide insights into both the advantages and challenges of integrating materiality into an institutional analysis. Incidentally, the chapters also provide insights into the specificities of studying materiality from an institutional perspective, and offer insights into how institutional analysis can inform our understanding of materiality. Each chapter, in its own fashion, contributes to the reflexive journey that we invite the reader to join.

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