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# Changing the Organization: Architecture and stories as Material-Discursive Practices of Producing "Schools for the Future"

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#### **Abstract**

I work with the concept of apparatuses of material storytelling as a way to study the enactment of 'the future school'. The article analyses a project at a school that involved students, teachers and leaders building models for learning spaces to inspire the architect who were to design a new building for grades 4-6. The analysis is theoretically informed by 'new materialist thinking'. The analysis show how the project, while producing differentiated learning spaces and ideas about the learning student, configures and reconfigures the organization known as 'a school' in ways that highlight contemporary problems concerning authority, management and the constitution of 'the student', in an education system which is increasingly focused on learning-centred educational management on the students desire and motivation for learning.



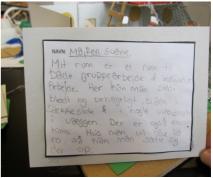


Figure 1. Left photo: Model of a working area at school, produced by a student. The green puffy things are large beanbags. The yellow dots on the walls arewindows. They are meant to be deep so students can sit on the windowsills. Right photo: The text is connected to the left side model and describes the space and how it may be used: "My space is a space for both group work and individual work. Here you can sit comfortably on beanbags and windowsills. There is also a platform. If you want some quiet time, you can sit there".

#### Introduction

In the article I conduct an analysis of processes of material storytelling of 'the future school' as a way of teasing out trends and changes in the organization of everyday life of teaching and learning in education. This analytical and conceptual focus is important, as an increasing number of educational management and pedagogics practices concern the governing of students' desire/motivation to learn (Staunæs 2011, Juelskjær, Staunæs and Ratner 2013). The educational focus on such emotional qualities in the everyday lives of the students is accompanied by an intake of a range of socio-affective-materiel technologies informed by the psy-sciences (psychology, psychiatry, pedagogy (Rose, 1999) that work on bodies and minds to make them "ready for learning". These managerial approaches towards creation of appropriate desire and motivation, calls for new studies of the conduct of everyday life *in* and *of* educational organisations: What are the new tensions, the productive possibilities and the necessary ethical considerations following the new practices? The analysis opens for answers to these questions.

To study such trends and organisational changes through a project where ideas of 'the future school' were shaped through model building and telling stories not only called for a process perspective (from 'organization' to 'organizing') but also for a materiality and affectivity sensitive approach. The article starts by defining its research apparatus; presenting theory and concepts concerning materiality, storytelling, affectivity: I see managing a school as involving very material and materializing/mattering practices and inspired by the work of Karen Barad (2007; 2010) materiality is not a 'thing' to choose to include or exclude. All practices are material-discursive, matter is a doing, a congealing of agency (Barad, 2007). Furthermore I am inspired by Anete Strands coining of "material storytelling", a concept she develops from the work of Barad and Boje. Boje's storytelling concept is tweeked into a – baradian - materialdiscursive concept, taking into account material agencies (Strand, 2012)<sup>ii</sup>. Finally the project "Sensing my school" is presented and analysed as an apparatus of material storytelling. The analysis is carried out as investigation into three moments and aspects of the workshop "Sensing my school", that is, three moments of negotiations of the future organization. I conclude by addressing organizational and leadership/management challenges in relation to the interplay (or intra-action) of environment (architecture, interior etc.) and learning bodies following the problems and possibilities that the analysis coin.

## Organizational changes in schools; changing landscapes of learning and managing

Currently, schools in Denmark (as well as schools in the other Nordic countries and elsewhere) are going through organizational changes that are manifested in changes in the built environment of the schools. The changes have a clear and cross country tendency: There is a demand for differentiated learning environments to facilitate everyday school practices in which the traditional classroom is only one of many learning sites. We are "building schools for the future", an expression you find again and again (Juelskjær, 2011). The changes are not only aesthetic and practical. The new architecture and its concomitant interiors are choreographed with contemporary ideals of flexibility and visibility, contemporary discourses of 'individualized learning styles', and differentiated teaching and learning; they are ways of enhancing the desire for learning. The architectural intervention of changing school buildings by building new schools or remodelling existing schools is a response to a managerial challenge. In the (re)management of leadership, of teachers' pedagogical and didactic practice, and of the 'shaping' of specific forms of learning students, i.e., Stories of 'change', 'the future' and 'architecture' are woven into each other as a technology of managing the schooliii. Educational architecture, interior, furniture and spatio-temporal practices are entangled in psy-management processes of mobilising affectivity – a mobilizing with the intent of enhancing (desire for) learning. *Design translate affective economies* and may help produce learning-able bodies ('calm' and 'desiring learning') but may also (as we shall see) enact other translations, circulations, intensifications.

The empirical material analyzed within the article exemplifies how such steering of the school into the future may be played out, and it shows how this process of managing opens up for negotiation of vital and complex practices of school life. At a school in Denmark, the project "Sensing my school" facilitated workshops in which school children, teachers and leaders produced physical models (30 cm x 30 cm) of desired learning spaces as well as stories of "the good place for learning" (see the photos above). These products intended to inspire the architect who was to design a new school building for the fourth to sixth grade students. Simultaneously, through the workshops the school actors were confronted with each others' hopes, ideas and wishes for the future practices in school. The project "Sensing my school" had additionally two agendas, firstly to enhance aesthetic learning processes, secondly that children should have voice concerning their environment in order to increase their (sense of) agency. As a final fold of the project, I was hired in as a researcher to

follow, evaluate and conduct research on the project. This specific article is a result of following own research agendas, not of evaluating the project as such.

#### **Apparatus**

Let's turn the attention to the theories that inspire the analysis. Within new material and posthuman turns (among many others; Barad 2007, Haraway 1991, Law 2000, Latour 2005, Massumi 2002) the world is theorized as the everprovisional result of acting where acting is more than a question of human activity and agency. A common denominator is the view of materiality as agential and co-active, as constitutive of and constituted by everyday life, through specific actions. There are many possible theoretical and conceptual companions for the conduct of empirical analysis. vi For the analysis at hand, I find Barad's framing of the relation between discourse and materiality productive. The material and discursive are mutually constituted and to mark her process-ontology Barad uses the term intra-actions in opposition to inter-actions – where the latter concept is about the coming together of two preexisting entities (Barad, 2007). In Barad's theorizing, what we take to be entities, are effected by iterative intra-actions; it is through the intra-actions that "agential separability" (Barad, 2007) occurs. Barad frames her position as onto-epistemological. Matter and meaning are effects of intra-active processes of mattering, and "outside of specific intra-actions, words and things are indeterminate" (Barad 2003, p. 820). Barad arrives at this position through a diffractive reading of poststructuralist thinking, quantum physics (especially physicist Niels Bohr) and feminist materiality thinking/posthumanist thinking, which are read through one another. The result is a theorizing of performativity with an emphasis on material-discursive agentiality. What we take to be the world is provisional effects of ongoing becomings of specific apparatuses of material-discursive practices. Intraactions occur in/through apparatuses, and apparatuses are processes of boundary making and -shapingvii. "Apparatuses enact agential cuts that produce determinate boundaries and properties of 'entities' within phenomena, where 'phenomena' are the ontological inseparability of agentially intra-acting components" (Barad, 2007, p. 148). Apparatuses and the agential cuts made within are then meaning-producing devices (boundary-making, difference-producing), where meaning is both material and discursive. Apparatuses are not new conceptual containers or place-holders. They are transformative arrangements, enacting what comes to matter. There is a double reference in Barad's theorizing: Mattering as the cuts produced by the research, and mattering in an ontological sense, as that which goes on regardless of the research (Juelskjær, 2009). viii The apparatus is both a technical means (or method) of tackling a philosophy of science premise and a conceptualization of a fundamental condition of this premise: The world is in constant, unpredictable, transformative movement; conducting science in/by/with this world entails setting up apparatuses through which something can matter and thereby be studied. In a way, you could say that it is about setting up fruitful experiments (i.e. research) in which the researcher is part of that very apparatus. At the same time, apparatuses are also central to Barad's conceptualization of the fundamental conditions of social/world processes of becoming, since what is enacted is enacted through agential cuts in apparatuses of material-discursive production (Juelskjær, 2009). Thus, "onto-epistemology". Finally (to cut a complex theoretical work very short) as Barad's theorizing is inspired by the works of Niels Bohr and by her queering of quantum physical theorizing on space, time, mattering (see especially Barad, 2007; 2010), an agential cut is also a cut producing "spacetimemattering" which means that time and space ceases to be external parameters (time as linear, space as the passive container of the activities), instead 'existence' is an iterative becoming of spacetimemattering (Barad, 2007, p. 234). These theoretical positions are crucial but storytelling as a material-discursive practice needs to be an elaborate part of the research apparatus in order to 'unfold the organizational activity of producing a school for the future.

# Apparatus of material storytelling

In order to position stories and storytelling within this article there are, again, many possible companions and inspirations to draw from, depart from, and pay respect. The qualities of stories and narrative knowing in making up the social world have been conceptualized by a number of scholars. For someone trained within the field of psychology Polkinghorne (1988), Bahktin (1981), Bruner (1990), White (2007) are scholars to look to. With theses scholars we find an emphasis on the social ongoing negotiated production of reality and selfhood through the storying of the same. What we do not find, though, within this body of work, is theoretical and conceptual sensitivity towards processes of power, the silencing of possible voices, processes of 'othering', theoretical and analytical awareness on the hegemonies of the cultural production of reality, as it is played out, contested and struggled with in the lived everyday. Turning towards feminist, queer, black and critical whiteness research we find a tradition of working with lived stories, against hegemonic narratives, analyzing and theorizing the specific, the silenced stories and subjectivities (for example hooks, 1989;

Frankenberg, 1993 Lourde, 2007; Delgado and Stefancic, 1997). Some of the works within this field concerns specifically the materiality of the social in terms of the production of hierarchies through material factors (whereas the scholars mentioned from the field of psychology are occupied with linguistics). Furthermore, within the (subsequent) material turn and within 'new material feminism', you find a concern for the dynamics and performativities of narratives and lived stories and how these should be 'linked' with the material or material-discursive, i.e. positions from where to think materiality and narrative. The theoretical and conceptual re/work on the concept of 'story' and 'narrative' is diverse. To resituate the focus of narratives and stories inspired from feminist, black and critical white studies into the specific research field of organization I will follow the arguments of Jørgensen and Boje (2009, 2010) where they stress storytelling as a living day-to-day practice involving multiple voices and is productive of multiple temporalities. This framing of stories is put forward through (critically, and following Derrida) contrasting to the concept of narrative, considered to be "a tyrant over meaning" (Jørgensen and Boje 2010) with its process of ordering, othering it produces and regulates time and meaning, it cleans up the messy, the lively and multiple: hegemonizes. Further, Strand (2012) takes the concept of storytelling from Boje and reads it through the work of Barad and develops the concept of "material-storytelling" highlighting stories as inherently material-discursive and turning material storytelling into an onto-epistemological – performative – concept.

Finally. In order to analyze the affective tonalities and the governing of these, in the research apparatus of material storytelling, the apparatus will be adjusted to include a concept of affectivity inspired by Brian Massumi. Within Massumis theorizing, affectivity includes atmosphere, moods, intuitions, emotion and sensation. It also concerns the intensity that touches us and is touched by us (Massumi, 2002, p. 15). Rather than being something that one has or is (as commonly understood with the concept of feelings), affectivity must be understood as tensions and intensity, which expresses itself relationally. Affectivity can be impounded and fixed and it can be dissolved. It moves and touches relations and subjects, whereby it creates new relations and subjects. We are affected and it thereby becomes possible to think and feel the world in certain ways. Affectivity has to do with the moment before the (linguistic) appropriation of affect as a particular feeling 'residing in' a person (a feeling which a person may be held accountable for: "why are you angry"?) (Juelskjær, Staunæs and Rathner, 2013; Staunæs, 2011). I am especially interested in how the affective is produced, made durable, transformed and governed through comfort-technologies of furniture (Juelskjær, 2009). A parallel between Barad and Massumi may be suggested for the apparatus: Affectivity, according to Massumi, is what is prior to appropriation. With Barads concept of intra-activity, prior to the agential cut of the intra-actions in the apparatuses, words and things are indeterminate. Then you may think affectivity as residing prior to the agential cut. Thereby I move to suggest (within this research apparatus) the shift from affectivity to feelings as a shift (a turning into something specific) effected through/in the moment of the agential cut: A "cutting together-apart" (Barad, 2010) of bodies-furniture-affects-schoollife-subjectivities<sup>xi</sup>.

#### Methodological considerations

What is certainly going on in "Sensing my school" is negotiation of multiple possible futures – through storytelling but neither unidirectional nor undirected. The storying going on within the workshops is (analytically viewed as) an apparatus for the production of something not totally open ended – but specific versions of 'the future school'. One could frame it like this - again following Jørgensen and Boje's division of narrative and story (2009, 2010): The projectapparatus of "Sensing my school" both makes room for the production and presence of living (material and materializing) stories of multiple experiences and senses of being a student (and a teacher) living and learning and the project is working on turning these stories into narratives – narratives to 'compete with' the dominant organizational/educational narratives already present at the school. My research apparatus, then, is attuned to grasp these productions and translations – in order to question the organization as it is producing itself and its (material and linguistic) 'future': future learning bodies, future relations and managing of these relations. The methodology then is to consider the observed activities as a project apparatus for the production of 1) fantasies about a future 2) a future build environment 3) future students. The methodological and analytical apparatus, then, is a research apparatus for the investigation of the negotiation of subjectivities and authorities and the steering of the school through processes (taking place through the project apparatus) that are - among many things - tactile, visual, practical, affectivity charged and aesthetized through the project apparatus. Then, when I look at material-discursive storying it is through the research apparatus: a processual practice with specific agential cuts made possible set up to study the *project apparatus*: another processual apparatus where not anything gets to matter but something particular and partly designed by the school and the architect. One of the scopes by this

methodology is the possibility of keeping a close look at how the apparatus of research is not identical with the apparatus of "Sensing my school" in which I as researcher collaborate. I want to underscore that these apparatuses (project + research) are not the same and should not be collapsed analytically, though they cannot be *separated*. In 'tooling the research apparatus' for the analysis I bring together the concept of *material storytelling* (Strand, 2012) that highlight multiplicity and the messy, and *apparatus* that highlight openendedness but specificity of productivity since agential cuts take place, not everything matters equally. Apparatus of material storytelling. Furthermore, following Barad's theorizing, the apparatus of storytelling is not "a human-based notion; rather, meaning is an ongoing performance of the world in its differential intelligibility" (Barad 2007, p. 335f).

I work through a specific case of producing the future school, a fruitful case that simultaneously presents some problems and limitations. As Orlikowski (2007) argues with regard to studies of technologies in organizations, when dealing with materiality as "a special case [...] it loses sight of how every organizational practice is always bound with materiality. Materiality is not an incidental or intermittent aspect of organizational life; it is integral to it" (p. 1436). Bearing this in mind, I emphasize that as I follow the theoretical and analytical optics outlined above, I see managing a school as involving very material and materializing/mattering practices. The specific workshops set up the possibilities to negotiate and co-produce the materials, spaces and stories of 'tomorrow' through dialogue with the material-discursive present.

To walk and talk with children about their environment and physical objects as a way to enact the worlds of the interviewee, as I have done, is not a new method. It has long been used in child-centered research, albeit mainly as a way to access the world of meaning-making processes (for instance Andenæs, 1991, Haavind 2005). Furthermore, ANT (Actor-Network-Theory) has taught us the method/metaphor of the network as the grid to plot in/produce humans as dependent on and co-constituted by artefacts and non-human actors at large (Latour, 2005). Within the context of this article, focus is maintained on the simultaneous constitution of both meaning and matter, inspired by Barad as wor(l)ds in the making. I have set up a 'research apparatus of material storytelling' for the work at hand. In the following, the results/outputs will be explored. Analysis is conducted in three moves. *1) Becoming learning students with furniture, 2) Negotiating fusions and authority 3) Arrested bodies.* These are three specific sites of production of 'the future school'.

#### Becoming learning students with furniture

The ideas of the future school were shaped through model building and telling stories about the good school life on different school locations, whereby the stories took shape through intra-action with existing school conditions and interiors. The methods of data production were geared to 'tap into' and co-construct these intra-actions of storying and modeling and consisted of observation of three workshops along with periodic on-site interviewing with the focus of producing reflections concerning the ongoing actions as they unfolded, with interview questions such as: "Can you tell me something about the material you are using for your model?" and "You have placed pillows in this area of the model; can you tell me what they are for?" (See also Bakke and Bean, 2006; Ellis and Berger, 2002; Andenæs, 1991 concerning on-site interviewing). The material also consists of (recordings of) students' and teachers' oral and (pictures of) physical presentations of the work, as well as recordings of peer interviewing about "my favorite place at school", and sketches and models of areas for 1) group work, 2) individual work, and 3) play time.

As I looked at the models, talked with students about them, and listened to students' presentations of what they considered to constitute a "good space at school", I found a lot to do with how to be seated in school. Also research and theorizing suggests intra-actions of bodies and furniture to be vital for the conditions of humans:

"Cache suggests furniture as: >> That object that is directly connected to our bodies. For our most intimate or most abstract endeavors, whether they occur in bed or on a chair, furniture supplies the immediate physical environment in which our bodies act and react; for us, urban animals, furniture is thus our primary territory. Architecture, object, geography – furniture is that image where forms are fused together (1995: 30)<". (Grosz, 2005, p. 21).

Inspired by Cache/Grosz and twisted by the work of Barad in order not to think the fusing of forms as two entities coming together (body – chair) but rather vice versa that the specificities of bodies and chairs and students are the effects of the intra-action, one may ask: What were the becoming of "fusing forms" (ibid.) of furniture and bodies to produce students in the school workshops? Most of the students made models of spaces that let them sit comfortably on something soft. They preferred furniture like beanbags, couches, platforms with pillows: i.e. furniture and space as something

different than the "hard chairs" of the classroom (see pictures at the beginning of this article). In the process of becoming a student in the specific fused forms and in the storying of this process, within the apparatus of "Sensing my school", the child's body is (concretely and imaginatively) molded into various positions, most of which *not* upright, that is, not (for example) a fusion of a body in discomfort and irritation produced as sensing the hard wood chair in the landscape of traditional classroom (the classroom, one might add, of discipline, as analyzed by Foucault (Foucault, 1995)). Sitting and being seated within the school organization is a vital situation since, predominantly, as a student you are not allowed to decide for yourself on qualities, places and ways of sitting – you are 'being seated', and as you are seated, your specific ways of sitting, i.e. the doing/performing of 'sitting-student' is subtlety evaluated by teachers as degrees of opposing-complying with the activities of learning which the teacher has initiated. And so the seating arrangements produced by the students as they imagine their future school setting must be viewed in relation to the arrangement and practice of 'being seated' in class (Foucault, 1995; Bjerg, 2011). Furthermore, in the production of fusions of bodies and windowsills and fusions of bodies and platforms in the models, students are elevated and/or drawn away from the main floor of the school, and so the invitation of the workshops to the students, to produce alternatives to the classroom, effected landscapes that are irregular and with multiple scales. At work in the project apparatus were versions of 'the present' intra-actively constituted and figured with alternative futures of school life.

A remark may be that the models produced in the project first and foremost are examples of current discourses on architecture and interior decoration as facilitators of learning and managing in school. "The models all mime the current design manuals for schools and workplaces", the skeptical discourse analytic researcher might say. "It is all about discourse". That is a feasible conclusion from a specific theoretical point of view. But what I find interesting (i.e. my research apparatus, within which I am agentially cut as researcher) is the potential of the project as material storytelling in which space, sound, light, materials, and experiences intra-act and co-enact needs and desires towards a(nother) school landscape, through the material-discursive practices of imagining and modeling of the future school. Furthermore, my attention is to what this might tell us about conditions of managing the organization of school. I am occupied with how spacetimemattering of school life is worked and reworked through the apparatuses.

Specifically, then, as the students were in the process of making the models and reflecting on school life, the material-discursive dichotomy of soft-hard, within the apparatus of "Sensing my school", enacted the materialization of specific future spaces of learning and future human actors. But there is yet another dimension of the material-discursive practices. There are affective tonalities of model-storying the soft-hard seating. In the workshops certain desires of becoming were present in the intra-action of (preparing for) building the model. For instance, in groups, the students were walking and talking while paying attention to the school landscape, sensing what the different lightning, acoustics, colors, physical arrangements etc. made them feel and evaluated whether or not the specific sites were pleasant/good. Afterwards, sensations and impressions went through processes of translation when building desirable spaces, choosing materials and producing stories and arguments for the choices made. Grosz writes that "furnishings [...] make of our bodies an abundance of sensations and actions" (Grosz, 2005, p. 21). The desires of becoming enacted within the project apparatus could be said to stem from sensations of excitement concerning the alternative fusions of body-furniture-school life (and excitement stemming from being part of the project and being given 'voice'). Excitements and desires do not just float freely within the organization of a school life, the affective fabrics of the fusion of bodies and furniture are 'up for governing', they are 'arrested' and molded by the organization, an aspect now to be looked at.

## Negotiating fusions and authority

I suggest, analytically, that an agential cut arrested soft and hard seating with negative and positive sensations of being and learning as student. The affective fabrics of this soft-hard opposition and the possible fusion of bodies and furniture were governed, appropriated and molded by the organization, for example in interactions and negotiations between teachers and students within the workshops. Affectivity is vital to the re/production of spacetimemattering of the organization, as what is shaped is future desire for learning. Let's look at a specific moment: As a way to learn about architectural concepts and thereby to prepare to make the models, the students were asked to identify and describe their favorite area of the school. Then the students were divided into groups and asked to present their favorite area as they walked around the school. Many students pointed out some benches with mattresses in a hallway in the area used by the oldest students of the school (grades 7-9). There were multiple intensities and high stakes around and about the storying of the "good place" through the benches. The following dialogue took place during a presentation:

We are gathered in a semi-circle around the bench in the area designated for the oldest students, some students are sitting on the bench. We are in the middle of a presentation:

Student 1: It is nice and soft sitting here. It could also be nice with some quiet calm music.

Student 2: I just want to say that you could sit here and write.

Teacher: But if you were allowed to sit here, would you be more concentrated or more drowsy. and then read less because it is 'couchy'?

Student 1: Read more.

Student 3: When I am at home I read better in bed and on the couch than when I am sitting on a chair

Teacher: So it doesn't matter that you are lying down and lounging a bit?

Student 4: The chairs in class are so hard. You shift around on the chair because you are uncomfortable.

Teacher: So you become unconcentrated?

Student 4: Yeah

Teacher: Sometimes the students out here on the bench lie down and I think they look a bit tired. And then I wonder whether you would get tired lying on the bench, but that's not the case?

Student 5: No, not me.

In the intra-action of semi-circle-bench-subjectivities there was a negotiation about which stories to weave into the materialities of the bench, producing possible future fusions of bodies and furniture within future school life; snippets of stories enacting how learning is best achieved and what 'the proper student' might be, now and then. Productions loaded with tension. The teacher addressed the potential risk of the intra-action of student and bench becoming a 'fusion of laziness' instead of a fusion of concentration and learning. He accessed storying of students' disobedience (being drowsy, not working but resting) students in need to be monitored by the teacher in order to work. In their counter storying, students enacted material-discursive resources such as: Hard chairs are not agents of facilitating optimum learning ("I read better in bed and on the couch"... "the chairs in class are so hard"). Another material-discursive resource enacted were the experience of learning practices in a home landscape of softness i.e. a "bed" and a "couch", home landscapes to which the teacher has no access of experiencing and evaluating the efforts of the students.

The storying is of a specific material-discursive practice. A half circle of students, teacher, researcher and workshopfacilitator facing the soft arrangement in the hallway (not, for example, in a classroom, with the students fixed at 'their seats' and the teacher in front of the blackboard). The stories are specifically mobilized through these fusions (or intraactions) of bodies and furniture (and absence/presence of classroom) which further enact different and possibly conflicting forms of authority in wor(l)ding the world (Barad, 2007). The negotiation of authority is part of the affective fabric of the storying. The storying by the students are affectively charged by the authority of privileged access to experiencing one's own body, i.e. the authority of knowing 'this is how my body senses'. So the storying of what the student want for the future touches upon, or are produced through experiences from their everyday, here and now and past experiences, inside and outside the physical location of school. The affective tonalities of the storying of the future (the reconfiguring of the spacetimemattering of the organization) are then specifically fused as the storying access or evoke senses concerning un/fairness of 'being seated' and being told to 'stay put' at the hard chair in class even though it may seem unproductive – in terms of learning and comfort. This line of storying may be more effective or powerful within the project apparatus of "sensing my school" than in the everyday negotiations among students and teachers, since the students are given the 'center voice' in the project. The specificities of the project apparatus enact an agential cut whereby a subjectivity of that very apparatus is produced, enabling the student to stick to the storying of: 'knowing how one's body senses the materialdiscursive conditions of learning, knowing what one feels'.

Teacher subjectivity is also affected and affectively charged throughout the unfolding of the stories, and looking into this analytically it is important to note the specific spatio-temporal dynamics in the empirical example: Students produced a future through sensing and storying a (material-discursive) present: They had gone through tasks of paying attention to architectural categories of light, colors, construction, soundscape, materials, activities and from that task pointed out qualities that they liked and produced stories of "my favorite place at school". And then the stories were told in front of this "favorite place at school" enacting a 'future' through this material-discursive 'present' fronting the bench. The authority of the classroom is challenged, as is the authority of the teacher in being the one who knows/controls. The teacher is mobilized to negotiate the storying. But it is not easy to argue against the authority of the sensing body, mobilized in the student's material-discursive stories in the project apparatus. The concern about 'the fusion of laziness' is not easily getting value and voice in the storying. The teacher mobilizes 'a present' in casu situations he has witnessed of other students: They look tired. He mobilizes a teachers' authority of knowing how to evaluate the effort of the student, an evaluation done by reading the landscape of fusions of student bodies and furniture. But the students still insist that he does not know, that they are the ones who know, and in that respect they insist on this knowing to be of value in 'a future'. Having accessed authority, the teacher then proceeded by confronting the students: Will you get tired, or will you work? So he proceeded by refraining from working against the authority of the sensing body, and instead to work with it, whereby working on how the storying may end and what may be contained in it: By doing so, the teacher furthermore turned the question into a contract between himself and the students (a contract for 'the future'), exercising his right to be the one to hand out contracts for the students to accept in order to be accepted ('students have authority to know their bodies, but teachers have, then, the authority (and obligation) to hold them up on that'). A student reply: I will work perhaps the only possible reply at that moment.

They negotiate what the body may become, and through what affective states it may be allowed to make itself felt. Thereby a storyline of legitimacy and illegitimacy is produced, ready to be tapped and weaved into the future 'soft arrangements' in the new building. But who is right about what the body may become, as it becomes through intra-action of body and soft furniture - who is right about whether it will become a learning body, lazy body, tired body, resistant-tolearning-body, an excited body? The question is central and "deliciously odd" (Foucault, 2006). In its strangeness, it highlights something about current conditions of managing schools concerning the simultaneous emphasis on governing the students and producing self-governing students. A possible optic on the matter – and mattering – is that there are multiple vulnerabilities displayed here: Students' stories are stories of embodied sensations of discomfort and longing for comfort and being heard, and when they were given a voice they insisted on the authority of these experiences. The teacher was obliged and willing to listen and learn, but anxious about losing his grip on (the authority of) the production of learning(sites) and the governing of the students. And there might be additional tensions in sight, concerning the conditions for becoming teacher when students are lounging on the couch with uncertain, situationally conditioned, bodily becomings: In what ways may the teacher access the learning spaces if the situated becomings are undecided and unclear? And could this possibly be uncomfortable for the emergence of a teacher-body? This makes the negotiation of what the future body-and-space may become both relevant and central to the enactment of 'school'. And thereby the negotiations also turn into a question of authority. The production of authority is at stake in the material storytelling of the fusions of forms and sentiments and actions of legitimacy of the 'soft' technologies of comfort. The students exercise the authority of the sensing body, and the teacher takes up the authority to frame the fusion and to re-address it as a self-governing problematic: You are obliged to govern your bodies to become learning bodies/students (and you must govern them within a future more fluid time-space). One could say, then, that tension of negotiation of authority and specific bodies are outputs or results of the agential cuts of the workshop apparatus. It is worth noting that what is not negotiated is whether tired students are better off on a hard chair or in a couch. Or whether or not students can go to the couch, when they sense that they are most excited or inspired to learn. The bodily and affective states are discussed as accomplishments of the comfort-technology or the fusion of forms (be it laziness or excitement/desire to learn), not as things that come prior to the fusion. But they seem to be fusions that must comply with established categories of students and learning ("lazy student" etc.) – not as (for example) establishments of new fluid and shifting socio-material categories.

Teachers and leaders also produced models and interwoven stories of the future spaces of learning in school. How did they address the multiple desires and possible tensions? Did they create a "soft governing" of the learning student/body? And what were the specific futures produced within the apparatus? Focus will be maintained on the performativities of bodies and the affective fabrics in the intra-actions in the apparatuses of material storytelling.

#### Arrested bodies

In the workshop where teachers and leaders participated, the models were made in a positive atmosphere of interest in creating learning spaces. They worked on spaces for specific categories of students like "ADHD students", "teenage girl, doing well in school", "professor-student", "quiet and shy student". The material storytelling of this workshop may be viewed in continuation of the negotiation of learning bodies and authorities from the previous section.

# Picture A Picture B Picture C







Figure 2. Picture A: "Reading tubes", situated in the shared space near the classroom. Picture B: Screen with interactive floor (with one student on the floor and one on the windowsill. Frosted glass windows). Picture C: Platform with screen.

The storying weaved with the model of the 'reading tubes' (Picture A) was:

"It is a small, contained space. If a boy sits here, the space surrounds him. Then he can focus on working; there is no space to play football". The storying with the model of the platform (Picture C): "There have to be pens and paper up here. It is very disruptive for a adolescent girl if she has to go back to class to get paper. It takes ages before she returns. If she returns to work at all".

When the teachers presented their models, their reflections on the models, the functions of the produced space etc., they rarely situated themselves as teachers or leaders directly within or in relation to the models. They focused exclusively on the students' learning activities in regard to how architecture, interior and choice of materials could enact learning. Elsewhere, I have characterized such future/current learning spaces familiar with the ones modeled in the project, as "choice-accelerated-spaces" (Juelskjær, 2009). What is underscored by this naming is that time, space, and bodies have to be governed in other ways in new school architecture. Students (at least for part of the school-day) are supposed to choose learning spaces on their own and let these spaces enable their learning, they must decide which other students they will sit with, and they must manage their time so that they do their work 'in time'. As effect the role of the teacher changes concordantly: classroom management must be rethought when the organizing unit is not the classroom, and the relations between teacher and students alter, when the teacher becomes some version of a 'visitor' in the students differentiated learning environment. In other words, the obviousness of school life is challenged in the choice accelerated differentiated learning environment. The negotiation between teacher and students about the possible 'fusion of laziness' (from the analysis above) is an example hereof. Bearing this in mind, it is especially interesting to see how the teachers appeared with the sites that they modelled. There was an absence of their own presence as teachers and leaders, and a production of authority build into the models and fusions imagined here. Teachers did neither talk about how to interact with the students nor on how to monitor (the work of) the students. They worked with the models while simultaneously storying material-discursive arguments for the sites to be sites of scholarly production. The sites would facilitate concentration and have the capacity to 'arrest the bodies' and turn the bodies into learning students. The sites/spaces were - bodily - inviting and had a "good atmosphere"; calm and quiet. There were examples of soft seating and seating on windowsills and in corners producing the learning-able student body. The 'learning-able body' of the project apparatus is not a generalized body, but differentiated bodies appearing along with specific categories of student. The workshop for the teachers and

leaders produced this sensitivity of categories-bodies-environment. So alongside with the absence of addressing the presence of teachers and management, we get an intensified or differentiated gaze upon students-furniture/environment: "They must be able to put up their feet. Adolescent girls just love to put up their feet" (from teacher presentation of model, picture C). "It is important to have some "nooks and crannies" for restless students. I have made some angles and dividers and an interactive floor you can use to burn off some energy" (from teacher presentation of model, picture B) "I have made this space in a corner of the classroom for this type of student. It has got moveable walls to make the corner a closed environment. He needs to be left alone, to have his own private space, and the others can then visit him here" (teacher, presenting his model). There were reflections and material solutions concerning students' gazes: Either they explicitly may or may not look out (toned or frosted window glass), and may or may not see what is going on in the rest of the inside environment, and may or may not be seen by other students. By these features the teachers and leaders were concerned with the conditions of student concentration. The capacity to look out concerned the possibility to draw inspiration from the outside environment, a possibility that was considered 'good' for some categories of students and 'bad' for other categories of students. Subtly, the apparatus of "Sensing my school" with its focus on the students and on building an environment for student learning, a future of the build environment was produced that substituted the need for the presence of the teacher (and for some, presence of other students) with the presence of the good, student-centered physical environment. The question of learning was turned into an affair between specific categories of students-bodiesmaterialities/spaces; specific cuts of material-discursive futures are effected.

One way, thus, to frame the current turn toward producing differentiated spaces within the organization is that these spaces are 'meant' to produce the desire to learn through a form of self-management facilitated through the space of learning. At the same time, some of the fragility and complexities involved in those very activities are shown in the analysis, both in regard of 'installing' self-management, but also concerning the ways in which the apparatuses becomes apparatuses of category production (and in-exclusion). As an effect of the emphasis on the facilitating capacities of architecture and furniture in relation to the production of learning bodies and subjectivities, what may be called ethics of accessibility, must be discussed: Some students are seen as profiting from having visual contact with trees/nature whereas others seem to need to be enclosed, and thereby withheld from that possibility. XV A category emerges, namely 'the good, able, student that can - and may - work anywhere'. This category may lead to criteria for benefits and punishment. How may these categorizations be negotiated within the everyday – future of – school life? What are the effects on categories, bodies, students and learning when categories are weaved into specific material-discursive-affective sites of learning? In what ways does this situation potentially address the problematic of learning in (what may be negotiated as) an enabling and ethically proper manner, and what are the dangers of learning-disabling categorizations? Responsibility for the cuts made and how we are of these cuts are vital (Barad, 2007), whereby one output of the research apparatus of material storytelling is to point at the need for ethical considerations 'in the heart of the matter' of producing differentiated learning spaces.

# Fractions of a new/future organization?

The aim of the article was to analyze the project "sensing my school" as an apparatus of material storytelling, producing the future school while analytically paying attention to tensions and possibilities concerning (future) school life and management hereof. Bakke and Bean (2006, p. 64) state that "New sensemaking and new landscapes [..] may address and attempt to alter the organization members' corporeality". What may be learned and/or altered through the apparatus of producing a future school? A central feature in the apparatus is the affective fabric of the spaces. Without the gaze of the teacher as the one to arrest the body and produce the desire for learning, it is up to the fusion of bodies and furniture to produce a (strong enough) desire to learn; you could say that this future accentuates management of and through the environment, and there are consequences of this specific art of managing. The desire for learning is to be awakened by the comfort of the space even though it may merely be comfortable in some and not other senses: There is a battle over the becoming of the body as a body that either facilitates or stands in the way of learning, at/through the specific sites, the specific fusions. \*\*vi\*

The materialities and spaces are complex 'stand-ins' of specific gazes and practices of the teacher in relation to the students, and students gazes on themselves as students. When teachers and leaders story their models, they do so explicitly from the vantage points of teaching at and leading a school, and they are co-produced as teachers and leaders within the apparatus of "sensing my school" of the future learning spaces. Imagining the future, the models turn into real physical environments and interior, the agential cuts in the material stories cuts off possible connections to non-scholarly activities

and produce a specific body of comfort that stays with the work at hand. Spaces to arrest the body. Materialized in the workshop and turned into stories of school life affectively charged with hopes for enhancing learning. Though, somehow you could say that hope and hopelessness go hand in hand: The future that is not imagined and thereby not negotiated is the future of the relations of students-teachers, students-leaders, and the teachers bodies (and how they are supposed to sense, move about and stay) in the differentiated landscapes of learning. Or, the relation is only imagined and negotiated in a specificity where the teacher is absent. I find (through the research apparatus) that the apparatuses in production implicitly condition that some of the responsibility for the ways in which time, space and human relations are determined is disseminated from the formal organization and management to other or expanded "entangled agencies" (Barad, 2007) – as the environment. The apparatus of material storytelling weaves the future fusions of bodies, furniture, affectivity, learning, subjectivities and authority. It produces hypersensitivity towards the significance of these future spaces and their capacities. And call for not only didactic and curricular reflections but also ethical considerations concerning the intraaction of bodies, social categories and space/interior – i.e practices of school leadership concerning these issues and processes.

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<sup>&</sup>lt;sup>1</sup> All photos are taken by Malou Juelskjær. The analysis was conducted in spring 2010 as the call for the special issue went out with deadline September '10.

<sup>&</sup>quot;I have taken the inspiration from Anete Strand (via the framing of the special issue of Tamara as "material storytelling") of the concept of "material storytelling". The theoretical, conceptual, methodological and analytical work of framing the term further on as "apparatus of material storytelling" is my own work and responsibility, inspired by Barad (2007) as well as earlier work (Juelskjær, 2007. 2009). I am deeply thankful and indebted to Strand and Tamara, for this wonderful opportunity to take up "material storytelling" as a thinking technology with which to move my work, as well as inspired and thankful for conversations with Strand.

<sup>&</sup>lt;sup>III</sup> In combination with the OECD's contemporary discourses of "effective schools" and "strong leadership", which give rise to governmental demands for specific results from the schools, this new technology leads to an increasing complexity of leadership and of working and learning in the

everyday practice of school life, as well as a goal of "optimizing the capacities of learning for each child in school" (Danish Government, 2011). The new learning environments, the intended and unintended ways in which they are used in everyday school life, the challenges they pose for the organization indicate that learning and leadership are enacted, reshaped and contested through the spatial and material (Juelskjær, 2011).

- <sup>iv</sup> Visit the homepage of the project <a href="http://www.kulturprinsen.dk/da/projekter/sans-for-min-skole">http://www.kulturprinsen.dk/da/projekter/sans-for-min-skole</a>. The project is a corporation between *Kulturprinsen*, architect Ulla Kjærvang and designer Mitten Ferrer and Løgstrup School.
- <sup>v</sup> For an overview of research into organizations and materiality see for example Bakke and Bean, 2006, Orlikowski 2007.
- <sup>vi</sup> For example, Law launches the concept of "relational materiality" (Law 2000), Massey argues that space is relational, open and ever emergent (Massey 2005), and Massumi fleshes out "relational architecture" (Massumi 2002).
- vii The apparatus is partly inspired by the work of King, and her term "apparatus of literary production" (King 1991), to elicit the productivity of the stories, writing strategies and devices as technologies wording the world. King develops the thinking as a means to open up for a feminist culture critique. But the concept of apparatus is also inspired by Donna Haraways re-work from King as well as Michel Foucaults concept of dispositif and first and foremost grounded in Niels Bohrs philosophy-physics about the lab.
- viii For further elaboration of the apparatus see Barad 2007, Juelskjær 2009, Højgaard and Søndergaard 2010, Højgaard, Juelskjær and Søndergaard 2012, Strand 2012.
- Adrian's ethnographic study of creation processes in artificial insemination (2006) is a Barad-inspired take on stories as effective and effects of material-discursive iterative intra-actions. Outside of feminist thinking see Rasmussen (2011) working on oral history through Barads theorizing, and Strand (Strand 2012 and Strand & Mølgaard 2011) for the coining of the concept "material storytelling", inspired by a merger between concepts from Boje and Barad, thereby turning the concept of storytelling, from Boje, into a material-discursive onto-epistemological concept.
- \* For resources of narrative and story thinking within organization studies, see for example Czarniawska, 1997; Bakke and Bean, 2006; Jørgensen and Boje, 2009; 2010; Sintonen and Auvinen, 2008.
- <sup>xi</sup> The " " between bodies-furniture-affects-.... Is to indicate or remind the reader of the connectivity of the intra-acting components.
- xii For reflections and examples of solutions on methodological issues in 'Baradian' empirical analysis see for example Adrian 2006, Juelskjær 2007, 2009, 2010, 2013; Lenz Taguchi 2010, Højgaard and Søndergaard 2010, Schwennesen 2011; Højgaard, Juelskjær and Søndergaard 2012). As Barads work is currently being taken up by many scholars the body of empirical analytical work is by now increasing vastly, but out of scope of this article to present.
- xiii Another interesting aspect that cannot be explored further here due to restrictions of length of article is the soundscape of future learning spaces. "Soft music" is mentioned here, and mentions of 'calmness' and 'not a lot of noise' are also dominant in the students' material storytelling.
- xiv Aspects of the constitution of social and student categories are discussed at the end of the article.
- \*\* According to some didactic principles, students in general should not have visual contact with the outsides of the classroom. As some schools/teachers adapt such principles, windows to outside spaces and into the space of the rest of the school are covered. This is an interesting and under-researched problematic: what may 'the outside' become? What is 'nature' of diverse apparatuses of governing the learning child?
- xvi This opens up new research questions about what desire may become and how it may be molded, and to what consequences within diverse future spaces of learning.