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Quantum Organizational World-Making - Through Material Embodied Storytelling Practices


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Abstract

In recent years, the social construction approach to strategy, organization, culture, management and learning has increasingly been criticized for ignoring the active role of the materiality of the social world (Barad 2007, Ingold 2012, Nicolini 2012, Taguchi 2009). Thus in the aftermath of the linguistic, discursive, and narrative turn, the quantum, material turn has emerged as one of the most recent research approaches to the study of organizational life. However, the quantum approach to organizational studies still needs scholarly discussions of the active agential role of body and of materiality in world-making phenomena.

In this article, organizational development and change are viewed as world-making phenomena that emerge from material, embodied, storytelling practices and are dissipated in the organization through the living story web in fractal, rhizomatic organizing processes. Diffractively reading primarily Boje, Barad, Ingold, Heidegger, Bakhtin, and Deleuze and Guattari through each other, a quantum storytelling framework is proposed for better understanding organizing processes towards the future. Special attention is paid to the prospective, sense-shaping role of agential rhizomatic antenarratives in these processes (Boje 2011b, Boje 2014a).

The practical contribution of the article is to heighten the awareness of practitioners towards the tensed interplay between centripetal, narrative stories of organized practices “in place”, the dynamics of living stories of lifeworlds “in movement”, and the sense-shaping, organizing antenarratives of an “unsettling” world in its becoming. The theoretical contribution is to further enrich our conceptual understanding of the entanglement between lifeworld living stories and agential materiality in world-making phenomena, as we move from inter-action to intra-action (Barad 2007, Barad 2003). The implication is to view organizational development and change from within-the-phenomena.

Keywords: Intra-action, world-making, things-in-their-making, meshwork, rhizome, fractal, agential, antenarrative, materiality, becoming, lifeworld, living story, dialogue, Barad, Bakhtin

Introduction

In recent years, the social construction approaches to strategy, organization, culture, management and learning have increasingly been criticized for ignoring the active role of the materiality of the social world (Barad 2007, Ingold 2012, Nicolini 2012, Taguchi 2009). Acknowledging that meanings, discourses and language are constituting parts of world making, the quantum physician, Karen
Barad, proposes a agential realist framework of the inseparable entanglement of meaning and matter, of discourse and materiality. Thereby she also grants things, objects and artefacts agency as participating and performing parts of world-making.

In this article, organizational development and change are approached from a quantum storytelling perspective applying the work of Boje, Barad, Ingold, Heidegger, Bakhtin, and Deleuze and Guattari. The conceptual framework of these authors contributes to an emerging understanding of embodied, material storytelling practices and their role in organizing processes.

Applying the triad storytelling framework (Boje 2011b), the purpose of this article is to explore the tensions between 1) centripetal, narrative stories of organized practices “in place”, 2) the dynamics of centrifugal living stories of lifeworlds “in movement” and 3) heteroglossic antenarratives of still “unsettled” organizing practices.

From a quantum material perspective, the purpose of the article is to deepen our understanding of fractal organizing processes through the lens of the triad storytelling model consisting of the interplay among narratives, living stories and antenarratives.

In the beginning of the article, the new quantum material and practice turn are presented as an introduction to the most recent approaches to studies of organizational life. Thereafter the article follows a bottom up structure related to Figure 1: Intra-Active Quantum Storytelling Practices of World-Making.

As an ontological and epistemological foundation of the article, the storytelling of organizational life is related to the ontological being-in-the-world (the lifeworld) and the epistemological knowing in being in the process of becoming.

Next, acknowledging their aliveness of the present moment, the living stories are accounted for as stories of lifeworlds. Through the relational living story web, these stories are centrifugally dissipated in the organization, contributing to the diversification and perhaps even risking the dissolution of the organization. To counterweight the centrifugal forces, the retrospective past-oriented narratives are presented as the second concept of the triad storytelling model. Encompassing the past, collective memory of the organization, narratives works in a centripetal way to unify and stabilize the organization and to strengthen the coherency of the organization.

The remaining part of the article then turns towards the prospective antenarrative practices of sense-shaping and organizing for the future. Whereas the retrospective narratives take for granted and sort of reproduce the ready-made world, the prospective antenarratives focus on the world-making processes of a world-in-its-becoming, picking up the novelty and the newness that continuously emerge in the living story web. Hence, in the remaining part of the article, a conceptual framework for understanding these antenarrative world-making processes are unfolded by diffractively reading Boje, Barad, Ingold, Heidegger, Bakhtin, and Deleuze and Guattari through each other. A diffraction methodology “involves reading insights through one another in ways that help illuminate differences as they emerge: how different differences get made, what gets excluded, and how those exclusions matter” (Barad 2007: 30).

Following Figure 1, the unfoldment of this framework encompasses the quantum understanding of the living story web as a rhizome consisting of a mesh of lines of growth. Unfolding the meaning of
lines of growth leads to the account of the coming-into-being of person and of things as part of the coming-into-being of material, embodied lifeworlds. The organizing practices of the antenarratives are accounted for by relating those practices to the concepts of intra-actively weaving, merging and entangling material, embodied lifeworlds at the site of contact between the lines of growth. Basically, this is the relational ontology of the rhizomatic organizational life.

Finally, as the end discussion and before summing up the contributions of the article, a fourfold antenarrative model is presented as one of Boje’s most recent developments of the triad storytelling model. Weaving, merging and entangling cannot be reduced to be a matter of inter-active contact between different already existing – though changing – lifeworlds. On the contrary, the process is a matter of how material, embodied lifeworlds constitutively emerge from within the phenomena. In this part of the article, the implication of shifting from inter-action to intra-action in our understanding of organizational world-making is discussed through the lens of the fourfold model. The contribution of the fourfold model is to capture the pre-ontological constitutive processes of intra-active lifeworld-making as processes that occur ahead-of the ontology of being-in-the-world.

From a quantum lifeworld perspective, the prospective antenarrative thus throw new light on the processes of understanding organization development and change as “life-in-process-of-becoming” (Bakhtin 2010: 13).

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**Figure 1: Intra-Active Quantum Storytelling Practices of World-Making**

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Quantum Antenarrative World-Making
Fourfold Antenarrative Processes of Organizing
Space-Time-Mattering

Intra-Active Entanglement
The Site of Contact

Coming-into-Being of Person

Coming-into-Being of Things

Fractal Rhizomatic Organizing
Lines of Growth – Meshwork

Living Story Web
Centrifugal Dissipation

Retrospective Narrative
Centripetal Coherency

Lifeworld: Being-in-and-of-the-World
Knowing – Being – Becoming
The Quantum Material and Practice Turn in Organizing Processes

In the academic history of the fields of strategy, organization, management, culture and learning, we have experienced many different scientific turns proposing new perspectives and ways of understanding the social world of organizations. Among these are the linguistic, narrative, and discursive turns which share in common the assumption that the social world is an ongoing social construction constituted by language, meaning and discursive practices. As such these turns propose an alternative paradigmatic approach to traditional scientific realism according to which the social world is objective and already existing in itself, populated by individual human and non-human beings and containing passive material entities with different properties and attributes.

In the literature of strategy, organization and culture, the distinction between these two main assumptions has been referred to as building and dwelling (Tsoukas, Chia 2002: 295, Nayak, Chia 2011, Ingold 2000b, Chia, Holt 2009) using Heidegger’s elaboration of the semantic meanings of these two concepts (Heidegger 1993). Whereas building is concerned with the production, design, and implementation of end-states and thus occupation of the world, dwelling relates to being-in-the-world, to inhabit, to engage in and to live life. According to Heidegger, we can only build, if we are capable of dwelling. The dwelling approach is rooted in Heidegger’s lifeworld ontology, which will be explained later in the article.

Another but quite similar and frequently used distinction is that of “being” and “becoming” (Tsoukas, Chia 2002: 295, Nayak, Chia 2011, Ingold 2000b, Chia, Holt 2009). The “being” perspective relies on a substance ontology according to which the social world is a “ready-made world”, whereas the “becoming” perspective is related to a process oriented view on the social world. It moves towards understanding organizations as an ongoing “world-making” phenomenon (Nayak, Chia 2011: 282). The dwelling and becoming perspectives grants language, meaning, discourse and practice a major role in world-making.

The linguistic, narrative and discursive turns have contributed largely by bringing the human being back into the studies of strategizing and organizing and by focusing on the role of language, narratives, discourses and power in the construction and reproduction of the social and cultural world. Despite the contribution of humanizing social sciences, the social construction approaches have been criticized for not sufficiently taking into account the materials and the practices of organizational life (Barad 2007, Nicolini 2012). As Barad phrases it: “Language matters. Discourse matters. Culture matters. There is an important sense in which the only thing that does not seem to matter anymore is matter” (2003: 801). As a response to this shortcoming, the practice turn and the new material turn started to emerge in the early 2000. One of the main contributors to the new material turn is the quantum physicist and post humanist Karen Barad’s agential realist approach to social science. Her approach has inspired and become further developed in the quantum storytelling approach by the work of Strand (2012), Boje (2011b, 2014a), and Jørgensen & Strand (2014).

The new material turn is different from old materialism as researched in traditional realism, positivism and Marxism (Taguchi 2009) or as researched in material culture and ecological anthropology (Ingold 2012). Opposite old materialism, the new material turn is attuned towards the active role of the material world and material agency (Taguchi 2009) in the construction of the social and cultural world. New materialism is thus part of the “world-making” / “becoming” perspective as it renders materials, objects and bodies active, performative, and agential in the construction of the world.
The performative agency of materials and bodies opposes not only the old materialism of traditional scientific realism but also the social construction approaches. In these approaches the materiality of the world is made passive and immutable, a static entity waiting for significance and to be completed by an external force like culture or history (Barad 2003: 821, Ingold 2012: 434-435).

The practice turn is composed by many different traditions and is approached from many different philosophical or sociological perspectives (for instance Bourdieu, Giddens, Heidegger, Merleau-Ponty, Wittgenstein). Consequently, there exists no unified theory of practice (Nicolini 2012: 9) but some familiar traits can be traced which can help to outline basic assumptions of the practice turn. The familiar traits reveal close links to the new material turn and together they provide a fundamental framework for understanding the agential role of materiality in world-making.

From the perspective of the practice turn, the social world is assumed “to be composed by and transpiring through, a bundle or network of practices” (Nicolini 2012: 8). The practice turn connotes the social and organizational world as nexus’, bundles, nets, assemblages, or confederations of practices interconnected and relational, simultaneously carried out, continuously reproduced or transformed. The assemblages of practices do not necessarily exist in harmony as presupposed in an integration perspective (Martin 2002) on cultural practices even though practices may to some degree or at some aggregated level produce order. On the contrary, the practices may “overlap, interweave, cohere, conflict, diverge, scatter and enable as well constrain each other” (Schatzki 2010: 155, Nicolini 2012: 175); thus connoting fragmentation, pluralism, dissensus and contradictions as in the fragmentation perspective (Martin 2002) on cultural practices.

The practice turn tends to foreground the role of the body and material things in the understanding of social and organizational phenomena (Nicolini 2012: 6, 8). In relation to the body, practices tend to be viewed as routine bodily activities. The body is not to be considered as an instrument used by the human agent in order to act. This assumption relies on the traditional mind-body dichotomy. Instead “practice is the routinized activity of the body” (Nicolini 2012: 4) or a habituated body using Bourdieu’s notion of habitus. Practice and body cannot be separated from each other, but are embodied practices involving skills, abilities, knowledge, learning, and practical understanding (Schatzki, Knorr-Cetina & von Savigny 2001: 18). The practice turn heavily impact on storytelling, as storytelling by nature is a way of practicing sense-making and sense-shaping through the telling of stories.

Practices are, however, not only social, cultural, historical and embodied practices but always also material practices. Thus Barad defines “matter” not as a thing but as a “doing” (2007: 151), thereby relating matter to practices and agency. Viewing matter as a practice differs fundamentally from the social constructionists who tend to ignore matter or view matter as congealed things, objects and artefacts that are produced, formed, designed and used as the end product and effect of human agency (Barad 2007, Ingold 2012). In this view, matter is considered to be passive, dead, a fixed essence or a property of things. The focus is only embracing the materialized process. In Barad’s view, however, matter is also an active agent in its ongoing materialization. Matter is produced and productive, generated and generative (Barad 2007: 137). Barad thus contributes to the practice turn by foregrounding matter as a doing – as a quantum practice.

In the following, the framework of quantum storytelling practices will be unfolded as an approach to organizing processes of organizational development and change. Storytelling practices are one of the oldest occupations and ways of making sense of life. It is also the primary sensemaking way of
communications in organization (Boje 2014a: xvii). Communication and sensemaking are constitutive processes of organizing and thus inseparable from organizational development and changes.

In Boje’s view, storytelling is the combination of narratives of past experience, living stories of emergence in the present and ante-narratives of the arriving future as illustrated in Figure 2: The Storytelling Triad Model. Living story is ontological situated in the lifeworld, in its Being-in-the-world. As stories are in lived-life from birth to death, they are treated as aliveness (Boje 2014a: xx, Boje 2014c: 1).

In the next part of the article, the ontology and epistemology of the article is accounted for by relating the storytelling triad model to Heidegger’s lifeworld and Bakhtin’s dialogical constitution of human life.

**Lifeworld – Being-in-and-of-the-World**

Lifeworld is understood in the Heideggerian sense of Being-in-the-world (Heidegger 2008). The notion signifies how “being” and “world” is an inseparable structure of existence. According to Heidegger, we are already in the world before we reflect upon it and make it object of our reflections and interpretations. At the most primordial level, we are unified with the world through our bodily, practical and emotional engagement with the world. We are not alone in the world but involved and entangled in the communication with other. We are involved through our activities such as employing things or taken part in discourses. Involvement is by Heidegger defined as being-with, a relationship (Heidegger 2008: 115). In discourse, lifeworld is articulated. Discourse – both as talking and listening – is related to “Dasein’s existential way of Being-open as Being-with for Others” (Heidegger 2008: 206).

As we are not alone in the world but are in the world as Being-with-one-another, we learn the world to know as a cultural, shared world. In our practical engagement, we become familiar with it as a place where we feel at home and dwell.

The bodily, material engagement with the world involves the “ready-to-hand” structure (Heidegger 2008: 98). The ready-to-hand structure concerns the useful and therefore meaningful interconnectedness of equipment such as tools, materials, natural products and even nature. What we perceive is thus not the entities with respect to their properties, characteristics and attributes (the “present-at-hand”), but the relational meaningfulness of the entities as they are used in a meaningful connection.
to each other. We are participant parts of creating this meaningfulness, as we are being-in-the-world as Being-with-one-another (Heidegger 2008: 158). In this sense, Heidegger outlines a material, embodied and relational lifeworld.

Only in reflections, we start to distance ourselves from the world in order to interpret our practical and emotional experiences. Heidegger thus distinguishes between a practical understanding based upon experiences, practices and emotions and a reflected understanding which involves interpretations. These two ways of engaging with the world are tightly connected to each other. Interpretation is a development of understanding: “In interpretation, understanding does not become something different. It becomes itself. Such interpretation is grounded existentially in understanding” (2008: 188). Interpretation is a reflected, explicit understanding; an understanding interpretation (Heidegger 2008: 193).

Hence, interpretation completes the practically understood meanings of the environmental ready-to-hand: of the relationships, belongingness, practical involvement and usability of beings-in-the-world. Interpretation completes the meaning production by defining, differentiating and conceptualizing them in relation to each other as a pen, as a piece of paper, as ink etc. Meanings are thus identified, organized and structured (by Heidegger called “as-structure” (2008: 192)). Through these processes of organizing meanings we develop our worldview, organize the world, and create identities such as: I, me, you, them, and us as well as define the differences between things and other types of beings-in-the-world.

Basically, Heidegger’s ontology is both a practice and relational oriented ontology and in literature he is considered to be one of the founding fathers of the practice turn in social science (Nicolini 2012).

The processes of practical understanding and reflective interpretations are relational processes through which we socially construct the world, cultural boundaries and identities. As stated by Nayak and Chia: “…everyday acts of practical coping, interpretation and sensemaking are in effect acts of “world-making” and identity construction” (2011: 289).

In her work, Barad distinguishes between ontologically being-in-the-world and being-of-the world. Her notion of being-in-the-world signifies, however, a different ontology than Heidegger’s notion, as her use of the notion refers to the essentialist ontology of the traditional realistic approaches. Similarly to Heidegger, she opposes this ontology and emphasizes instead the relation between body and world as a primordially relation of “being part of the world: “Before the issue of how the body is positioned and situated in the world is the matter of how bodies are constituted along with the world, or rather, as “part” of the world (i.e., “being-of-the-world,” not “being-in-the-world”) (Barad 2007: 160). According to this view, knowing the world, therefore, does not origin from essentially being-in-the-world but from being a constituent part among other constituent parts of the world. Knowing does not origin from being at the distance of the world, by standing outside-the-world (Barad 2007: 185) as we are already part of the world and its becoming. Thus knowing cannot be separated from being or becoming.

Her quantum framework encompasses ontological theory of being and an epistemological theory of knowing. In her view, these two processes merge into what she calls an onto-epistemological ap-

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1 Barad extends the onto-epistemology with ethics, as the becoming of the world is an ethical matter. She calls this an “ethico-onto-epistem-ology (Barad 2007: 185).
The process of knowing in being in the process of becoming is part of what Heidegger refers to as the circle of understanding – the dynamical relationship and interplay between practical understanding and interpretation. Later in the article as part of the account of the future-oriented antenarrative, Heidegger’s circle is unfolded more into depth and enriched by the quantum contribution of Barad’s agential material approach. To acknowledge the diffractive contribution of both frameworks, the notion of lifeworld is understood as the material, embodied lifeworld in this article.

The onto-epistemology of the lifeworld contributes to an understanding of organizing processes according to which change involves world and being as simultaneous, intertwined processes of becoming: “Since the person is a being-in-the-world, the coming-into-being of the person is part and parcel of the process of coming-into-being of the world.” (Ingold 2000b: 168)

In his most recent work, Boje adopts the quantum thinking by integrating and combining central concepts from both Barad and Heidegger. Furthermore, he integrates Bakhtin’s dialogical framework as a way of understanding the relational web of storytelling through which stories of lifeworlds are dissipated and merged into shared lifeworlds.

Thus this storytelling quantum framework contributes to the understanding of retrospective and prospective sense-making and sense-shaping processes of strategizing and organizing the life of organizations.

In the following section, the storytelling triad model is related to Heidegger’s lifeworld and Bakhtin’s dialogical constitution of human life. As a first step, the living stories of lifeworld are in focus.

**Living-Story Web and Centrifugal Dissipation**

Living stories are life-world stories. They are told in the here and now moment of living life and are stories about things, self, others, events and the world (Boje 2014a) as we live the world and as we live our understanding (Gadamer 2005). Walter Benjamin states about the storyteller that the storyteller’s “gift is the ability to relate his life; his distinction, to be able to tell his entire life” (2006: 378). The stories are above all about his real life: “this is the stuff that stories are made of” (Benjamin 2006: 368).

Telling the story of real life relates living stories to the storyteller’s practical experiences of his engagement with the world throughout his life. Experiences are the very source from which all storytellers have drawn (Benjamin 2006: 1). Living stories are thus rooted in the Heideggerian sense of being-in-the-world in the practical, embodied engagement. As such, they are an open-ended process.
of becoming throughout life without beginning or end; it is a story of continuation, unfolding until the moment of death (Boje 2014a, Benjamin 2006). The process of making sense of the meaning of life continues as an open unfinalized process until this moment.

Storytelling is a dialogical and relational process that takes place between a storyteller and a listener. Telling stories is according to Benjamin: “the ability to exchange experiences” (Benjamin 2006: 1). This exchange takes place in the dialogue as Bakhtin ontologically defines the dialogue as an existential of human life: “Life by its very nature is dialogic” (1984: 293). The dialogue is defined as “the great dialogue” (Bakhtin 1984: 71), meaning that all voices participates in the dialogue with equal rights. The Bakhtinian dialogical approach to storytelling is illustrated in Figure 3: The Polyphonic Storytelling Triad Model.

Hence, living stories make lifeworlds accessible and exchanged as experiences. Hence, lifeworlds merge through the living stories. The view of merging lifeworlds through exchanges is shared by Bakhtin: “Every thought and every life merges in the open-ended dialogue” (1984: 293).

The sharing and merging of lifeworlds is the bedrock of developing shared cultural meanings and practices as part of organizing processes. The very process of merging lifeworlds in dialogues is related to heteroglossia and transgredience by Bakhtin (1981, 1984, 1986) and by Boje (2011b) to the organizing processes of heteroglossic antenarratives. These concepts will be explained later in the article. Here it suffices to state that living stories constitutes the ground for the merger of lifeworlds.

![Figure 3: The Polyphonic Storytelling Triad Model](image)

The multivoiced merged living stories encompass the voices of those involved in the dialogue in the present moment of life as well as the internalized voices from the past. As Benjamin phrases it: “The storyteller takes what he tells from experience – his own or that reported by others. And he in turn makes it the experience of those who are listening to his tale.” (2006: 364). Furthermore, experience is passed on from mouth to mouth; in fact storytelling is the art of repeating stories, the oldest forms of craftsmanship (2006: 362, 367). This process of storytelling constitutes the web of relational living stories.
Understanding living stories in the sense of Bakhtin’s open-ended dialogues refers to the condition that the dialogical meaning production is an ongoing and unfinalized process. According to Bakhtin, the smallest linguistic unit is the utterance; it is the main unit of meaning uttered by a speaker in relation to Otherness. The utterance is addressed to the participants of the dialogue in the anticipation of an answer, a response. The dialogue is conceived as an inherently responsive interaction. The utterance is just a link in the chain of communication (Bakhtin 1986: 68, 84). As a responsive interaction, not only the speaker is active in addressing the listener, but the listener is an active responsive listener. The speaker can expect answerability: “the speaker does not expect passive understanding that, so to speak, only duplicates his or her own idea in someone else’s mind […]. Rather, the speaker talks with an expectation of a response, agreement, sympathy, objection, execution, and so forth…” (Bakhtin 1986: 69). Thus the dialogue presupposes the active participation from all participants: “To live means to participate in dialogue: to ask questions, to heed, to respond, to agree, and so forth” (Bakhtin 1984: 293). The weaving and spinning is what keeps the story going; it only stop with the self-forgetful listener (Benjamin 2006: 367) who cease to be active participant or invest himself in the dialogue.

The anticipation of a unique response in fact also implies that the dialogue can draw on voices from the future; that is the voices of expected future answers. Meaning is thus an open-ended process directed towards the future. Consequently, the dialogue is a process of prospective futurizing sense-making and sense-shaping. Living stories are “in movement by itineraries”, “founding space by movement” (Boje 2011b: 4-5) as they go on: on a journey towards the future of what is becoming. Drawing on and merging with different voices increase what Bakhtin calls the intertextuality of the discourse.

The storytelling arena of voices is a dynamical arena as new storytellers may access and others may leave it. Thereby, the web of living stories expands and changes (Boje 2014c: 13) throughout the organization both in its internal and external spheres. Hence, the organizational borders are blurred.

The relationship between the voices of the past, present and future is a dynamical relationship between centripetal and centrifugal forces in the life of language and culture (Bakhtin 1981: 272). Whereas centripetal forces are related to centralization and unification, and involve homogenizing and hierarchizing influence, centrifugal forces are decentralizing processes that are open to other alternative worldviews uttering questions, doubts, criticism, counter-arguments and different interpretations (Bakhtin 1984: 71).

The centrifugal forces of the polyphonic living story web may move the organization in a multitude of different directions in motion, increasing the messiness and complexities of daily living. In the utmost consequence, the centrifugal forces may lead to the dissolution of the organization.

The centripetal forces are striving for keeping the organization together by providing the bases for organizing and structuring processes and for the emergence of new patterns of human behaviour. The centripetal forces are thus more related to the narrative and to some extent also to the antenarrative parts of the storytelling triad model whereas the centrifugal forces are related to the polyphonic dialogical exchanges of lifeworlds through the living story web.

The centrifugal and centripetal forces of the living story web contribute to our understanding of organizational development and change. The web of relational and continuing living stories is con-
stitutive of the emergence and dissipation of new organizational patterns of practices. However, since the living-stories are grounded in the micro-level of the present here and now moment and always are on the move, the patterns may be in the flux, always changing, and thus very fragment-
ed, perhaps cohering or perhaps conflicting.

Addressing the emergence of a pattern is, however, to take one step further into the account of how the storytelling triad model approaches organizational development and change. We need the narrative to capture how the centripetal storytelling forces establish organizational coherency and unification in a tensed interplay with the centrifugal living stories occurring at micro-level of the organization.

**Retrospective Narratives of Centrifugal Coherency**

In the literature, narratives are referred to as grand narrative, master narratives and as BME narratives. The BME narrative is a structured story of events with a beginning, middle and end such as the strategy of a company. The narrative can also be understood as the collective, institutional memory of an organization (Boje 2014a: xxi). As a collective memory, the narrative is the shared retrospective story of the past that “erase the living story “little wow” moments” (Boje 2011b: 3). The narrative is past-oriented and stabilizes and unifies the living stories so quickly that the dynamics of living story networking is overlooked. Hence, the narrative works as a centripetal monologue that closes down the living story process in the attempt to only tell one story (Boje 2014a).

Even though Bakhtin defines dialogue as constitutive of human life, he problematizes its conditions of possibility as the relationship between voices may not be free of power and dominance. Consequently, he distinguishes between the dialogue and the monologue. The monologue voice is someone who knows and possesses the truth, who closes down alternative worldviews, who makes the other an object of own consciousness, and who denies the other equal rights and responsibilities. “A firm monologic voice presupposes firm social support; presupposes a we – it makes no difference whether this “we” is acknowledge or not” (Bakhtin 1984: 281). Whereas centrifugal forces allow diversity, dissensus, heterogeneity and polyphonic truth to come into play in “the great dialogue” (Bakhtin 1984: 71) which makes the dialogue rich in reference to other voices and their discourses, centripetal forces may instead lead to monologue, relying on its own assumptions about the world and thus closing down other voices and their worldviews.

The retrospective narrative is a past oriented interpretation and thus linear. In relation to Heidegger’s circle of understanding, it is not grounded in the present practical understanding from being involved in and with the world. It is not grounded in the living stories of the Here and Now moment. It derives its raw material from the past which is then imposed upon the present world. The retrospective narrative thus works as a static, past oriented, fossilized and prejudiced understanding of the world. The definitions and prejudices of the narratives clothe the I and the Other and have form-shaping force (Bakhtin 1984: 280). The past-oriented narrative sensemaking maintains the already organized meanings structures of similarities and differences. Following from this, the existing worldview and already constructed boundaries, identities, forms and structures of the organization are maintained and enforced by the narrative. As Boje states, the world is organized and in place, fossilized, reified, and dead (2011b: 3, 5).
Being a collective memory of the organization that is controlled by and stuck in the past, the narrative is neglecting the subjective experience of remembering (Linda, Adorisio & Boje 2014: 2), silencing the living stories, limiting what gets told by organizations (Boje 2014a: 3-4) and distorting the people’s living stories (Boje 2014a: xxi).

As a dominating, centripetal narrative, it will seek to marginalize and erase alternative worldviews, practices and ways of organizing. Being a managerialist collective memory monologue, the only dialogue allowed “is a managerial one [...], which all others must imitate or pay the consequences of their resistance (Boje 2008: 192). In relation to organizational development and change, it implies that the strategy and organizational design comes before implementation. Furthermore, Boje states that the organization may be exposed to the risk of passive or even active polarized resistance against the power of the narrative.

Following from this, the dominating monologic, unified, BME narrative can be related to the “building” and “being” approaches mentioned in the beginning of the article. Change is understood as a transition phase between two identifiable and fixed states; as a movement from point A to B in order to reach a pre-defined goal. Time is thus understood in terms of spatial moments and end-states (Tsoukas, Chia 2002: 295, Nayak, Chia 2011) assuming a linear time perspective where time is running from past to present to future. It does not capture the processes of organizing in between.

In order to understand the organizing process of organizational development and change, we thus need to turn to the antenarrative of the storytelling model. This implies a shift away from a narrative understanding of the social world as “ready-made” towards understanding organizations as an ongoing “world-making” phenomenon (Nayak, Chia 2011: 282).

In the remaining part of the article, antenarratives are thus in focus. Constituting the prospective, sense-shaping of future, they are central to organizing processes viewed through the lenses of a storytelling perspective. The antenarratives are discussed as material, embodied, organizing practices from a quantum perspective. Furthermore, this discussion also addresses the dynamic and tensed interplay among antenarratives, narratives and living stories.

**Antenarratives of Sense-Shaping Future**

The antenarrative is a storytelling concept that is invented and defined by Boje as a prospective sensemaking and sense-shaping of the future (2011b, 2011a, 2014a).

As a future-oriented sense-shaping process, the antenarrative contributes with a view on organizing processes that differs from the social psychological view on retrospective sensemaking as presented by Weick (1979, 2012). The antenarrative prescribes that we actually have a role to play in creating and shaping the future without having to return to the “being” and “building” approaches mentioned in the beginning of the article.

The antenarrative practices capture the organizing processes of the world in its becoming, before collapsing the storytelling into a narrative of a ready-made world. The antenarrative thus addresses the open-ended, intra-active\(^2\), simultaneous, and entangled coming-into-being of world, things and

\(^2\) A quantum concept developed by Barad and explained later in the article.
persons. Hence, the quantum approach to the antenarrative is accounted for in the remaining part of the article following the bottom-up structure of Figure 1.

**Rhizomatic Antenarratives – Fractal Organizing**

Boje distinguishes between 4 different types of antenarratives: the linear, the cyclic, the spiral and the assemblage (rhizome) antenarrative (2011b, 2011a, 2014a). In this article, the assemblage rhizomatic antenarrative is of special interest as a way of understanding the fractal organizing of organizational development.

The rhizome is a botanic metaphor and ontology introduced by Deleuze and Guattari and which has strong resemblance with the living story: "rhizome has no beginning or end; it is always in the middle, between things, interbeing, *intermezzo*" (1987: 25).

![Figure 4: Assemblage Rhizome](Designed by A.M.C. Strand and produced by N.T.F. Topp. Material Storytelling Lab. 2014. Aalborg University)

In a rhizome, the development and changes do not form a linear structure from beginning to end, from point to point, from position to position, but "it grows between", in the middle, along the lines of becoming (Deleuze, Guattari 1987: 19, 21, Ingold 2011). They contrast the narrative by being a short-term memory or even anti-memory, as it works by variation, expansion, conquest and offshoots (Deleuze, Guattari 1987: 21). Consequently, the movement is not controlled by the past-oriented sensemaking and collective memory of the organization.

In line with the definition of a rhizome, Deleuze and Guattari define an assemblage as the “increase in the dimensions of a multiplicity that necessarily changes in nature as it expands its connections. There are no points or positions in a rhizome, such as those found in a structure, tree, or root. There are only lines” (1987: 8).

The assemblage consists of a multitude of rhizomatic antenarratives that moves from present to future-shaping (Boje 2011a: 9). Each of them is open and connectable, reversible and susceptible to constant modification and reworking, and still has a multiple of entryways and exits, or lines of flight (Deleuze, Guattari 1987: 12, 21). “A rhizome may be broken, shattered at a given spot, but it
will start up again on one of its old lines, on new lines” (Deleuze, Guattari 1987: 9). In the passage
of moving on in new emerging situations, the rhizomatic antenarrative can thus be understood as a
process of wayfinding and coping, of proactively sensemaking, of creating new possibilities and
directions, and thus of shaping future. Coping, wayfinding and sense-shaping of the future are
world-making processes.

These offshoots, lines of flight and ruptures (Deleuze, Guattari 1987: 4, 9) are what we can under-
stand as fractal organizing processes that emerge from coping and wayfinding in a world of becom-
ing at the \textit{micro}-level of the organization. In this sense, the organization can be understood as as-
semblages of rhizomatic antenarratives.

The botanic metaphor of assemblages of rhizomes is illustrated in Figure 4: Assemblage Rhizome.
The metaphor contributes to our understanding of organizing processes as a fractal rhizomatic de-
velopment and change of the organization not only at the surface but also in the underground. Ac-
cording to Deleuze and Guattari, the underground encompasses the production of the unconscious,
of new statements and of new desires (1987: 18). Interventions and changes to the surface may not
stop the rhizomatic development in the underground. Unlike the hierarchical structure of the tree,
which is rooted in the ground at one spot, one single point in space, and only is growing in one line-
ar direction, the rhizome develops in multiple directions from the middle. In the hierarchical organi-
zational structure, the hierarchical superior is the only active neighbor of the individual (Deleuze,
Guattari 1987: 16); in the rhizomatic acentered organization, growth and movement proceeds from
the middle in between people, back and forth in all directions.

The figure of the colored lines (Figure 5: The Meshwork. Lines of Growth) is adopted from the
frontpage of Ingold’s book “Lines” (2007) as it illustrates the complexity of daily living in organi-
izations. To a large extent, Ingold’s understanding of lines resembles the lines of the rhizome. By
introducing the distinction between network and meshwork / web of life, Ingold contributes to de-
velop our understanding of fractal organizing. According to Ingold, lines are “real lines of life – of
movement and growth” (2011: 63) and not geometrical lines between points that are positioned in
relation to each other in time and space. Such spaces are lifeless, static, closed, and in a state of be-
ing (2011: 142), as the relations are already defined and positioned. It is what Ingold defines as the
network of interconnected points and interacting entities (2011: 63). In Heidegger’s terminology,
the relations have already been interpreted, identified, defined and conceptualized into organized
structures that may produce a closure to the continued process of understanding (the circle of under-
standing).
As a contrast to the network of relational positions, Ingold views the life lines as entangled and interwoven lines of growth and movement. The entanglement of life is an entanglement of relationship-in-practice as the lifelines become caught up with one another (2011: 63, 142). This entanglement is what Ingold refers to as the meshwork; the web of life. In the meshwork, “people are united not in their belief but in a way of being that is alive and open to a world in continuous birth;” a world which is not “a ready-made world” but “a world-in-formation along the lines of their relationships” (2011: 63). As illustrated in Figure 5, the meshwork is composed by multiple lines of life forming a complex and dynamic web of sites of contact or adjacency between the lines.

Ingold’s concept of the meshwork or web of life is closely related to the living story web and the aliveness of stories as illustrated in Figure 6: Quantum Storytelling Triad Model.

Persons and things are enmeshed and storied “by the pathway along which they have previously come and are presently going” (2011: 141). As a contrast, the network relates to the closed narrative of identified entities and their fixed essential properties.

The world-in-formation refers to the process of organizing and forming the world, of world-making. Thereby it relates to the antenarrative. Instead of the geometrical understanding of space, Ingold prefers to understand space as a world and its processes as processes of life: “the process of what is going on in it [world] – the processes wherein its manifold forms arise and are held in place – are processes of life, not time” (2011: 142), or “life-in-process-of-becoming” / “a world of life” as Bakhtin phrases it (2010: 2, 13). Hence, time-space is the material, embodied lifeworld. In this respect, antenarratives can be viewed as the constitutive processes of life-world-making.
The Coming-into-Being-of-Person

As Ingold outlines, the forming of the world happens alongside lines in growth and movement. The growth of lines refers among other things to the process of becoming of human beings. This is in line with the entangled ontology and epistemology of knowing, being and becoming as accounted for in the diffractive reading of Barad and Heidegger earlier in the article. The coming-into-being-of-person indicates the formation of identity. This process is grounded in the relation between body and world and can be enlightened through the lens of Bakhtin’s concepts of dialogue, heteroglossia and transgression (view Figure 3: The Polyphonic Storytelling Triad Model).

The living speech of the dialogue is an embodied practice that creates the relation between body and world: “In this dialogue a person participates wholly and throughout his whole life: with his eyes, lips, hands, soul, spirit, with his whole body and deeds. He invests his entire self in discourse, and this discourse enters into the dialogic fabric of human life, into the world symposium” (Bakhtin 1984: 293). Hence, the storytelling of life is an embodied practice, involving the whole body in a body-world engagement. The purest expression of the values and feelings is in the embodied innovation, lying at the border between the verbal and non-verbal and creating a portrait in sound of the addressee (Clark, Holquist 1984: 207).

In line with Bakhtin’s thinking and using the metaphor of the art of craftsmanship, Benjamin states that storytelling, in its sensory aspect, is not a job for the voice alone, but that the hand plays a part, supporting what is expressed by its gestures trained by work. Like the artisan, the task of the storyteller is to “fashion the raw material of experience, his own and that of others, in a solid, useful, and unique way” (Benjamin 2006: 377). Not only words are involved but also the co-ordination of the soul, the eye, and the hand. Their ways of interacting with one another determine a practice, an embodied storytelling practice. The storyteller is an artisan and “the relationship between the storyteller and his material, human life is […] in itself a craftsman’s relationship” (Benjamin 2006: 377).

Hence, the storytelling of life is an art of craftsmanship where the artisan develops and apply his artisan embodied competences and practical experience of life in his relation to and engagement with the material world.

The coming-into-being is, however, not only a matter of the body and its artisan storytelling competences; as an entangled part it is also a matter of self and Otherness. Heteroglossia and transgression are Bakhtinian concepts that enlighten those processes.

The dialogue between living stories of lifeworlds implies a transformation of identities, as self and other are relationally constructed in the dialogue. According to Bakhtin, identity is a dialogical transformation of "how an individual becomes other than what he was" (1981:115). In their work on Bakhtin, Clark & Holquist state that “An utterance is always between a self and an other and constitutes the primal workings of self-identification” (1984: 206). Self is constructed in the relation to other selves. This construction is a heteroglossic exchange and combination of own and others’ words and meanings through which self emerges as the sum of its discursive practices.

Heteroglossic means “another’s language in another’s speech” (Bakhtin 1981: 324). Utterances are heteroglossic because they are uttered in a language used in different social, cultural and historical context (Bakhtin 1986: 428). Thus Bakhtin states: “I live in a world of others’ words” (1984: 143).
Others and words are embedded in lived cultural worlds and communities in time and place, but nevertheless part of the ongoing chain of heteroglossic communication.

Polyphonic, heteroglossic dialogues allow therefore living stories of life-worlds to merge culturally, socially and historically and produce new multivoiced, merged living stories as well as new language and relationship practices. By nature, this process is a co-creative, relational, entangled process of coming-into-being of person and lifeworld.

Transgredience signifies stepping / going beyond the bounds and has to do with transgressing the boundaries through interaction. As human we can never encompass everything in our own exterior. Only others can access our exterior as they can see what goes on behind and around us from the outside. The things, we cannot see are not outside experience, but merely outside the boundaries of what is available to my sight in a particular moment (Holquist 2009: 15). Transgredience refers to the self’s need of the other, where other encompasses other people, events, things, signals from the environment. We are outside most of the tings, people and ideas in the world but through interaction in dialogue, we may transgress the boundary of outsideness.

Transgredience is thus part of the becoming of who we are and of the life we live. In the transgredience process, the world outside us become part of us; as Holquist phrases it: “the world is not given to me, in the sense that so much of it is outside me and thus in need of being creatively organized into my life” (2009: 15).

Life-in-process-of-becoming is deeply entangled with the interaction with others, things and events in time, space and culture. Heteroglossia and transgredience contributes to the understanding of the entangling and interweaving processes that occur at the sites of contact between lines of growth of things and persons. World and body are entangled, creating a material embodied lifeworld.

Thus the concepts contribute to a quantum storytelling perspective on world-making. Both heteroglossia and transgredience are concepts that relate to the antenarrative practices of creatively organizing life through the merger of material, embodied lifeworlds.

The Coming-into-Being-of-Things

What has not been touched upon so far in the account of life-world-making is the materiality of lifeworld. However, also matter is always in the process of becoming; a phenomenon which is referred to as “a world of things-in-their-making” by Shotter (2011: 2) (see Figure 6) or “things-in-phenomena” by Barad (2007: 140). To foreground materiality implies a shift from understanding artefacts as already-made things to an understanding of artefacts as things-in-their-making.

In the former “artefact” view, materiality consists of two sides: the brute, physical raw materials of the world and the social and historical agency of human beings who convert the materiality into finished forms of artefacts by projecting on them purposes, designs and meanings. In the act of making the artifact, matter and form are united but in a way where the form is imposed upon matter rendering it passive and inert. The artefact is thus a materialization of ideas and meanings as well as the artifact also consists of natural substance rendered cultural. Artefacts can thus be considered to
be part of a material culture that is created by human beings with which they surround themselves. (Ingold 2012: 432).

The latter “thing” view opposes the assumption of a form-receiving passivity of matter as materiality possesses natural forces of its own. As matter is conceived as homogenous, its variability and agency is overlooked despite the fact that matter is always in flow and in a process of becoming due to its elasticities, tensions, and resistances. Thus matter participates actively in the form-taking activity. This matter-flow cannot be controlled by practitioners but can only be followed and corresponded with guided by intuition in action and an embodied gestural dance with the material. (Ingold 2012: 433-435). This view on matter is much in line with Barad who defines materials as substance-in-becoming (Barad 2003: 822).

The former view considers artefacts as an object; that is a produced and finished artefact that has reached its final and complete form and which is enrolled in the social lives of human beings to be used or consumed. It’s further becoming is only a matter of recycling (Ingold 2012: 435).

As a contrast, the latter view considers artefacts as a thing understood as a sample of material (Ingold 2012: 435). In viewing the artefact as a sample of material, Ingold draws on Heidegger’s work on “The Thing” (Heidegger 1975). According to Heidegger, the “thingly character of the thing does not consist in its being a represented object…” (1975: 167). Hence, things do not appear as things by means of human making as this is a way of thinking of the thing as an object represented or placed before us. Instead, Heidegger addresses the old semantic meaning of thing as a “gathering” and even the active meaning of things as “thinging gathers” and “the thing things world”3 (1975: 174, 177, 181). This active meaning of thing as a gathering implies a co-responding material engagement (1975: 181) whereas the expression of thing things the world emphasizes how matter matters in world-making.

According to Ingold, this close correspondence with the materials is to touch it, to observe it, to follow its matter-flow and intuitively to join its ongoing formation. In fact, the correspondence with the materials is conceived by Ingold to be the work of an artisan: “In the act of production, the artisan couples his own movements and gestures—indeed, his very life—with the becoming of his materials, joining with and following the forces and flows that bring his work to fruition” (2012: 435) and he continues: “Such engagement is to participate in what Heidegger calls its “thinging” (2012: 436).

To view the artefact as a sample of material is thus: “to see it as a potential – for further making, growth, and transformation” (Ingold 2012: 435). Consequently, things grow and are grown similarly to organisms (Ingold 2012: 431). In line with the quantum thinking and drawing on Barad, Ingold thus argues in favor of “ecology of materials”.

In the above view on things-in-their-making, it becomes even clearer how the growth of the embodied artisan storyteller and the growth of things-in-their-making are entangled processes in world-making from a quantum perspective.

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3 I interpret this as the material lifeworld. Being-in-the-world encompasses all beings including human beings, non-human beings as plants and animals (apart from humans) and material beings as natural raw material. In line with Barad’s thinking, all beings have agency and are constitutive parts of life-world-making.
Intra-Active Entanglement at the Site of Contact

In the above, the coming-into-being of the world, of the person and of the thing is accounted for by diffractively reading Boje, Barad, Ingold, Heidegger, Bakhtin, and Deleuze and Guattari through each other.

The entanglement of matter and meaning that is involved in those processes of becoming is made even more explicit by Barad in her approach to quantum world-making. The core quantum concepts at stake here are intra-action as a contrast to inter-action and the intra-active, diffractive entanglement of discourses and materiality (view Figure 6: Quantum Storytelling Triad Model).

Intra-Action versus Inter-Action

Barad’s ontology is basically a relational ontology (Barad 2003: 812) according to which the primary ontological unit is phenomena. Phenomena are defined as the ontologically primitive relations without preexisting relata (Barad 2007: 139) (relata being predefined boundaries and properties of entities). Quite similarly to Ingold’s distinction between network and meshwork, she introduces the distinction between inter-action and intra-action as a way of understanding relations.

The traditional use of “interaction” as a notion presupposes the existence of individual, independent entities with properties; that is “relata” (Barad 2003: 815). This process is called “thingification” by Barad, as an expression of turning relations into “things”, “entities” and “relata” (Barad 2003: 812).

In intra-action, both human and non-human organisms as well as things, matter, meaning, time, and space are participating, agential parts of the intra-active (re)configuring of the world. But not as relations between separate already existing entities as assumed in inter-action. “Existence is not an individual affair. Individuals do not preexist their interactions; rather individuals emerge through and as part of their entangled intra-relating” (Barad 2007: ix). Barad thus constitutes “intra-action” as a more primordial level than “inter-action” by stating that relations are not secondarily derived from preexisting relata (Barad 2003: 815). In this way, the world is an open-ended process of becoming. Its possibilities for becoming are remade in each meeting, each intra-action (Barad 2007: x). Both the world and each participating agent are thus in a continuous, entangled process of becoming. Intra-action derives its meaning from the process of becoming from within the phenomena (from within the intra-activity).

According to Barad, matter and meanings are entangled with each other in the intra-active activity and thus constitutive of world-making. In this entanglement, matter and meanings – or materiality and discourses – are mutually effecting and changing each other as they are active agents.

Materiality or matter is not just materialized but also an active “agent” in its ongoing materialization (Barad 2007: 137). In the above discussion of the “thing”, this process was unfolded through the lenses of Ingold and Heidegger.

Intra-Active, Diffractive Material-Discursive Entanglement

So far, world-making as a phenomenon has been characterized as an open-ended, rhizomatic and growing process of organizational development and change. However, power and discourses are constitutive, intra-active parts of the meaning-making, sense-making and sense-shaping processes
of world-making. In a Foucauldian sense, Barad defines discourses as constraining and enabling what is possible to say and what counts as meaningful statements in specific time, culture or context and groups of people. Materiality and discourse are entangled in what Barad refers to as the material-discursive practices of world-making.

The material-discursive practices are further elaborated on by Taguchi. Meanings are materialized, performed and rendered into material practices in an ongoing performance of the world. Material bodies, matter, artefacts, architecture and organization of practices are thus constitutive of discourse and meaning-making as they are shaping our notions, beliefs and meanings. (Taguchi 2009: 22). Thus we follow the flow of matter and the material preconditions of our lifeworlds.

Conversely, discourse is constitutive of how we organize things in the material world and act as embodied subjects. Notions, beliefs and meanings are part of shaping our bodies and motions. “Hence, these materials and artefacts are to be understood as materialised ideas of knowledge and learning too” (Taguchi 2009: 22). In this sense, discursive practices and meanings are specific material (re)configurings of the world (Barad 2003: 818-819, 820-821).

Consequently, the entanglement is much more than entities being intertwined or joined together. The entanglement creates a difference which Barad refers to as diffraction. Diffraction is a quantum concept which both is used as a methodology and an ontology. Ontologically speaking, diffraction is about the difference that emerges from the different entanglements. Diffraction is, however, not about any difference but about which difference matters (Barad 2007: 378) . “We can understand diffraction patterns – as patterns of difference that make a difference – to be the fundament constituents that make up the world” (Barad 2007: 89).

Barad’s concepts of intra-action, entanglement of matter and meanings and material-discursive practices contributes to our understanding of how the organizing processes involve not only meanings, language and discourses but also matter. Her concepts integrate matter as an active constituent in the merging and weaving of lines of life in the meshwork. Hence, with reference to Barad, Boje develops his storytelling framework into the concept of “agential” antenarratives (2011b), thereby pinpointing how matter matters in the storytelling practices of shaping the future.

**Knowing-in-Being-in-Becoming – Towards a Quantum Onto-Epistemological Storytelling**

The quantum approach to material agency as proposed by Barad and Ingold is closely related to embodied, material storytelling practices. According to Ingold, the world is a storied world, and things of this world are their stories by their paths of movement and relations. Things do not exit but occur. Through their encounters and entanglement, they become bound up in the other’s story. This is where the production of knowledge takes place: to know someone or something is to know their story and to be able to join that story to one’s own. (Ingold 2011: 160).

Hence, we are turning into the epistemological processes of world-making at a pre-ontological level; that is, we are moving into the constitutive processes of life-world-making from within-the-

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4 Originally in physics, diffraction refers to the way waves combine and overlap or bend and spread when they meet obstructions. When this happens, their different pattern changes into new different patterns that lead to new relational consequence (Barad 2007: 74, 80).
phenomenon. We are returning towards the processes of knowing-in-being-in-becoming; the entangled onto-epistemological processes. We are digging into these processes as they take place – relationally and co-creatively – at the site of contact between lines of growth.

Knowing is a central part of the storytelling triad model. The interplay among the past-oriented knowledge of the narrative, the open learning experiences of the living stories and the not-yet-in-place knowledge of the antenarrative are epistemological storytelling processes of world-making. The understanding of those processes can be deepened by looking into the fourfold antenarrative model developed by Boje (2014a, 2014b).

The Fourfold Antenarrative Organizing Processes

The fourfold antenarrative model is an extension of the four characteristics that define the antenarrative (Boje 2011b, Boje 2011a, Boje 2014a, Boje 2014b). The four characteristics are altogether called the B’s of Antenarrative. Below these four characteristics are unfolded and at the same time related to the quantum conceptual framework of the article.

Bet: The prospective sensemaking, sense-shaping antenarratives are bets on the future as regard the possible future development of the organization (Boje 2014a: 10). The practitioners make bets on the future when they try to make sense of the future directions of the organization.

Hence, the antenarratives address those many possible rhizomatic paths and directions in which the organizational life, things and people may move. As such they address the frontier of what is becoming.

Before: The antenarrative is the process of storytelling “before” the narrative coheres. The antenarrative collapses the many possible futures (bets) into a few actualities (Boje 2014a: 10).

People, things and the life of the organization are thus in motion, unsettling, still not in place. Whereas the centrifugal forces keep the storytelling open for new possible futures, the centripetal forces attempt to fuse and unify the many possibilities as part of an organizing process. The antenarrative thus relates to the “becoming” perspective on organizational development and change (Tsoukas, Chia 2002), mentioned in the beginning of the article.

Between: The antenarrative serves as the bridge or link between living story web of individualization and the grand narrative of generality, universality and essentialism. The antenarrative process connects and transforms the living stories and narratives (Boje 2014a: 10, Boje 2014b). Narratives, living stories and the various sorts of antenarrative pathways all take part in shaping the future of organizations (Boje 2011a: 12).

As a bridge, they are in the center of the interplay between, at the one hand, the narratives of the organization in place that are rooted in collective stuck-in-the-past memories and, at the other hand, emerging living stories of “life-in-the-
process-of becoming” (Bakhtin 2010: 13, Boje 2011b: 3, Boje 2011a: 12). The antenarratives help bring about a rupture of development. Preventing the narratives from erasing the newness and novelty of the living stories, the antenarratives involve a co-creative, heteroglossic, transgressing process of simultaneously growing and merging material lifeworlds. Through the heteroglossic, transgressing dialogue, different material lifeworlds of languages, cultures and histories merge and emerge. Not as the objectified, institutionalized and materialized “world of culture“, but as “the world of life” (Bakhtin 2010: 2). Hence, the heteroglossic antenarrative addresses the co-creative material, embodied world-making process that escapes the reproduction of a ready-made world.

Beneath: The antenarrative is beneath the grand narrative as it reaches into the level of the micro-processes and the micro-structures of the living story webs (Boje 2014b); that is, the web of lives – the rhizomatic meshwork. As wholeness, the grander narrative covers over this micro-level at a more aggregated and abstract level of the organization.

Hence, the antenarrative relates to the practice turn mentioned in the beginning of the article. The antenarrative practices are grounded in the micro level of the organization, where the actual “going-on” occurs in situ. The organizational life emerges from the weaving and reweaving of material lifeworlds as micro-changes in the site of contact between living stories. Thus change constitutes the organization. From a practice perspective, the organization is a kind of “secondary accomplishment” (Tsoukas, Chia 2002) that is constituted, shaped and emerging from rhizomatic micro-changes through antenarrative practices. The organization viewed as an secondary accomplishment, however, signifies an organizational pattern that has emerged and taken the shape of a narrative in place. From the antenarrative perspective, the organization is never accomplished.

Hence, from a storytelling perspective, the four characteristics of the antenarrative addresses core issues of organizational development and change. Extending the four characteristics by Heidegger’s notions of “fore-structuring”, “fore-conception”, “fore-sight” (in the figure fore-telling), and “fore-having”, the four B’s turn into the fourfold antenarrative model (Boje 2014b) of prospective sense-making, sense-shaping and world-making.

The four processes should not be seen in isolation of each other but are entangled into each other. The model contributes to the understanding of organizational development and change as a world-making process from within-the-phenomenon as an onto-epistemological process of being, knowing, and becoming. These are the processes through which the ontology of the world (being-in-the-world) is constituted. Hence, the fourfold model deals with the most primordial constitutive processes of world-making.

**Antenarrative – Fore-Caring, Authentic Self, and Attunement**

According to Boje, the core of the antenarrative model relates to Heidegger’s notion of a world of care. Caring for life in time and space is a primordial existentiality according to Heidegger and the primordial for Boje (2014a: 111, 241). Being-in-the-world in a sense of caring and concern is to be authentically aware in being, in dwelling, and in knowing by experience. Caring, as caring for self,
for others, for the relationship, for futures of potentiality, and for destiny, is made the approach of storytelling inquiry by Boje (2014a: 239).

One of the most authentic modes of caring is in anticipatory resoluteness; a caring where being is “ahead-of-itself” grounded in the future (Heidegger 2008: 375) and thus a fore-caring. Anticipation is a form of Being-towards; of looking forward to a possible way to be. Resoluteness is related to authentically taking ownership of own life in one of the possible (rhizomatic) ways that occurs in the world of events. Resoluteness is “taking action” (Heidegger 2008: 358). Taking ownership of one’s life relates to the authentic self (self which take hold in its own way) as distinguished from the they-self (the absorption of self into the world where the “they” prescribes the way of interpreting the world by articulating the referential context of significance) (Heidegger 2008: 167). An authentic self does not uncritically repeat the usual doings despite its cultural familiarity.

Caring thus implies awareness and authenticity towards the future of what is becoming in order to enact it. In the light of the framework of this article, the authentic self polyphonically struggles with the narrative, cultural they-self to avoid becoming depersonalized and instead actualized own uniqueness. Only then the participants in the dialogue can contribute creatively, individualized and personalized.

Caring is furthermore related to moods. Caring for destiny, the feeling of anxiety may arise when we fail to find the world meaningful, no longer feel at home in it, and sense the possibility of a world without us. Anxiety may disrupt our dwelling in the world and our noticing of the vague signals of what happens in the entanglement between the interior and the exterior of our lives.
All our moods manifest in how we are and how we are faring and may even make us turn away (Heidegger 2008: 173), thereby not taking ownership of our lives. We are in the world by moods prior to cognition, and we are attending to the world from this inner state-of-mind. We find “events happening to us and within us – as a movement of feeling that comes […] – that we ourselves have not initiated” (Shotter 2011: 4). Thus, the internal processes of our body entangle with the processes of the material world in an inseparable structure of intra-actions. The movement of feelings arises as part of what Shotter expresses as “our outgoing exploratory activities and their incoming results” (2011: 10).

Our moods may distort the understanding of events that happens on the move and impact on how we make sense of the arriving future and the choices we take on different bets on the future: “…while we are a part of the passage of space-time-materiality we can make near future and near past changes that […] alter the passage of events, because we are in attunement with different events and making choices about different bets on the future” (Boje 2014a: 14).

Thus attunement matters to how we act to make potential futures manifest, whether we are conscious or unconscious about it. Understanding the movement of feelings as part of our primordial material engagement with the world relates to Heidegger’s Being-attuned (Heidegger 2008: 172). By being more aware of and managing the moods of our feelings, we may attune in new ways towards choices and actions and become more open and authentic selves in our approach to the manifold of future pathways.

Caring, authenticity in anticipatory resoluteness and attunement are all embodied practices in the engagement with the world. As such, the body is foregrounded in the quantum antenarrative practices.

The four “bobbles” of the model constitute the fourfold of the antenarrative model and relates to Heidegger’s distinction between practical understanding and interpretation. Hence, this part of the antenarrative model relates to the circle of understanding of knowing-in-being-in-becoming. Viewed in the light of the quantum perspective adopted in the article, this circle is developed into an intra-active material, embodied circle of understanding.

Interpretation is founded on fore-having, fore-conception and fore-sight (Heidegger 2008: 191). These three concepts are linked to the practical understanding of being involved in the world.

**Bet and Fore-telling / Fore-sighting**

By being on the move, being-in-the-world is never in a static state but always on its way to become something else. The futural mode is an existentiale of being as Being-towards-possibilities (Heidegger 2008: 188). The most extreme possibility of being, is being dead which essentially is what makes being possible. Thus caring about its destiny is an existential structure of being as being directed towards the future.

Fore-telling practices are a way of working with destiny; of making some possible and attractive futures more potential than others and of preventing some other possible futures from happening. To anticipate is to fore-sight; the sight of what is coming; a warning signal (Boje 2014a: 250) to be understood, interpreted and acted upon. Hence, fore-sighting / fore-telling concerns the bet for the future of the organization.
Fore-telling or fore-sighting is held in a practical fore-having and not in a cognitively derived prediction as its primordial foundation. This something we see in advance is a fore-sight that “takes the first cut” out of what has been taken into our fore-having, and it does so with a view to a definite way in which this can be interpreted” (Heidegger 2008: 191).

The implications of the fore-sighting are two folded. Firstly, fore-sighting / fore-telling is pragmatically rooted in actions-taken; in the practical, embodied engagement and involvement with the material world. That is, the entanglement between the body and the material world.

Secondly, the interpretive cut referred to by Heidegger concerns the meaning-making cut of defining and establishing boundaries of similarities and differences between beings-in-the-world. In a quantum perspective, this cut is extended to encompass the intra-active material-discursive / meaning-matter entanglement. In intra-action, “things” are cut together and apart (Barad 2007: 179), thereby producing or reconfiguring boundaries, properties and categories as well as a sense of self and other. It is thus through the specific intra-actions, a differential sense of being is enacted and meanings and concepts become meaningful (Barad 2007: 139, 2003: 817). According to Barad, the agential cuts are not enacted by willful individuals but by larger material arrangements of which “we” are a “part” (2007: 178).

The intra-active agential cuts are important to the understanding of organizational world-making, as the cuts are differentially enacted in different material-discursive practices (Barad 2007: 178, 376), meaning that some possibilities of becoming are excluded from mattering, others are included. Thus different agential cuts materialize different phenomena / different (re)configurings of the world.

From a quantum storytelling perspective, the cuts are produced in the material, embodied and discursive practices of agential antenarratives. They compose agential intra-active bets on the future.

**Before and Fore-having**

By taking actions on possibilities, possibilities become potential; a potentiality-for Being (Heidegger 2008: 357-358). Taking actions, we path the way for a more potential and attractive future. Acting upon it is a way of for-having it.

Taking action is a process of knowing, as knowing is both a practice and a process. Knowing emerges in the entanglement between the body and the material world in a dance between what is intelligible and what is not. According to Barad, knowing is to engage in material practices which are part of the world-making process, as practices of knowing have material consequences. Which practices we enact thus matter: “Making knowledge is not simply about making facts but about making worlds, or rather, it is about making specific worldly configurations – not in the sense of making them up ex nihilo, or out of language, beliefs, or ideas, but in the sense of materially engaging as part of the world in giving it specific material form” (Barad 2007: 91).

Hence, taken action is a way of preparing the way for the potential becoming of the future. It is a way of shaping the future (Boje 2011a) and relates to the process before the narrative is in place. If the narrative is in place and dominating the process of world-making, the organization is stuck in past oriented knowledge. Thus there is a distinction between knowledge and knowing. Knowing is process and practice oriented and implies the ongoing performance of the world. In fact, knowledge-making practices are world-making practices. The knowledge-making practices are part of the entanglement between meaning and matter, between discourses and materiality. These prac-
tices have performative consequences. According to Barad, performativity is a doing – an enactment of boundaries that entails constitutive exclusions and consequential diffraction patterns (2007: 135). Actions, practices and doings matter to world-making as agential cuts.

The agential cut of fore-sighting and knowledge-making practices can thus not be separated from each other but are entangled into each other. As will appear in the following, the last two “bobbles” of the antenarrative are just as entangled in the world-making phenomenon.

**Beneath and Fore-conception**

Fore-conception is related to the beneath part of the antenarrative that reaches into the grounding of real life at the concrete micro level of the organization. The grand narrative consists of pre-defined concepts and already interpreted, thematic and scientific knowledge at a aggregated, generalized, and abstract level of the organization. According to Heidegger, however, the most primordial kind of knowing is the one grounded in our actions and not in our cognition. Taking action on possibilities is not rooted in a conscious move where we analyze and take cognizance of the situation (Heidegger 2008: 347); instead actions are already part of the situation as being-in-the-world. Anything understood in fore-having and seen foresightedly, becomes conceptualizable through interpretation (Heidegger 2008: 191)

The grounding of the fore-conception in the fore-having can be related to the heteroglossic language development emerging from the dialogue. The fore-conception is part of the emergence of what Bakhtin calls a new real life language (2004) as opposed to a theoretical language. As Shotter & Katz phrase it, it is through: ”...the living moments between people, in practice, that utterly new possibilities can be created, and people “live out” solutions to their problems they cannot hope to ‘find’ in theory, solely in intellectual reflection on them” (1999: 81).

In Heidegger’s thinking, conception in interpretation is grounded in the real life language instead of being derived from the scientific, theoretical and already known world. This performative practice oriented view on language and discourses is reflected in Wittgenstein’s work on language games according to which meanings of words are woven into their activities of their forms of life: “the meaning of a word is its use in the language” (Wittgenstein 2010 § 43). The process is thus closely related to the actions of fore-having.

**Between and Fore-Structure**

Telling, acting and developing language and concepts are all features of the sense-shaping future which relates to the practical engagement with the world and thus to Heidegger’s concept of practical understanding. Structuring and organizing are processes that relates to interpretation as the reflected, interpreted understanding.

According to Heidegger, all interpretation operates in the fore-structure (2008: 191). However, he also states that: “Anything interpreted, as something interpreted, has the “as” -structure as its own; and how is this related to the “fore” structure? (2008: 192). This question has to do with the circle of understanding and with space, time and mattering.

The circle of understanding can work in two ways. It can work as a “circulus vitiosus” (Heidegger 2008: 194); a distorting circle of closure or a disclosing circle of openness.
The “as structure” refers to the already understood and pre-defined meanings. Structures are in place. Things, people and events are already defined and positioned in relation to each other. Consequently, the “as structure” bears some resemblances with Barad’s inter-action and Ingold’s network. However, the interpretation contributes to make the world familiar and intelligible, a place where we are at home, dwelling.

In so far as these interpretations become detached from their grounding in the practical understanding, the circle might develop into a vicious circle. This circle relates to the centripetal, monologic narrative of the single, finalized and dominating story that is erasing, distorting and silencing the living stories. Controlled by the past, the circle reproduces the already known world and based upon this knowledge outline the future development of the organization. This way of organizing is the work of a linear antenarrative which is supportive of the BME narrative.

According to Heidegger, however, to perceive the circle of understanding as a distorting circle is to misunderstand the way the circle works in disclosure (2008: 190): “In interpreting, we do not, so to speak, throw a “signification” over some naked thing which is present-at-hand, we do not stick a value on it; but when something within-the-world is encountered as such, the thing in question already has an involvement which is disclosed in our understanding of the world, and this involvement is one which gets laid out by the interpretation” (Heidegger 2008: 190-191). Involved means Being-open in Being-with. New emerging possibilities of the situation become disclosed through this openness. Consequently, disclosedness is constituted by the open state-of-mind, understanding and discourse, by care and by being already in a world alongside entities within-the-world (Heidegger 2008: 263). What is disclosed to us in the circle is the hidden “positive possibility of the most primordial kind of knowing” (Heidegger 2008: 153, Boje 2014b).

The openness and disclosure are touched upon by Shotter as he states that by being “sentient, embodied, situated, reflexive, and responsive beings” we may become alert to “the incessant creation of novelty” in new emerging situations (2011: 9). They are vague almost unnoticed signs of thoughts of directions, of new ways of relating to our surroundings, of new ways of understanding differences and similarities, and thereby of new ways of configuring the world (Shotter 2011).

Thus the “as” structure “which is constitutive for understanding and interpretation, can be modified” (Heidegger 2008: 196). The modification implies that our understanding of the past may change in a restorying or retelling process of the past. According to Barad: “The past is never left behind, never finished once and for all, and the future is not what will come to be in an unfolding of the present moment; rather the past and the future are enfolded participants in matter’s iterative becoming” (Barad 2007: 234). Thus, space and time are agential constitutive parts of world-making similar to matter, body, meaning and discourses. This intra-active entanglement is signified in her quantum notion of “spacetimemattering”.

Spacetimemattering is entangled with the fore-telling, fore-having and fore-conception. Spacetimemattering viewed as a performative quantum circle of understanding matters to our storytelling constructions and reconstructions of the past and our prevising of futures (Boje 2014a: 20): “Antenarrating involves us in the passage within which selective pasts and futures express this present, belonging to its novelty, participating in it, affecting the course of passage itself.”
The fourfold antenarrative model as accounted for above contributes to enlighten the tensed and constitutive storytelling interplay between narratives, living stories and antenarratives. It provides a quantum storytelling framework for understanding organizational development and change.

**Research Contributions – Final Remarks**

By diffractively reading Boje, Barad, Ingold, Heidegger, Bakhtin, and Deleuze and Guattari through each other, a framework of world-making through material, embodied storytelling practices is developed and proposed in Figure 8: Quantum Storytelling Life-World-Making. The purpose of the framework is an attempt to deepen our understanding of the processes of material life-world-making. Hence, ontologically and epistemologically, it contributes as a quantum perspective on intra-active organizational development and change.

Organizational development and change is understood as a world-making phenomenon. “Making” as in world-making is not similarly to the building perspective (mentioned in the beginning of the article) where building comes to an end in its final form. Rather, making is to be understood as a process of “weaving the world”, of “working from within the world” instead of upon it, on its surface (Ingold 2000a: 382). This resembles Barad’s view on becoming as a process from within the phenomena (from within the intra-activity) (2007).
Organizational development and change viewed as a world-making phenomenon is furthermore related to the life of world, to the life-in-the-process-of becoming. Organizational life is a life-world-making process.

This life-world-making process is an intra-active process of entanglement and interweavement. According to Ingold, weaving continues throughout life as an ongoing “interweaving of our lives with one another and with the manifold constituents of our environment” (2000a: 382). Thus weaving is to Ingold what dwelling is to Heidegger.

From a quantum storytelling perspective, this weaving and entangling process concerns the interplay of the triad storytelling model as accounted for through the diffractive reading of Boje, Barad, Ingold, Heidegger, Bakhtin, and Deleuze and Guattari. The centrifugal narrative attempts to maintain organizational coherency and collective patterns but these are challenged and disrupted by the centrifugal processes of the living story web. The organization is understood as fragmented assemblages of micro-practices and fractal rhizomatic organizing processes. The living-stories and their interplay with the antenarrative practices are important to creative world-making as opposed to narrative reproduction of the ready-made world.

The organization is unsettling, in its process of becoming. Bridging between narratives and living stories, the quantum (fourfold) antenarrative works as organizing processes of merging, entangling and interweaving material, embodied lifeworlds. The antenarrative works in the core of the circle of understanding, addressing what Heidegger phrases as: “the working-out of possibilities projected in understanding” (2008: 183). Consequently, the antenarrative is a process of making the world from within the world; as an intra-active phenomenon.

The proposed framework of quantum storytelling is an attempt to understand the life of organizations as an onto-epistemological quantum phenomenon; a quantum life-world phenomenology. The implication is to view organizational development and change from within-the-phenomena.
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