

A SOCIAL LANGUAGE OF OBJECTS AND ARTIFACTS. Concepts of materiality in practice-based approaches to knowing in organization

BY CONNIE SVABO

ROSKILDE UNIVERSITY. COMMUNICATION, BUSINESS AND INFORMATION TECHNOLOGIES
ROSKILDE, DENMARK

TEL: +45 2617 307

SVABO@RUC.DK

This paper is an inquiry about design. It gives an introductory overview to the vocabulary of ‘materiality’, which is used by a chosen selection of social theories. The paper shows a *language of artifacts and objects* as it is used within *practice-based approaches to knowing in organization*.

Similarities and differences are presented in the way four distinct intellectual traditions conceptualize the array of material objects and artifacts, which are central in the tales of practice. The paper looks into the *mediatedness* of knowing and doing in organizations.

The intellectual traditions which are scrutinized all agree that ‘doing’ is materially embedded – that objects and artifacts are central to both knowing and learning - but what is their understanding of materiality? With which concepts do the social theories attempt to grasp tools and design objects – furniture, graphics, flutes-in-making and built space?

The paper shows which concepts are used and it demonstrates how the interaction between social and material realities are viewed. Furthermore it highlights some of the ontological and epistemological assumptions which can be traced from the distinct conceptualizations – ranging from materialist ontologies to interpretivist epistemologies.

The contribution of the paper is an overview of

vocabularies of materiality within practice-based approaches, and thus it contributes to the further development of the conceptual understanding of the tangible, embedded, embodied, artifactual and object-related side of organizational knowing.

The intellectual traditions which are examined are *interpretive-cultural and aesthetic approaches, activity theory* and *sociology of translation*. The vocabulary is theoretically generated, and is based on the anthology “Knowing in Organizations – A Practice-Based Approach” edited by Nicolini, Gherardi and Yanow, and published in 2003. In its cross-reading this paper explicitly focuses on the material sides of this practice, where the primary concepts used are those of *artifact* and *object*.

PRACTICE-BASED APPROACHES AND A NEW MATERIALISM

Practice-based approaches to the study of organization all agree that knowing and doing in an organization is contextual and materially embedded. Tools and other material aspects of ‘doing’ are central to organizational actors, to activity and knowledge. Practice-based approaches provide a theoretical vocabulary which enables thought about knowing, learning and organizing “as social, processual, materially and historically mediated, emergent, situated, and always open-ended and temporary in character.” (Gherardi, Nicolini & Yanow 2003, p.26)

This paper wants to portray the *materially* part of this quote. The aim of the paper is to conceptually explore the relationship between what in broad terms can be labelled sociality and materiality. It seeks to answer questions such as: what concept is used to represent 'materiality'; how is the interaction between 'materiality' and social processes of knowing and doing viewed: which role does materiality play in relation to action – does it stabilize or destabilize?

The interest raised in this paper for 'materiality' is echoed in what some call 'a new materialism', which explores artifactuality and material culture. An intensified interest in 'thingness' and materiality has emerged in the past decade as an explicitly interdisciplinary endeavor involving anthropologists, archaeologists, art historians and philosophers - among others. By exploring the social life of *things*, going to 'the things themselves' and seeking to understand the effects which they have on human activity, it is possible to spark new energy into, and perhaps "alter the terms of classical debates about idealism vs materialism, realism vs constructivism, agency vs structure, or essentialism vs fluidity and difference." (Pels, Hetherington & Vandenberghe 2002, p.5). These discussions tie in with modernist vs posmodernist considerations about the relationship between form and content. (Ølholm 2001 p.19) 'New materialist' notions are also echoed in organization studies, which historically have focused on how people make things, but which currently also encompass 'how things make people' – how objects mediate social relationships, and ultimately how objects can be read as having a form of agency of their own. (Pratt & Rafaeli 2006, Strati 2006)

Developing a vocabulary which explicitly is oriented towards the material aspects of social practice may contribute with new understanding of organizational life. Analysing the material side of organizations; things, artifacts, buildings and bodies, may be a useful source of knowledge - as it has been acclaimed for decades by symbolists and other interpreters of culture. Further understanding the agentive – and other – effects of these materialities, understanding how artifacts and objects participate and contribute to organizational processes may change the ways we conceive of and try to arrange organization.

The contribution of the paper is an overview of vocabularies of materiality within a chosen selection of practice-based approaches, and thus it contributes to the further development of the conceptual

understanding of the tangible, tacit, embedded, embodied, artifactual and object-related side of organizational knowing and learning. The social theories, which this paper focuses on, are a cluster of theories gathered under the umbrella of 'a practice-based approach', and the point of departure for this paper is one specific book: "A practice-based approach to knowing in organizations", edited by Yanow, Nicolini and Gherardi, and published in 2003. The texts which are scrutinized in this paper are by Yanow (cultural interpretive), Strati (cultural interpretive / aesthetics), Gherardi and Nicolini (sociology of translation), Suchman (sociology of translation), Engeström et.al (activity theory). This paper does not examine the whole body of work by these authors, but touches down on singular texts published in one common anthology. In a few places, points from other texts by the same authors are included, and a few places other contributors from the same intellectual tradition are mentioned. Focusing on one single text from extensive lists of publications has weaknesses; critique and discussion of the perspectives provided by the author happens not on the basis of their complete body of work, but on what they have chosen to write in one specific text, at a certain time and in a certain context.

COMMON FEATURES OF PRACTICE-BASED APPROACHES

Practice-based approaches provide a unique focus on the mediatedness of knowledge and on its tacit forms. There are a range of things, which the approaches have in common. Five general features of "a practice-based theoretical repertoire" are: 1) That it "conjures up a world that is always in the making" (Gherardi et.al. 2003, p.22). This implies focusing on what people actually do: talking about and looking at action, and using verbs to describe it. 2) An interest in the social aspects of knowing and learning; placing processes of knowing not in the mind of the individual but in a social subject. This distances these approaches from cognitivism. 3) That it gives voice and interest to the 'unorderly', using terms such as uncertainty, conflict and incoherence. 4) That it sees knowledge as situated in a spatio-temporal context¹, and finally, the theories 3) use a range of 'object terms', "referring to material artifacts as well as to specific historical conditions" (Gherardi et.al. 2003, p.22).

¹ This may be explored further elsewhere - what are differences and similarities within the approaches as regards 'situatedness'? "The term 'situated' indicates that knowledge and its subjects and objects must be understood as produced together within a temporally, geographically, or relationally situated practice." This is not without importance to 'materiality'.

It is this range of ‘object terms referring to material artifacts’, which this research paper delves into. These approaches, which all are gathered under the same umbrella of ‘practice’, and whose authors all agree on the mediatedness of knowledge have distinct conceptualizations of how the *mediatedness* happens. They write stories of the role and importance of material objects, their construction and use, but there are subtle differences in the vocabularies that they employ, as there are more profound differences in their ontological and epistemological levels.

A HOST OF OBJECT TERMS

REFERRING TO MATERIAL ARTIFACTS

Common for these traditions, and central to a practice-based approach to knowing in organizations is that organizational knowing is seen “as situated in the system of ongoing practices of action in ways that are relational, mediated by artifacts, and always rooted in a context of interaction. Such knowledge is thus acquired through some form of participation, and it is continually reproduced and negotiated; that is, it is always dynamic and provisional.” (p. 3. Nicolini, Gherardi & Yanow)

Practice-based approaches talk about ‘mediated action’ and tell stories that are social *and material*. They tell stories about flutes, roofs, pots and pans, crops, diseases etc. All of these ‘things’ are “active ‘characters’ in the stories of organizing that constitute the chapters of this book”, write Gherardi et.al. and continue: “Unlike in other approaches, here these artifacts do not play a merely background role. On the contrary, they participate actively in the stories, carry history, embody social relationships, distribute power, and provide points of resistance.”(Nicolini, Gherardi & Yanow 2003)

If I dissect the quotes above, I look into “mediated by artifacts”, what does mediated mean, and what are artifacts? ² The questions that arise are: *how* do artifacts “carry history”, “embody social relationships”, “distribute power” and “provide points of resistance”?(ibid p.22f) An important goal for this text is to answer these questions, to look into to which degree the answers provided by each of these traditions supplement and/or contradict each other, and thus - to scrutinize various concepts and understandings of *the*

² “the context of interaction” (what is context, what is interaction?) would also be relevant, but is beyond the scope of this text.

material in the social stories.

To this we proceed.

MATERIALITY -WHAT?

Within the selected texts, the two most common, general concepts used to give name to the physical, material world are those of objects and artifacts.³ Objects are physical entities, artifacts are both discursive and physical.

There truly is a long list of terms in play: stable artifacts, nonhuman elements, materials, materializations, materiality, nonhuman actors, nonhuman objects, technological artifact, material artifact, object, intermediary artifact, natural object, tool, thing, instrument, object of work. Many of the terms are from the sociology of translation. The other perspectives generally use fewer terms, the cultural-interpretive and aesthetic approach primarily use the terms (physical) artifact or object. In activity theory, materiality is represented in the form of (physical) tools and as (physical) objects of activity.

Yanow and the cultural-interpretive approach

Yanow⁴ uses the concepts of ‘physical artifact’ or ‘object’ to represent material reality in a social context. *Artifact* is a term which covers both material and immaterial phenomena; artifacts may be language, acts and objects, and the category also includes values, beliefs, feelings.(Yanow 2006, p.37)⁵

Objects are “the physical artifacts we create in organizational (and other) contexts and vest with meaning and through which we communicate collective values, beliefs and feelings. Among physical artifacts are the spaces in which words are spoken and read and in which organizational members act and interact, as well as the objects that populate these spaces, to which words refer and that acts engage.”(Yanow 2006, p.42)

Yanow⁶ quickly narrows the material side of social

³ One could also include historicity and situatedness, but this will not be done here.

⁴ who in this text is taken as a representative of the interpretive approach,

⁵ These various artifactual forms are the data that are accessed and analyzed using interpretive methods. “Such a cultural methodological approach gives as much emphasis to physical artifacts as to acts and language (see, e.g. Gagliardi 1990b; Yanow 1996, esp. ch. 6) (Yanow 2006, p.37)

⁶ In the text, which this presentation is based on.

reality down, quite pragmatically, and in line with her epistemological interpretive approach; by empirical definition.⁷ Physical artifacts are always related to people, to the meaning they assume to people, and in the analysis of physical objects/artifacts, the categories of analysis are defined empirically, by context, trade and tradition. In one article the artifacts/objects of analysis are 'flutes'. In another article, the analysis concerns 'built space'. Yanow writes: "as the category of organizational objects is quite large, the discussion will treat primarily one element: built space. The methods discussed here lend themselves to the study of other objects (and, indeed, also to acts and language), but little attempt will be made to extend the discussion to them more broadly." (Yanow 2006, p. 43)

Objects may be the focus of *acts*, and they (and other artifacts) may have *site-specific meanings* to actors. Artifacts may be *acted on*, and people may be *in interaction* with them. Objects as the focus of acts, resembles the perspective of activity theory, where the term "object of activity" is used to tell of working at something with certain intentionalities, certain actions, and again this notion of intentionality can be paralleled to Strati and the being-in-use of artifacts (Strati 2003).

In this interpretive approach, social and material realities are seen as closely linked (as is the case for all of the practice-based approaches). A practice is seen as "a set of acts and interactions involving language and objects", and these acts and interactions are repeated over time, they have patterns and variations. (Yanow 2003, p. 34)

Strati and aesthetics

Strati also uses the term artifact, but he also mentions terms such as physicality and corporeality. (Strati 1999) Organizational artifacts may be physical and tangible objects, but even when they are physical and tangible, writes Strati, they "are not static, immutable, or determinable once and for all; on the contrary, constructionist, phenomenological, and interactionist analyses have shown the extent to which they are mutable and constantly self-innovative (...)" (Strati 2006:24).

"In short, at the beginning of this new millennium, organizational artifacts depict contemporary Western societies as some sort of "postsocial environment"

⁷ Following from this approach, our understanding of things will always be epistemic, and therefore, attempts at ontologically characterizing them are irrelevant (?).

(Knorr Cetina, 2003) in which they mediate the social relations among people to an ever-increasing extent, and in which they themselves transmogrify into transmutational objects." (Strati 2006:23f.)

According to Strati the concept of artifacts has evolved "from that of a tool to an actor in organizational dynamics by the analyses conducted within "workplace studies" (Heath & Button, 2002), as well as those on "cooperative learning" and "participatory design" applied to information systems (Ciborra, 1996; Ehn, 1998)" (Strati 2006, p. 23)

Grasping for a vocabulary with which to talk about 'materiality', the concept provided by the aesthetic approach is; *physical and tangible artifacts which are mutable and constantly emerging anew.*

Engeström and activity theory

In the activity-theoretical approach central concepts, which have to do with material reality are the concepts of *tools* and *object of activity*. Tools are both technology, procedures and language – for instance concepts. Tools, along with rules and division of labor mediate activities. The *object of activity* is a concept which also may be both material and immaterial. An important feature of it is, that it is something which activities are directed at, for instance an object in the making.

Engeström's general model of 'activity systems' sets the agenda for this approach. The model "features the relations between object-oriented activity, agents, and the community of which they are a part." "Objects of activity are partly given and partly emergent. Engeström suggests (a) that the relations between individuals and the object of their activity are mediated by concepts and technologies, (b) that the relationships between the community and the overall object of its activity are mediated by its division of labor, and (c) that the relations between individuals and the communities of which they are a part are mediated by rules and procedures. Such factors comprise an interrelated *bricolage* of material, mental, social, and cultural resources for thought and action." Blackler et.al. p.128, 2003)

Material reality in this perspective is presented as context, and as elements of a physical outer world, which both may assume a *mediating* role, and be the *objects which actions are directed towards.*

Suchmann, Gherardi & Nicoloni Sociology of translation

Sociology of translation⁸ conceptualizes of material reality with a range of terms; natural object, artifact, actant, boundary object, materials, materializations, material circumstances. Material entities are treated as the “missing masses” (Latour) from analyses of organizational phenomena. (Strati 2006:23; 2003).

Material reality in this approach is a *participant* in social action, as are human beings, and as such should not be ‘excluded’ from having its role described. Materials are central to social ordering and “materials are not given in the natural order of things but are themselves products or effects generated reflexively in and through networks.” “That is, materials are not simply more and less durable in themselves, but rather some network configurations generate effects⁹ that last longer (through their faithful and ongoing reproduction) than others.” (Gherardi et.al. 2003, p.189)

The common, general concept used within this approach is to talk of entities or actants, without a priori categories.

MATERIALITY - HOW?

EMBODIMENT, SYMBOLIZATION, MEDIATION AND ALIGNMENT

Gherardi, Nicolini and Yanow in the introductory chapter to “A Practice-based approach to Knowing in Organizations” write, that most of the essays in the book talk about ‘mediated action’, and of things (artifacts, objects) as active participants in the stories.

Briefly having sketched out which concepts are used, we now will look more closely into this; which approaches talk of mediation, in what ways are the objects/artifacts seen as participants? Which understandings do these intellectual traditions have of the interplay between social and material realities?

Symbolization

In Yanows work two processes are in focus: *symbolization* and *embodiment*. Symbolization regards “the symbolic (representational) character of the

⁸ a.k.a. actor-network theory, a.k.a. relational materialism, a.k.a. semiotic materialism

⁹ So here is talk about *effects* - network configurations that create effects. Which I find interesting. Does this imply some sort of causality – sequence?

A thought is, that ‘those’ who acknowledge ‘materiality’, who talk of it in some ‘materialist’ form, also give it space to have an effect (?), and thus (maybe?) to be the cause of something?

relationship between artifacts and their embodied meanings”, writes Yanow and continues: “This entails an analytic focus on meaning: what values, beliefs, and/or feelings an artifact represents beyond any “literal”, nonsymbolic referent.” (Yanow 2003, p.37) The first part is clear; looking into symbolization implies to develop an understanding of what values, beliefs and/or feelings an artifact represents to a person or to several people, (depending on whose meanings we are interested in). The second part is utterly unclear to me, what is this, which “an artifact represents beyond any “literal”, nonsymbolic referent”? This is not explained further in the text.

Embodiment

As regards *embodiment* artifacts (material and immaterial) are seen as “embodying the intentions (or “mind” or “consciousness”) of the creators of the artifacts.” (Yanow 2003) This notion of embodiment is also described in Strati’s work, when he writes of the interaction between a human being and a non-human item: “the relationship between the surgeon and the scalpel, [...] is such that the scalpel is not considered in itself, but as an integral part of the body.” (Strati 2003, p.65) Strati quotes Polanyi: in these processes “we shift outwards the points at which we make contact with the things that we observe as objects outside ourselves. While we rely on a tool or a probe, these are not handled as external objects.” (Polanyi 1962:59)

Implicit in this description is a fluidity. The boundary between what is perceived as ‘me’ and ‘the outer world’ is displaced. The thing (tool) is interiorized, and the acting person makes him/herself dwell in it. Strati with this description, and using Polanyi captures important experiential aspects of what goes on between the tool and the human. This is not described (as sensorically) by the other approaches. What Strati, with Polanyi makes me aware of is how the category or boundary between human and nonhuman shifts with the human consciousness or perception of the thing. Polanyi calls it subsidiary awareness, where the scalpel and the person using it are not separate, but related – in action. When this relation is not in action, when the scalpel is seen as a separate nonhuman object, Polanyi calls this focal awareness. These two forms of awareness according to Polanyi are mutually exclusive.

Intentionality

A common feature for several of the practice-based approaches is, that they give importance to *intentionality*, and describe how physical objects may be the focus of human attention of different sorts. Yanow explicitly writes, that objects are the focus of acts, and that artifacts

may be the focus of daily work related practices. Strati uses Polanyis concept of subsidiary awareness to describe how a human action (and intention) leads to temporary interiorization/embodiment. The issue of intentionality is very clear in the activity-theoretical approach, where the object of activity (which may be a physical object, but needn't be) is loaded with intentionality. The object of activity is what activity is directed towards, and which the human subject may work at, for instance by using physical tools. The perspective which seems to be 'weakest' in its conceptualization of the intentions of human subjects is sociology of translation, a perspective which commonly faces critique from a humanist perspective – for its not regarding the human subject as 'anything special'. Sociology of translation does not seem to be preoccupied with human intentions, it instead is interested in tracing effects, in tracing relations and their stabilizations (which often are analyzed with point of departure in a physical object, a stabilized artifact, for instance Suchmans bridge).

Mediation and Alignment

Suchman (following Law) views organizing as processes of socio-technical ordering. Ordering (and knowing) is viewed as what Suchman calls 'persuasive performances', where the task/challenge is to create stable *alignments* across human and nonhuman elements. Materials are seen as central to social ordering, but there is no such thing as 'a natural order of things'. There is no order. But there are ordering efforts, and there is temporary order (Law). Gherardi and Nicolini, also from a sociology of translation perspective, demonstrate similar conceptualizations of knowing as 'the performance/performativity of ordering arrangements'. Gherardi and Nicolini primarily use the term *mediation*, and focus on the roles of 'intermediaries' (Callon 1992), where intermediaries may be: human beings, artifacts, texts and inscriptions, and money. (Gherardi and Nicolini 2003)

"A sociology of translation is a sociology of mediation, since the intermediaries represent delegations and inscriptions of actions already initiated elsewhere: they do not repeat actions but transform these in surprising and unexpected ways." (Gherardi and Nicolini 2003, p. 210)

Summing up, it appears, that the processes and relations between humans and material objects, in relation to knowing and more generally in relation to organization are conceived of in various ways: as

symbolization, embodiment, mediation, and alignment. And furthermore it appears that an important difference in the approaches is whether they are concerned with human meaning and intentionality.

THE QUESTIONS OF ONTOLOGY AND EPISTEMOLOGY

The traditions of a cultural-interpretive inclination stress the interpretive(!), meaning-making processes of encounters with objects. Within this frame of thought, it is not likely to find mention of the 'objective' characters of artifacts. Strati mentions, that a thing, a chair for instance, does have an 'ontological determinant', an essential characteristic in its *functionality* – it is made for sitting on, but he further argues, that this essence quite rapidly becomes uninteresting. According to Strati, what instead determines the quality of the chair is aesthetic, the human sensory perception of the chair, and the judgment of its aesthetic qualities. Strati argues, that ontology (function) does not account for the complexity of the organizational artifact, nor for the complexity of the object.

Yanow is a bit more unclear on the issue of ontology. On the one hand, Yanow writes of built spaces as having certain qualities, for instance that spatial elements may have their own "language" and may usefully be described by using design vocabularies such as descriptions of height, width, mass and scale, materials, color etc., and on the other hand, she stresses, that no meaning resides within the artifact. Yanow writes: "the language I have used here may seem, at times, either to suggest that buildings speak for themselves or to attribute to them the meanings intended by their "authors" (founders, executives, architects) alone. I have written, for example, "buildings convey", when what I mean is, "the buildings comprise elements that their designers intended to use to convey" or "users and passersby interpret these spatial elements to mean..." (Yanow 2006, p.59f.)

This quote clearly expresses epistemological interpretivism, but also poses a problem or dilemma of vocabulary. Yanow chooses to use sentences which leads to reader-assumptions, that she actually is using 'objectivist' ways of describing the characteristics of a building, for example as regards scale, materials etc. The mismatch between the language used and the interpretive frame, opens up for the consideration of whether 'meaning' suffices as what we draw on, when we seek to

describe physical objects, buildings for instance.¹⁰ It seems to me, that this may be a case of ‘social reductionism’; to say that there are no properties or qualities to a thing, which may fruitfully be described without talking about meaning, and even worse: that ‘meaning’ captures *everything* there is to say about a physical object. Points made by activity theory about *instrumentalities* and sociology of translation about *functional effects* seem to be relevant categories to consider as well, if we are seeking to describe ‘a thing’. And furthermore, aesthetic qualities, (corporeal, tangible) which Strati stress, may also not necessarily be grasped by the ‘meanings’ sought for with the interpretive approach. ‘Meaning’ somehow gives association to something mental and verbal. Can we make interpretations of a chair, which are not about meaning? Pratt and Rafaeli in the last chapter of the anthology “Artifacts and Organizations – Beyond Mere Symbolism” from 2006, (and which both Yanow and Strati have contributed to), suggest a framework for understanding artifacts as social constructions, where the dimensions, that they highlight (on the basis of all the contributions in the anthology) are symbolic *and* aesthetic *and* instrumental.¹¹ And in the same chapter, Pratt and Rafaeli suggest, that artifacts may also be understood as physical constructions, where relevant features to describe could be: the *sensuality* of the artifact, and whether it is *fragile* or *hardy*. (Pratt & Rafaeli 2006, p.281)

In contrast to Yanow’s ‘ontological (social) constructionism’, (Yanow 2006, p.44) are the more materially inclined perspectives of activity theory and sociology of translation, and within these the more frequent use of the word ‘object’.

Activity theory may be labelled a ‘functional materialism’ (Blackler 2003), and where interpretive approaches as their central line of inquiry have *what meaning do people make of the world*, this approach looks into how the human subject is *shaped through social and material experience*. (Blackler 1995, Spender 1996). Material reality is seen as central to the development of human subjects, it is through engagement with the outer world, that learning and

¹⁰ I agree, that no ‘meanings’ per se, reside ‘in the things themselves’, but could it be, that something else, resides in them? That they may be loaded with certain ‘scripts’, ‘agentive effects’?

¹¹ The model: is a triangle:, where one of the angles is *dimension* (instrumental, aesthetic and symbolic) (as mentioned), another is *perspective* (sensegiver, sensemaker), and another is *conversation* (identity, legitimacy, culture...?) (Pratt & Rafaeli, 2006 p.284)

development occurs. Central concepts in the activity theoretical approach, which have to do with material reality are the concepts of *tools* and *object of activity*. In activity-theory, human conduct is seen as object-oriented activity, a central thought being that the object (which may be both material and immaterial) is already implicitly contained in the very concept of activity. Tools are the devices (material and immaterial) which mediate activities, and the instrumentalities of these tools are important. In this approach it seems that dichotomous lines are not drawn between the social and the material, the central concepts which may represent material entities (tools and object of activity) also contain immaterials like language. There is no explicit vocabulary for material objects, but material objects are included as objects of activity, and as mediating tools.

In sociology of translation, the terms which are frequently used are those of ‘object’, ‘material’ – and also the terms actant and artifact. In comparison with the other approaches sociology of translation more explicitly focuses on materiality, and on tracing how stable material arrangements come to be. Objects are seen as network effects. This implies that the understanding and description of an object is achieved by tracing its relations to other entities, and these entities may be human and non-human. Within this perspective there is no a priori distinction between different entities, or actants, as they are also called. They may be human or artifactual, material or discursive. Using John Law’s words this may be labelled *a relational materiality* (Law 1999, p. 4). (Nicoloni and Gherardi name it a ‘*socio-material constructionist approach*’.) From within this approach, when we look for materiality, we will look for network effects, and the vocabulary which is used is one of actants, objects and non-human materials.

Summing up, there really is an array of ‘object terms’ used within practice-based approaches and more fundamentally, there are quite distinct perspectives on ontological and epistemology, as regards materiality.

References:

Alvesson 2002: Mats Alvesson: Postmodernism and Social Research, Open University Press 2002

Blackler 1995: Frank Blackler: *Knowledge, Knowledge Work and Organizations: An Overview and Interpretation* in The Journal of Organisation Studies, 16(6)

Blackler 2003: Frank Blackler, Norman Crump and Seonaidh McDonald: *Organizing Processes in Complex Activity Networks* in Gherardi et.al. 2003

- Czarniawska, Barbara & Guje Sevón (eds): *The Northern Lights – organization theory in Scandinavia*, Liber - Abstrakt - Copenhagen Business School Press 2003
- Dugdale, Anni: *Materiality: juggling sameness and difference*, in *Actor Network Theory and after*, eds.: John Law and John Hassard, Blackwell Publishers/The Editorial Board of the Sociological Review 1999
- Engeström 2003: Yrjo Engeström. Anne Puoni and Laura Seppänen: *Spatial and Temporal Expansion of the Object as a Challenge for Reorganizing Work* in Gherardi et.al. 2003
- Gergen, Kenneth J.: *The Saturated Self. Dilemmas of Identity in Contemporary Life*. Basic Books 1991.
- Gherardi et al. 2003: Nicolini, Gherardi & Yanow: *Knowing in Organizations. A Practice-Based Approach*. M.E. Sharpe, 2003
- Gherardi & Nicolini 2003: *To Transfer is to Transform: The Circulation of Safety Knowledge* in Gherardi et.al. 2003
- Jensen, Torben Elgaard: *Aktør-Netværksteori – en sociologi om kendsgerninger, karakter og kammuslinger*, Papers in Organization no. 48 - 2003, New Social Science Monographs, 2003
- Law 1999: John Law and John Hussard: *Actor Network Theory and After*. Blackwell Publishers 1999
- Law 2004: John Law: *After Method, Mess in social science research*, Routledge 2004
- Latour 2005: Latour, Bruno: *Reassembling the Social: an introduction to actor-network-theory*, Clarendon Lectures in Management Studies. Oxford University Press 2005
- Pels, Hetherington & Vandenberghe 2002: Dick Pels, Kevin Hetherington and Frédéric Vandenberghe: *Sociality/materiality : the status of the object in social science*, Special Issue of "Theory, culture & society", 19:5/6, SAGE 2002
- Pratt & Rafaeli 1997: Michael G. Pratt and Anat Rafaeli: *Organizational Dress as a Symbol of Multilayered Social Identities*, *Academy of Management Journal*, vol. 40 (1997), pp. 862-98, Reprinted in "Organizational Identity – A Reader" eds. Mary Jo Hatch and Majken Schultz, Oxford University Press 2004 pp. 275-312
- Pratt & Rafaeli 2001: Michael G. Pratt and Anat Rafaeli: *Symbols as a Language of Organizational Relationships*, *Research in Organizational Behavior*, Volume 23, pages 93-132, 2001 (article)
- Pratt & Rafaeli 2006: Michael G. Pratt and Anat Rafaeli (eds.): *Artifacts and Organizations – Beyond Mere Symbolism*, Lawrence Erlbaum Associates, Publishers
- Spender 1996: *Making Knowledge the Basis of a Dynamic Theory of the Firm*. *Strategic Management Journal*, 17 (Winter Special Issue)
- Strati 1999: Antonio Strati: *Organization and aesthetics*. Sage 1999
- Strati 2003: Antonio Strati: *Knowing in Practice: Aesthetic Understanding and Tacit Knowledge* in Gherardi 2003
- Strati 2006: Antonio Strati: *Organizational Artifacts and the Aesthetic Approach* in Pratt & Rafaeli 2006
- Suchman 2003: Lucy Suchman: *Organizing Alignment: The Case of Bridge-Building* in Gherardi et.al. 2003
- Yanow 2003: Dvora Yanow: *Seeing Organizational Learning: A "Cultural" View* in Gherardi 2003
- Yanow 2006: Dvora Yanow: *Studying Physical Artifacts: An Interpretive Approach* in Pratt & Rafaeli 2006
- Ølholm 2001: Marianne Ølholm: *Postmoderne lyrik. Konstituerende træk og læsestrategier*. Dansk lærerforeningen 2001