Chapter 4

MATERIAL STORYTELLING – LEARNING AS INTRA-ACTIVE BECOMING

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ABSTRACT

Karen Barad’s post-humanist agential realist account of mattering has far reaching implications for understanding intentionality, memory, and learning in organizations. We argue for a diffractive methodology of material storytelling to organizational learning as an alternative to how narrative and storytelling approaches deal with this issue. Organizational learning is thus seen as changes in the living relationalities that constitute the specific spacetimematter manifold configuration that at any moment and in any situation make up the organization. It implies that learning is relocated from what takes place in the human mind to what takes place in here-and-now performances. Learning does not take place through reflection or reflexivity but is the result of a diffractive process in the here-and-now moment of becoming. Subsequently we argue for a multimodal approach to organizational learning. Instead of relying on oral or written language alone, a material storytelling methodology invites us to play with the apparatus of the whole situation and to integrate spatial, material, and bodily dimensions in organizational learning.

Keywords: Material storytelling, organizational learning, diffractive methodology, multimodal approach

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INTRODUCTION

Karen Barad’s post-humanist agential realist account of mattering (Barad, 2007) has far reaching implications for understanding intentionality, memory, and learning in organizations. On this backdrop, we argue for a diffractive methodology of material storytelling (Strand, 2012) to organizational learning as an alternative to how narrative and storytelling approaches deal with this issue. This is accomplished by considering human beings as material-discursive of-the-world becomings rather than narrative beings or historical-discursive constructions.

We define our storytelling approach to organizational learning as iterative intra-active ‘living stories’ (Jørgensen, Strand, & Boje, 2013, p. 44). Living stories are stories-in-the-making and an ingrained part of the theatre of action. It is a performative, enacted, and embodied material way of being and becoming that is a part of identity-in-the-making; including “gender-in-the-making” (Barad, 2007, p. 87), as well as race-in-the-making, and class-in-the-making. Living stories are ‘material stories’ in the sense of being made up of material-discursive (re)storying actions in organizations (Strand 2012, p. 46).

Organizational learning is thus seen as changes in the living relationalities that constitute the specific spacetimematter manifold configuration (Barad, 2007) that at any moment and in any situation make up the organization. ‘Spacetimematter’ manifold, here, highlights the inevitably entangled states of multiple spatial, temporal, and material constituents that co-configure performativity in organizations, which are both the results of, and the governing forces of, what is enacted.

Learning is thus neither determined nor without causality. It implies that material storytelling relocates learning from what takes place in the human mind to what takes place in here-and-now performances. In other words, the focus is relocated from conceptual thinking towards everyday practices, which are not seen as the results of human or discursive agency alone but are seen as the complex results of diffractive interferences of material-discursive practices in which spatial, bodily, and material constituent agential force take part.

This leads to a third implication, which is that learning does not take place through reflection or reflexivity but is the result of a diffractive process in the here-and-now moment of becoming. While reflection and reflexivity are human-bound concepts and emphasizes processes of the human mind, diffraction gives a more adequate varied and complex insight into what creates learning, and it thus opens up other ways of designing learning processes in organizations. Subsequently, as a fourth implication, we argue for a multimodal approach to organizational learning. Instead of relying on oral or written language alone, a material storytelling methodology invites us to play with the apparatus of the whole situation and, in particular, to integrate spatial, material, and bodily dimensions in designing the learning process. The chapter positions the material storytelling methodology to organizational learning in three steps.

Firstly, key notions of a quantum-inspired posthuman approach to organizational learning are presented. Our intention is to specify for the reader some initial considerations regarding what characterizes such a radically different approach as a foundation for this elaboration on organizational learning. This includes positioning material storytelling as a third approach, different from a narrative approach and a historical-discursive approach to storytelling and
organizational learning. As part of this positioning, these latter approaches are presented and discussed at some length.

Secondly, the notion of material storytelling is elaborated to a greater extent. We argue that material storytelling is special, here, in that stories are seen as co-configured through the entangled state of agencies of the material-discursive practices of bodies, artifacts, and spaces. It has dramatic consequences for our conception of organizational learning because phenomena like memory, intentionality, learning, and so forth, are conceptualized as something that does not belong to or is not generated by individuals but are seen instead as something that emerges out of the living relationalities of the apparatus of the whole situation.

Thirdly, we draw out the implications of a material storytelling approach to organizational learning. We argue that the move towards material storytelling implies a decentering of the human subject as the source of learning. Importantly, this implies a movement from focusing on reflection and reflexivity towards a diffractive approach to organizational learning, where the focus is relocated from the human mind to the apparatus of the whole situation in which agency is reconfigured as a relational phenomenon. We also argue that even if human beings are decentered, the approach is definitely not anti-human but, rather, implies another way of thinking about how we relate to the world.

**A Posthuman Approach to Organizational Storytelling**

In a discussion of the philosophical implications of Michael Frayn’s play, ‘Copenhagen’, which is about Werner Heisenberg’s controversial visit to Niels Bohr in Copenhagen in occupied Denmark in 1941, Barad makes the following remark in coining a Bohrian indeterminacy principle as opposed to Heisenberg’s uncertainty principle.

[In Bohr’s account intentionality cannot be taken for granted: intentions are not preexisting determinate mental states of individual human beings...attending to the complex material conditions needed to specify ‘intentions’ in a meaningful way prevents us from assuming that ‘intentions’ are (1) preexisting states of mind, and (2) properly assigned to individuals. Perhaps intentionality might better be understood as attributable to a complex network of human and non-human agents, including historically specific sets of material conditions that exceed the traditional notion of the individual. Or perhaps it is less that there is an assemblage of agents than there is an entangled state (Barad, 2007, pp. 22-23).

This passage highlights some important principles of Barad’s post-human agential-realist account of mattering. On this view, intentionality cannot be properly assigned to individuals. Intentionality is better understood as being attributable to a complex network of human and non-human agents. These are not to be thought of as an assemblage of agents but, rather, as an entangled state of agencies. Importantly, this notion of the entangled state is drawing on quantum entanglement rather than the usual understanding of entanglement as ‘intertwinement’. We will elaborate on what this means in more detail below.

The implications of this approach to organizational learning are far reaching. When we cannot assign intentionality to individuals, we cannot assign memory or learning to individuals. Accordingly, we humans are not in charge of organizations as if organizational practices first erupt in the human mind and then materialize and congeal. Rather,
organizations are material-discursive sites of engagement (Strand, 2012), where actions are the result of complex intra-actions of historical, spatial, and material dimensions; where the binary oppositions between individual/collective, language/matter, human/non-human, and so forth, are continuously reenacted; and where the entangled state from which these oppositions emerge is a complex ‘between’ of entanglements. Importantly for Barad, this does not mean to be intertwined with another but that they lack an independent self-contained existence.

What we split out or cut as individuals, organizations, or other entities emerges through, and as part of, their entangled intra-relation; they are not pre-existing entities. Barad’s argument is complex and has implications for many different scientific research areas.

In this chapter, we will relate her work to our fields of interests, which are storytelling and organizational learning. More specifically, we will position the term ‘material storytelling’ as a diffractive reading of storytelling theory and Barad’s agential realist account through one another and draw out the implications of this reading in relation to organizational learning. What emerges from this reading is an intra-active account of storytelling where learning becomes the results of living (re)storying actions that emerges from entangled states of human and non-human agencies. Overall, the reading presented here suggests we attend to these complex historical, material, and spatial networks in order to account for what organizations know, what they learn, and how they learn. In addition, we propose that these complex entanglements have to be taken into account when designing learning in organizations.

Table 4.1. Three storytelling approaches to organizational learning and their assumptions

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For now, we will position material storytelling within the literature on organizational learning by relating it more closely to two other storytelling approaches: one that is grounded in a conception of being as narrative being (experience as narrative), and one that is grounded in a conception of being as a historical-discursive construction. We sketch the principles of the three methodologies, including the implications to organizational learning, in the table below. This will be followed by a more thorough description of the narrative approach and the historical being-in-discourse approach. The table is inspired by (1) Clarke (2005), who distinguishes between mapping of narrative discourse and mapping of historical discourse but does not go into a material-discursive realm; (2) Taguchi (2010), who develops a Barad-inspired pedagogy, and (3) Strand (2012), who takes Barad’s work into the realm of storytelling.

Narrative Being

In arguing for a narrative framework for management ideas, Corbett-Etchevers and Mounoud (2001, 166) argue that the central concern of narrative analysis is how the narrative operates as an instrument of the mind in the construction of reality. They build on Bruner and Ricoeur to argue that, through the plot, seemingly unrelated events are configured to a story with meaning. They argue that their framework contributes to an integrative view and to making sense of an enormous amount of data. They also argue that the narrative framework allows for unity as well as multiplicity in the analysis of their particular case, the consumption of management ideas at Cement Inc. (2001, 166).

In many ways, this article is representative of a narrative tradition characterized by a search for unity and order through the identification of dominant plots in the organization. In Corbett-Etchevers and Mounoud’s article, four plots of the consumption of management ideas are identified from a huge collection of source material. These four plots give an account of both adopting and using knowledge management at Cement Inc., and of individual and organizational experiences (2001, pp. 165 and 169). They are thus considered the unitary essence of the consumption of management ideas in the particular case at hand. It is the synthesis of the heterogeneous. Their approach is heavily inspired by hermeneutics and, in particular, the philosophical approach to narrative existence promoted by Paul Ricoeur. The idea, here, is that we construct ourselves through narratives of ourselves in a world of other beings, animals, nature, and objects. Narrative is human time, is a condition of human existence (Ricoeur, 1984, p. 52), and is created through what Ricoeur calls the power of configuration. This should not be mistaken with how Barad and Haraway use the word configuration (see later). Instead, configuration should be understood here in a hermeneutical sense as interpretation.

Ricoeur’s argument is as follows. The power of configuration – referred to as mimesis2 in his framework – is the result of an intermediary position between the two operations of mimesis1 (pre-understanding) and mimesis3 (after-understanding). The relations between mimesis1, mimesis2, and mimesis3 constitute the dynamics of emplotment, which is the central dynamic in the relations between time (the world) and human time (narrative). Emplotment thus emerges on the background of a prefigured time that becomes a refigured time through the power of configuration. Narratives are created within a circle of mimesis (Ricoeur, 1984, pp. 71-76) where post-understandings lead back to starting points and within
that dynamics incorporate pre-understandings of what he calls semantic structures, symbolic resources, and temporal characteristics (see also Cunliffe et. al., 2004, pp. 270-271).

Plot mediates in three different ways. First, it mediates between individual events and the story as a whole: “it draws a meaningful story from a diversity of events or incidents (Aristotle’s pragmata) that it transforms the events or incidents into a story...In short, emplotment is the operation that draws a configuration out of a single succession” (Ricoeur, 1984, p. 65). Secondly, the plot draws together heterogeneous factors such as “agents, goals, means, interactions, circumstances, unexpected results” (1984, p. 65). Finally, plot mediates in a third way: “that of its temporal characteristics. These allow us to call plot, by means of generalization, a synthesis of the heterogeneous” (1984, p. 66).

When applied to organizational learning, the narrative approach focuses on the ways in which organizational stories are transformed into narrative coherence, order, and plot. It is human-centered in its attempt to describe human time as the center of memory, intentionality, and learning. Furthermore, a close relationship between narrative and learning is proposed. Clandinin and Connelly (2002, p. 2), for instance, argue that an important criterion for experience is continuity in the sense that experience grows out of past experiences and leads to other experiences: “Wherever one positions oneself in that continuum – the imagined now, some imagined past, or some imagined future – each point has a past experiential base and leads to an experiential future”. Narrative experiences are thus important in the analysis of organizations, and can, in themselves, be a source of resistance to dominant narratives in the organizations, thereby creating the conditions for learning and change.

Narrative analysis is often in the form of accounting for the narratives experiences present among the actors in organizations. As Clarke (2005, p. 182) notes, personal narratives often appear to float unanchored of contextual practices but, she also notes, this is not necessarily the case. In her mapping of narrative discourses, personal narratives are contextualized and situated, and she argues for situational maps of narrating actors (2005, pp. 190-194). We believe that Rhodes and Price (2011) provide an example of these situational maps.

They use narratives to account for the post-bureaucratic experiences of employees in a local government called Nabskville. These narratives are referred to as contrasting narratives of organizational change (2011, p. 241) and are different from the ways in which this organizational change has been represented by official accounts. Although they argue that these accounts have the ‘antenarrative’ character of being emergent stories that remain open to the dynamics and contradictions of practice – a concept taken from Boje (2001) – their analysis is based on recounted experiences of people, where narrative is considered a representation of an event or series of events (2011, p. 242).

Their analysis is thus based on what Czarniawska calls narrative rationality (1997, p. 22), which is similar to emplotment based on retrospective sense-making instead of lived experience in the moment. In this way, experience becomes portrayed in a more continuous manner than what is probably the case, as we shall later argue. Their article is thus a story of learning, as situated in what they call organizational practice, and which “is actually enabled by and reliant on bureaucracy rather than supplanting it” (2011, p. 242). It is a complex and less unified story different from the official accounts (2011, p. 248) but, nonetheless, seems to be a story consisting of a plurality of narratives of unified beings rather than taking into account the more dynamic living stories in-the-making.
In such instances, organizational learning is to bring these narratives into play in organizational rework and thus creating a broader foundation and anchoring in organizational practices. This is empowerment by the relocation of power from the few to the many. In other instances, organizational learning is to bring alignment between organizational narratives and the actors’ personal narratives. Here, the organization is ‘the higher context’ in the sense that it is the organization’s strategies and goals that are regarded as the true narratives in the organizations.

In both cases, the approach to organizational learning can be characterized as using the past to create a desirable future. This is learning through retrospective sensemaking (e.g., Weick, 1995) where the question is what we have learned from the past and how we can learn from the past to create the future. For Boje (2008), most organizational strategies as the results of retrospective sensemaking, which is used to ‘boost’ specific interpretations of the past, and ignore others, to create a higher degree of consciousness of who we are and where we come from.

In this way, such strategies create a ‘higher’ form of memory and archetypes of “proper identities” in organizations. Retrospective sensemaking is thus a way of mirroring present challenges and problems with what has taken place in the past. Organizational learning, therefore, is accomplished through reflection. Such reflections are often very dialogical and participatory in their designs. Nevertheless, it is important to emphasize that the narratives are ‘sacred’ in the sense that they are not questioned. Implicitly, being is considered as having a relatively solid, unified, and continuous identity. Such an approach does not call for fundamental changes in the ways in which organizations, and its participants, conceive of themselves.

**Historical Being-in-Discourse**

While the narrative approach places emphasis on the construction of plot, order, and coherence in being, historical being-in-discourse is grounded in an ontological idea of historical being instead of narrative being. While this approach is configured through a critique of some of the presumptions that dominate the narrative approach, the focus is not, per se, on the destruction of narrative coherence; rather the focus is on the continuous reconfiguration of narrative structures through the resistance that storytelling offers against the established narratives. From this approach, it is that dynamic which defines learning and organizational learning.

This approach is characterized by taking history seriously by locating the biographies of men and women in the historical and geographical structures in which everyday life is organized (Clarke, 2005, p. 261). The emphasis is relocated from speaking agents to the historical and geographical circumstances in which they speak. This decentering of individuals has been labeled post-humanism and is characterized by a movement of attention from what takes place in the human mind towards an understanding of human beings as embodied and embedded in technical, medical, informatics, and economic networks; in short cultural or discursive networks (Wolfe, 2010, pp. xv-xvi).

This approach emphasizes ‘living story’ (Jørgensen and Boje, 2010) as a key term to denote the living spontaneous in-the-moment performances instead of narrative emplotment. This is closely related to what Bakhtin calls the unique once-occurrence being-as-event
It implies the recognition of difference and multiplicity, as well as lived experience in the moment of becoming before this performance is stabilized, fixed, and reduced in theories, narratives, and other accounts of what happened.

Living stories are not prepared performances (Taptiklis, 2010, p. 110). They are situated performances of everyday talk and actions. Because of the embodiment and embeddedness in a technological and cultural world, living storytelling is both continuous and discontinuous; that is to say, it is dis/continuous; it contrasts with the order, coherence, and continuity of the narrative approach. While narrative is about continuity within experience, storytelling entails a process of differentiation within continuity (Santos 2001, p. 165). Stories entail narratives but also their contradictions, renegotiations, and their renewal or destruction. Storytelling is about the communication of tradition and habit (Brown and Duguid 2001, p. 43), but it is also about creating something new (e.g., Denning, 2007).

New layers of complexity are thus added in comparison with the narrative approach, which is criticized for relying on a single point of view, and for the static-ness of its fixed linearity, a fixed linearity that is the result of retrospective narrative sensemaking told from peoples’ particular positions and points of view (Sole and Wilson, 2003, pp. 5-6). Narratives are regarded as being too overly simplistic representations of a much more complex reality and, as such, cannot imitate social life and represent the complexity of its connections adequately; which, nonetheless, is suggested by Czarniawska (2001, p. 128).

Living story invites us to explore the moment as a new beginning by emphasizing the many different voices and forces inherent to the emergent speech and actions, and to configure a new more self-conscious “I” or “we” by focusing on and disclosing the historical and geographical conditions that allowed for the stiffening and fixation of particular story lines – that is narratives – in taken-for-granted assumptions of who we are and where we come from. The mapping of historical discourses in their making is one particular way in which living story has been approached in the literature.

Clarke argues that the mapping of historical discourses owes a great debt to postmodern and poststructural writers, and particularly Michel Foucault, who revolutionized history through the Foucault–style genealogy (e.g., Foucault, 1984; Flyvbjerg, 2002; Jørgensen, 2002 and 2007): “These are histories not of events but of practices, not of great men but of discourses that claim to tell truths, not of ‘wars and politics’ but how life is conceived and lived in daily practices” (Clarke 2005, p. 262).

In our account of living story, history is important, and we use living story in a Foucauldian manner by using history to question and change the narratives of existence in organizations. We also propose that genealogy is a way of deconstructing narratives since it is characterized by the decomposition of accounts as they occur in the interplay with other people, spaces, and artifacts in particular historical circumstances, as we shall argue below.

The transition from narrative to living story in the literature is gradual but accomplished in particular through the works of Boje and colleagues (see also Strand, 2012, pp. 145-149). Cunliffe et al. (2004) develop a theory of narrative temporality through applying two amendments to Ricoeur’s work. The first amendment is an emphasis on performance; it proposes an expansion of Ricoeur’s model to include the contexts or spaces of narrative performance. As such, they draw attention to what happens in the moment – in the now – of narrative performance: “Life is lived in the moment and much of our sense-making also occurs in the moment” (Cunliffe et al., 2004, p. 272).
Consequently, this amendment implies a movement towards a more poststructural or postmodern position, and a movement from considering the narrative as produced by a human subject to viewing it as discursively constructed in the moment of its occurrence. This also implies that the telling becomes more dynamic and fluent as a contextual response to the situation in which it emerges (2004, p. 273).

The second amendment is an emphasis on *multiplicity*; Cunliffe et al. argue that the perpetual referring within the threefold mimesis results in multiple threads of past narratives weaving together into multiple presents and creating multiple futures (2004, pp. 273-274). The second amendment is proposed because Ricoeur does not sufficiently deal with the dynamics within the three-fold mimesis. Cunliffe et al. suggest that there is such a dynamic that creates a “polyphonic, negotiated narrative” (2004, p. 274).

The two amendments mark an emerging transition from an emphasis placed on narrative to an emphasis on living story. Living story implies the position that we do not have a unified consciousness or self (transcendental conditions) from which everything else is interpreted. Instead, being is fragmented and multiple. Living story does not imply a refusal of narrative as an important part of being. However, it does perceive being as a much more complex discursive construction, which, as noted, cannot be adequately represented in narratives.

Jørgensen and Boje (2010, pp. 257-258) argue that living story happens as a natural spontaneous performance with other people in specific circumstances. They use it to distinguish it from the static, institutionalized, and sometimes petrified story lines that are organized through narrative coherence and plot. For Jørgensen & Boje, living story storytelling implies resistance to how proper accounts should be written, told, and performed in the modern capitalist corporations and contemporary society. Their reference point is Derrida’s notion of story, which, according to him, has no borderlines. Story is at once larger and smaller than itself, entangled in a play with other stories, becoming part of the other, making the other part of itself, etc. (Derrida, 2004, p. 82). Importantly, story gains its specific meaning in relation to the term narrative, which constitutes its homonym but, nonetheless, is utterly different from story.

Western narrative tradition, Derrida argues, is very different from story in representing time in a more linear fashion with a relatively stable beginning, middle, and end coherence organized around a plot. Narrative is, for Derrida, an illusion in the sense that it puts artificial borderlines around the text. Narrative, in other words, stabilizes and fixes the story and, as such, is relatively monological and authoritarian by refusing the entangled state and the subsequent dynamic movement of stories.

Derrida is thus extremely critical towards Western narrative tradition, which, in his opinion, is dominated by totalizing narratives (Derrida, 2002, p. 299; Jørgensen and Boje, 2010, pp. 255-256). Narrative, for Derrida, is a simplistic and violent representation of much more complex relationships where plural voices are present. It is violent in taking charge of stories and in converting them into a homogeneous narrative whole. Narratives are thus considered the results of a demand for proper beginning – middle – end accounts, which work to wring out the essence of the text (Derrida, 2004, p. 72).

Therefore, learning becomes a question of questioning our notions of selfhood as expressed in narratives through a confrontation with either history or now-performances. The questioning of narratives thus takes place by looking at the transitioning from narrative and living story and vice versa. Jørgensen and Boje (2010, p. 258) note that the challenge is to create living story webs of relationships, thereby confronting established and dominant
narratives, in order to question who we are, and become more aware how our beingness is conditioned on the intertwinement and entanglement with other and others’ stories.

Furthermore, they propose to look at the transitioning from narrative to living stories which means looking at how narratives are continuously challenged by other voices in living-day-to-day storytelling, and how these narratives are continuously modified and reinterpreted to fit new ends and circumstances. Relations of power are very closely linked to the construction of narratives. There is no independent narrative “I”. Rather, we are historical products of dominant relations of power that create being; not the other way around. The living story webs of relationships are thus created through genealogies of self (Jørgensen, 2007, pp. 72-73) or through deconstruction (Jørgensen and Boje, 2010; Jørgensen, 2011).

A living story approach is not interested in reducing stories to a plot or wringing out the essence of a text. Jørgensen and Strand (2012, pp. 175-176) note that a storyteller is much more interested in contextualizing the text in a specific time-space, and by clarifying the socio-political circumstances of the text. They further note (2012, p. 176) that stories are produced in complex political circumstances where multiple voices are present.

As such, the understanding of organizations and the people within them is accomplished by getting a sense of who people are (including their interests, intentions, and motivations) and by describing what they do together with other people in specific time-spaces. In this way, narratives must be understood as a simplistic image of self, a telling that must be understood both in its socio-historical context and as a product produced by voices in particular positions with particular intentions and interests.

Genealogy and deconstruction are always systematically suspicious of narrative self. The purpose, however, is to create the conditions for a more reflexive position on our ways of thinking and acting, and thus to create the conditions for rethinking narratives and futures. In this way, the historical being-in-discourse approach would argue that the perception of narratives as ‘sacred’ is problematic in relation to learning. Rather the ‘true’ recognition of otherness lies in the attempt to place and appreciate human beings as they emerge through their performances with others in specific time-places, and the use of this understanding to create other and more desirable accounts and understandings of self.

Michael White, the inventor of narrative therapy, suggests (2007, p. 27) revealing the politics of the problems that brings people to therapy. His intention is to deconstruct dominant and negative narratives of self that have shaped peoples’ perceptions of their lives and identities in order to allow for other stories to emerge. Even if we would not call it therapy, the proposed mapping and deconstruction of personal and organizational accounts is an example of questioning the truth of dominant accounts and allow for other perceptions and stories to emerge.

Organizational learning is accomplished through this creative oscillation between narrative and living story, no matter if this is directed towards personal development or organizational development. It is accomplished through deconstruction of a genealogy of, for example, personal narratives (for instance leaders’ narratives) or through the deconstruction or genealogies of narratives of organizational problems and/or solutions (e.g., why do organizations perceive problems and solutions the way they do) (Jørgensen, 2011; Jørgensen et al., 2012).

The important problem highlighted here, is that organizations and people, as historical products, come to see realities and their problems and solutions in a particular way where some phenomena are illuminated while others are disregarded. An important aspect of a
living story approach is to cast a light on these ‘shadows’ thus revealing new possibilities. We will now turn our attention to (the apparatus of) material storytelling, which configures organizational learning from Barad’s work to argue for an alternative approach to organizational learning that builds on and reconfigures vital aspects of the historical-being-in-discourse approach.

**Material Storytelling**

‘Material storytelling’ was originally coined by Strand (2010, 2012). In her PhD study, Strand reported on an action research project that she conducted in a Danish public institution, through which an apparatus of material storytelling was developed. Here, Strand used material artifacts, spatial configurations, and bodynamic exercises, instead of the more traditional organizational learning language-based methods, to accomplish organizational rework. Her work is thus based on a radically different conceptualization of memory, intentionality, and change in organizations from how they have been considered by earlier approaches. Strand’s concept of material storytelling is accomplished by way of a diffractive reading of Boje’s storytelling theory and Barad’s agential-realist ontology. A consequence of such a reading is that stories are not seen as originating in individual storytellers but, rather, as emerging from the dynamic spacetimematter configuration in the here-and-now moment, which in turn produce the spacetimematter manifold.

As noted earlier, the spacetimematter manifold highlights the entangled states of multiple spatial, temporal, and material constituent agential forces. Material storytelling conceptualizes these forces as the entangled state of stories of spaces, stories of artifacts, and stories of bodies.

Material storytelling thus implies a different material-discursive reconceptualization of what living story is as a performed practice. While historical being-in-discourse relies heavily on history in the deconstruction of narrative structures in creating of new beginnings, material storytelling is meticulously attentive to the configuration of the situation as an entangled configuration of material, spatial, and discursive dimensions across multiple timescales. Organizational learning is thus conceptualized and accomplished differently.

Here, an entangled genealogy of becoming is the focus of attention where both past experiences and anticipations of the future are agencies that are, at one and the same time, co-configuring factors which are themselves being co-configured. The past or history does not sit still; nor does the future. Changes are accomplished as changed relationalities through the enactment of the between of material-discursive practices of space, materiality, and bodies.

Learning as an iterative performance thus becomes the result of a multimodal (i.e., Iedema, 2003) constitutive process, where the reconfigured “I’s” and “we’s” are not considered ‘new’ discursive constructs embedded in separate entities; they are entangled parts of the reconfigured body, space, materiality network. In other words, learning and identity reside not in people but emerge from, and are enacted through, the totality of the situations of which people are part, including architectures, designs, systems, techniques, procedures, gestures, habits, interaction patterns, etc.; learning and identity thus relates to what Barad refers to as the apparatus of the whole situation.
Viewed in this way, the apparatus is the material-discursive configuration that enacts and constrains story performances from a ‘field of possibility’ that defies both determination and causality. We will return to this point in the next section.

Before this, we will concentrate on how stories can be understood when storytelling theory and Barad’s agential realist approach are read through one another. Important in this operation are the terms intra-action, entanglement, agential cuts, and diffraction. As noted before, intra-action signposts our understanding that phenomena never exist in and of themselves but must always be seen in relation to one another. Entanglement captures this relational aspect in the sense that it does not only refer to being intertwined with one another but rather “to lack an independent, self-contained existence” (Barad, 2007, p. ix).

In this respect, Barad rejects terms like interconnection, entanglement with, or interaction because they implicitly assume that the world consists of separate entities that interact with each other. Instead, intra-action denotes the dynamic mutual constituent forces of meaning/matter and time/space as the motor of change and learning.

From this, it follows that stories do not emerge in individual storytellers or are the results of collective interactions between storytellers. Rather, stories emerge from complex multi-voiced, multimodal, mutually constituent agencies. Taguchi (2010, p. 47), who has developed a Barad-inspired intra-active pedagogy, notes that we are of-the-world in the sense of being made up from the same substances as the rest of the world. Therefore we are completely dependent on the world in both the production of knowledge and in learning about the world (2010, p. 42).

Barad’s work is important because it affords a more balanced understanding of story than what is usual in the social sciences, where, according to Barad, language has been granted too much power (Barad, 2007, p. 132). Instead, following Barad we argue that story emerges as a material-discursive practice from diffractive interferences of a complex or ‘a between’ of various material, natural, linguistic, and bodily forces that form mutually constituent relations by which the world and its boundaries are enacted through what Barad calls agential cuts.

Diffraction is another important aspect of Barad’s framework. It is used because Barad defies terms like reflection and reflexivity because they remain caught up in the geometrics of sameness (2007, pp. 71-72). In turn, she argues that “diffractions are attuned to differences – differences that our knowledge-making practices make and the effects they have on the world” (2007, p. 73). Furthermore, she notes that diffraction attends to the relational nature of difference, and this difference is not a matter of essence, but relationally bound whereby she denotes her approach as a relational ontology.

She quotes Haraway in saying that a diffraction pattern does not map where differences appear but rather where the effects of differences appear (2007, p. 72). Diffraction patterns are thus patterns of difference that make a difference (2007, p. 72). A diffraction pattern is relational and, as such, is linked to intra-action and entanglement. It is not a pattern that emerges from the interaction of separately existing entities; rather, diffraction is a quantum phenomenon that presumes the inherent entangled nature of phenomena as relationally constituted. As such a diffraction apparatuses patterns does not only measure effects of difference. More profoundly, “they highlight, exhibit and make evident the entangled structure of the ontology of knowing” (2007, p. 73).

So, what do intra-action, entanglement, and diffraction imply in relation to storytelling? To answer this question, we need to address the double notion of mattering, which is a significant building block of Barad’s framework (see also Jørgensen and Strand, 2012, pp. 18-
Barad takes her starting point in Judith Butler’s proposal that matter needs to be understood as a process of materialization that stabilizes over time and produces the effect of boundary, fixity, and surface (Barad, 2007, p. 150). According to Barad, Butler ultimately re-inscribes matter as a passive product of discursive practices.

Instead Barad suggests re-inscribing matter as an active agency participating in the process of materialization (2007, p. 151). She notes that matter is not a fixed substance, rather “matter is substance in its intra-active becoming – not a thing but a doing, a congealing of agency. Matter is a stabilizing and destabilizing process of iterative intra-activity” (2007, p. 151). It follows from the notion of intra-activity that matter is not the fixed properties of independently existing objects. Instead, “matter refers to phenomena in their ongoing materialization” (2007, p. 151).

Matter or phenomena are therefore to be understood as always already material-discursive or onto-semantic constructs. In other words, matter is not a linguistic construction but a discursive production in the important sense that discursive practices are themselves material reconfigurations of the world. Discursive practices are, therefore, themselves fully implicated in the dynamics of intra-activity through which phenomena come to matter and therefore mattering “is a dynamic articulation/configuration of the world” (2007, p. 151).

Materiality and discourse are thus mutually implicated in the dynamics of intra-activity. Materiality is discursive since material phenomena are inseparable from apparatuses of bodily production and discursive practices are always already material. Materiality and discourse do not stand in a relationship of exteriority to each other (2007, pp. 151-152). Whatever you do or whatever you say are the effects of diffractive patterns; that is, effects of the differences enacted and thereby the results of iterative material-discursive intra-activity. In other words, stories are matter in terms of being particular articulations/configurations of the world that enact a local cut, in terms of constraining and enabling what comes next, and in terms of being always already material.

In any single story performance, multiple scales of time, space, and materiality are threaded through one another. Stories are a congealing of agency that cut together-apart (Barad, 2010). They are iterative intra-activity that becomes through multiple and multimodal intra-acting agencies, and they have temporal, spatial and material effects: an enfolded spacetimematter manifold that in turn becomes the co-constituted co-constituent part of the field of possibility for the next cut. In the next section, we will clarify how the material storytelling approach is different in terms of approaching, understanding, and working with organizational learning.

**APPARATUS OF (MATERIAL) STORYTELLING: IMPLICATIONS FOR ORGANIZATIONAL LEARNING**

As stated above, material storytelling methodology has far-reaching implications for working with organizational learning because of the ways in which some of the most basic building blocks of organizational learning (such as memory, intentionality, and learning) are fundamentally re-conceptualized. Organizational learning is best conceived as changed relationalities accomplished through iterative performances. It implies doing particular things with particular people, in particular places, with particular things, and in particulars situations.
Organizations are not compositions of narratives, and they are not historical-discursive constructs but are instead material-discursive configurations. They are the effects of diffractive relationships of history, bodies, spaces, and artifacts, and they are continuously (re)configured in the moment into renewed material-discursive sites of engagement (Strand, 2012).

They thus imply both a certain continuity and discontinuity – e.g., dis/continuity (Barad, 2007). The performances of organizations are not simply what people do together. They reach beyond human endeavors. Many agencies help constitute these performances as they are multimodally configured and relationally constituted. The multimodal configuration of performativity in organizations relies on what we call the apparatus of storytelling inherent in any situation, which also entails organizational memory. Barad has the notion of apparatus from Nils Bohr and it is rather different from Agamben’s (2009) notion of apparatus or dispositif, which is linked to Foucault’s notion of discourse.

Apparatuses are for Barad material-discursive practices that are formative of meaning and matter. They are productive of and part of the phenomena produced and they are continuously reconstituted as part of the ongoing intra-activity of the world. The phenomena and the apparatus always go hand-in-hand. As such, apparatuses are considered to be material configurations that reconfigure spatiality and temporality as well as mattering (Barad, 2007, p. 146). In Barad’s words, apparatuses “enact a local cut that produces “objects” of particular knowledge practices” (2007, p. 147). In other words, stories are configured from the apparatuses that make up the organization in the here-and-now moment of becoming.

Haraway (2008, p. 4) notes that “figures collect the people through their invitation to inhabit the corporeal story told in their lineaments”. Just above this quote, Haraway tells of how, as a little girl, she loved to inhabit the miniature worlds and the play of scales of time and space that toys and stories made patent for her. For us, this captures how the apparatus works as a material-discursive configuration.

An apparatus invites the enactment of particular stories to be told and enacted and, as such, it contains a field of possibility of performances. It is through the particular stories told and enacted that we constitute ourselves as ‘unique human beings’; that is, where we make the world into our ‘own’. This, however, does not mean that it is actually ours or becomes our own because they are enactments of the material-discursive apparatus of the whole situation in which we are part.

Haraway further notes (2008, p. 4) how the figures she played with are at the same time creatures of imagined possibility and of fierce and ordinary reality. In other words, the material-discursive configuration of the apparatus is a creature of imagined possibilities (the future) and of ordinary reality (the now). The apparatus is not a representation or an illustration of something else. Neither is it only a support, referent, or source of sustainability of a particular discourse (e.g., Barad, 2007, p. 151). The particular material-discursive configurations are material-semiotic nodes or knots of intra-active co-shaping of bodies, materiality, and meaning.

The apparatus enacts particular stories, but it is not a deterministic relationship in the sense that certain stories become inevitable. More specifically, the apparatus enables and constrains what stories can be told as a field of possibility in the sense that specific inclinations for story performance are embedded in the material-discursive configuration. Rather, the apparatus gives different opportunities and limitations for performances; to
stimulate, make easy or difficult, to enhance or delimit, to make more or less probable, etc. As such multiple intra-acting forces are always in play in apparatuses.

Material-discursive configurations invite inhabiting and performing particular stories. It is a diffractive energy force that emerges from the interferences of performance inclinations that are embedded in the material-discursive configuration of an apparatus and the actualized here-and-now story performances. In terms of analysis, it calls for a different approach. Neither narratives nor historical analyses will do because there is an excess of history (time) in these approaches.

Instead, we will argue for a detailed exploration of crucial now-moments in organizations. Barad argues for a diffractive mode of analysis where we learn to tune our analytical instruments (she calls it the diffraction apparatus) in a way that is sufficiently attentive to the details of the phenomenon we want to understand (Barad, 2007, p. 73).

In relation to organizational learning, this calls for detailed explorations of those moments in which crucial or important learning takes place because it is the only way we can get a sense of the diffractive interferences and entanglements of human and non-human forces that configure new story performances. Furthermore, we do not learn to become otherwise through reflection or reflexivity but through diffractive participation in the situation where we engage with other people, spaces, and artifacts.

It follows from this that learning emerges from apparatuses of storytelling. These apparatuses contain professional knowledge(s), bodies, artifacts, technologies, and spaces. Working with the apparatus of storytelling of the organization is the key to organizational learning in organizations. The instruments and tools that are used matter in this respect and they are not restricted to the use of language but include using space, bodies, and artifacts. Organizational learning relies on the continuous experiments with the totality of apparatuses of storytelling.

There is no privileged best way to do organizational learning, nor is it possible to define precisely what it is. What is required is active participation and an attention to detail. In relation to pedagogy, Taguchi (2010, p. 61) notes that learning “takes place right in the middle of things, in our very living and doing pedagogical practices”.

Similarly, organizational learning takes place right in the middle of organizations. To facilitate organizational learning requires not only use of strategies and tools that take into account the multi-modal configuration of organizations but also a close attention to the movement of the moment. Consequently, it requires improvisational and spontaneous capabilities and openness to this movement of the moment. It requires ‘enacting the between’ (Strand, 2012).

Material storytelling thus constitutes a new diffractive methodology for organizational learning that creates new grounds for conceptualizing and understanding the relationships of time, space, materiality, and their inherent groundings in organizational learning methodologies. It emphasizes that story performances are always already material-discursive – as mattering bodies where language, actions, and the whole body is material-discursive practice, and thus where history, space, and materiality are part of and in turn (re)configured through every action.

As such, we shift our attention from what goes on in the human mind to the inherently entangled intra-active relationships of mind, body, spatiality, and materiality. Learners are regarded as ‘entangled becomings’ (Taguchi, 2010), and organizational learning becomes the
results of diffractive interferences of material-discursive forces. But it would be a major mistake to assume that our approach is anti-human—the point, rather, is exactly the opposite.

Importantly, we see material storytelling as a new way of working with personal and organizational development in a way in which the intra-relationality of human beings with objects, spaces, the physical world, and so forth, is emphasized, because ultimately material storytelling is about entangled connections, commitments, and relationalities. In her account of agential realism, Barad makes an argument for what she calls an ethics of mattering, which is a material-discursive account of Levinas’ responsibility ethics (Barad, 2007, pp. 391-392), where the notion of ethics is expanded from an anthropocentric view towards a more ecocentric notion of ethics.

The argument is that the performativity of all human and non-human bodies come to matter through the world’s iterative intra-activity where boundaries, properties, and boundaries are differentially enacted (2007, p. 392). Barad uses the phrase ‘cutting together/apart’ to capture this cutting of inclusions/exclusions that matters.

This practice is, however, about making connections and commitments and not about othering or separating (2007, p. 392). We are entangled becomings of multiple threads of materiality, temporality, and spatiality. Therefore, we are always already responsible to the others with whom or which we are entangled, not through conscious intent but simply through the various entanglements through which we make our daily lives. For Barad, ethics is thus about responsibility and accountability for the lived relationalities of becoming of which we are a part (2007, p. 393).

This responsibility transcends each and every situation and rejects the metaphysics of individualism that serves as a foundation for traditional approaches to ethics. She explains that causality is not linear distinct causality but about complex connections between innumerable forces. As such, there are no singular causes and no individual agents of change. Ethics is not about a right response to the other but is, rather, a fundamental responsibility and accountability for the lively material-discursive becoming of which we are part (2007, p. 393).

Ethics is not restricted to human-human encounters but must take into account the intra-active entanglement of material-discursive practices. Importantly, we cannot transform responsibility into a very clear answer for what to do. Ethics of mattering instead calls for delving deeper into an inquiry into situations thereby recognizing the inherent complexity and the plurality of human and non-human voices that are always somehow present in each and every situation.

**CONCLUSION**

We have argued for a material storytelling approach to organizational learning. It implies exploring the movement of the moment and paying attention to the multimodal constituting of phenomena. In configuring organizational learning, it implies playing with multiple scales of time, space, and materiality that are entangled in the moment. As a reconfigured approach, it both supplements and reconfigures narrative and storytelling approaches to organizational learning and offers a new way of dismantling the organizational apparatus and to create something new.
Material storytelling adds several and significant layers of complexity to organizational learning in granting agency to spatial, material, and bodily dimensions to a much higher degree than usual in organizational storytelling research. The aims are however still the same; namely working with organizational and personal development through working with reconfiguring narratives and stories in organizational settings understood as apparatuses of storytelling.

That said, it is an approach that is the most radical in emphasizing the relationality and mutuality of meaning and matter, and it thus offers radical ways of conceptualizing memory, thinking, doing, being, reflecting, and so forth, which used to be the sacred domains of individuals or at least of culture as an inter-subjective discursive construction. As such, Barad has brought to life something that was either considered dead or was granted an insubstantial role in traditional research; how matter matters – or the meaning of objects, nature, and materiality in living and being. Material storytelling is an attempt to bring these insights into organizational research and organizational learning.

REFERENCES


