

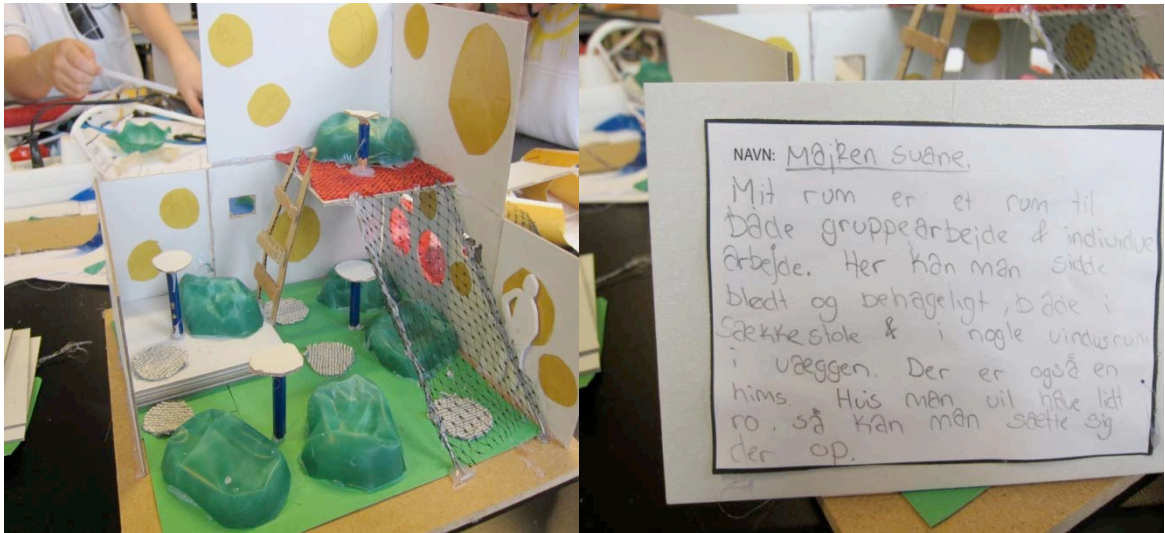
# Designing future learning. A posthumanist approach to researching design processes

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## Abstract

I investigate how a design process – leading up to the design of a new education building - enact, transform and highlight tacit everyday practices and experiences in an education setting, whereby becoming an art of managing. I apply a post-humanist performative perspective, highlighting entangled agencies rather than focusing on human agency. I focus on the design process rather than the designer. The design process accelerated and performed past and future experiences of schooling, learning, teaching. This called for analytical attention to agential forces of not only the material but also the spatio-temporal. The concept of spacetime mattering from the work of Karen Barad (2007) highlights the performativity, the continuous coming into being through entanglement and differentiation, of space, time, matter and meaning. I draw on this thinking in order to reconsider how multiple spatialities and temporalities matter in design processes. Furthermore, the analysis emphasise how design translate affective economies and that attention to those affective economies are vital for the result of the design process.

**KEYWORDS:** Participatory design process, educational architecture, posthumanism, learning, bodies, time space matter, affectivity



**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 are windows. 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”.



The teacher who made the model explained: *“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”.*

(All images by Malou Juelskjær)

## Introduction

The design process analyzed in the paper was a participatory design process at a school; a process (named “Sensing my school”) concerned with creating ‘the future learning environment’. A designer, an architect and a Children’s Culture Institute conducted the process – leading up to the building of a new school building. First of all, the paper outlines the theoretical resources of the research, followed by the methodology of the

research design<sup>1</sup>. A short introduction will be given to the context of the design process: Contemporary ideas and ideals in relation to educational architecture and contemporary understanding of learning/schooling. Following, the analysis is carried out as investigation into three moments and aspects of the design project, showing the design process as a material storytelling (Strand, 2012) in which space, sound, light, materials and experiences intra-act and co-enact needs and desires towards other school landscapes, through the material-discursive practices of imagining and modeling the future school. The paper will focus - and conclude - on what may be learned about design processes (as it taps into contemporary schooling), when focusing on the design process (rather than on the human actors) reshaping of the real – the spatiotemporality of the school and the affective economy running through the staging of these re-shapings.

## Theoretical resources

Within new material and post-humanist turns (among many others; Barad, 2007; Braidotti, 2014; Haraway, 1991; Latour, 2005; Massumi, 2002; Thrift 2007) the world is theorized as the ever-provisional result of acting where acting is more than a human capacity. A common denominator is the view of materiality as agential and co-active, as constitutive of and constituted by everyday life, through specific intra-actions. What we take to be the world is provisional effects of ongoing becomings, becomings that are inherently material-discursive, and outside particular “intra-actions”, words and things are indeterminate (Barad, 2007). Human experience and narratives are thus also produced in and of specific material-discursive intra-actions, narratives and experiences are not “a human-based notion; rather, meaning is an ongoing performance of the world in its

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<sup>1</sup> The project “Sensing my school” facilitated workshops in which school children, teachers and managers and principal ended up producing 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 make 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 was initiated by a childrens culture institution “Kulturprinsen” which specializes in conducting projects with children, and the workshops were designed and carried out by designer Mitten Ferrer and architect Ulla Kjærvang. “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 paper follows own research agendas – thus is not a part of the evaluation of the project.  
<http://www.kulturprinsen.dk/da/projekter/sans-for-min-skole>

differential intelligibility” (Barad, 2007, p. 335f). It is an onto-epistemological theoretical position: We have knowing-in-being, as our experiences and subjectivities are of the world, in its iterative becoming; a post-humanist perspective (ibid.).

Following this line of thinking, design processes may be viewed as agentic, performative material-discursive doings, with effects of the real. Agency is not ascribed to the designer, but emerges in the complex assemblage that enact what may come to be.

Concordantly, the architectural ‘form’ is neither a mere end product nor simply a container of and shelter for human bodies, but may be investigated as a dynamic intra-action with its (so-called) natural and cultural environments (if we are to insert that boundary, even though troubling that very boundary by seeing how it gets made, is part of the post-humanist perspective). The ‘becoming-building’ is characterized by being an (open-ended) process of continuous becoming and differing (see also fx. Christoph & Beyes, 2014; Meaney, 2013; Strand, 2012; Tholander, 2012; Thrift, 2007).

Becoming (-building, -design) is not only a material-discursive process but certainly also a spatio-temporal. Design re-configures the spatial and temporal with which it is entangled as well as spatial and temporal ‘forces’ (or practices, to put it less mystical) constrain what may be. I take inspiration from the work of Karen Barad (2007, 2010). Her theorizing is both a queering of quantum physics and a re-formulation of how to conceptualize discourse and matter when time and space are reconsidered from the perspective of quantum physics<sup>2</sup>. 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). This is interesting in relation to design processes. I shall elaborate in a moment. Central to Barads theorizing is the idea of quantum entanglement, and she states that “phenomenon are material entanglements enfolded and threaded through the spacetimemattering of the universe” (Barad, 2012, p. 44). The ‘past’ and the ‘future’ are implicated in what makes a phenomenon. Space, time – past/future – matter do not ‘stay put’, they are “iteratively reconfigured and enfolded

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<sup>2</sup> Barads theorizing is first and foremost inspired by physicist Niels Bohr, while the ‘queering’ of quantum physics is enabled by inspiration from contemporary thinkers such as Donna Haraway, Michel Foucault and Judith Butler.

Barad suggests “a shift in the ontological and epistemological underpinnings of our theories, not an insistence that quantum physics can provide an explanation for everything under the sun” (Barad in interview: Juelskjær & Schwennesen, 2012, p. 18). It is beyond the scope of the paper to elaborate on Barads thinking with quantum physics (see Barad, 2007; 2010 and for empirical analysis inspired by the queering of time and space fx. Juelskjaer, 2013).

through the world's ongoing intra-activity" (Barad, 2012, p. 44). Hereby Barad stresses time (and space) as "dis/continuous" avoiding dichotomies of past-present-future, stasis-change (Barad, 2010, p. 244). Multiple spatio-temporalities are threaded through each other – and are agentic. The concept of spacetime mattering highlights the performativity, the continuous coming into being through entanglement and differentiation, of space, time, matter and meaning.

So I draw on this thinking in order to re-consider how multiple spatialities and temporalities matter in design processes. The design process of "Sensing my school", is (viewed as) an intervention in- and a re-configuration of a world (a school life) which is already in the making. It creates futures which are 'already there' but on the same time 'will never really be'. It enacts specific pasts, that gets threaded into (materialized in) the hopes for the future, it changes the spaces and the perception of spatialities of school life and movements in space. It reconfigures the spacetime mattering of learning. It taps into ongoing re-configurings of organizational processes of creating and managing school life. Etc. etc.

Finally, then, a concept of affectivity is needed in order to be able to analyze sufficiently the agentiality of the design process – as well as what happens when design processes taps into ongoing processes of organizational life. Affectivity includes atmosphere, moods, intuitions, emotion and sensation. It also concerns the intensity that touches us and is touched by us (Massumi, 2002). 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. (Staunæs, 2011; Juelskjær et al., 2013). The affective is produced, made durable, transformed and governed through the timespacemattering of the designs.

## Research design

The design project "Sensing my school" was set up in order to put – first of all – children/students (secondarily, teachers and leaders) in center of attention, and activating their knowledge and fantasies about school life and learning, in order to use this when

building the school. The ambition of the research of the design process, though, was to shift the focus from human agency to entangled agencies of becoming. The (posthumanist) research design was made to pay attention to the forces of materiality, spatio-temporality and affectivity while investigating which interventions/versions of design and subjectivities that were enacted. The design process was - among many things - tactile, visual, practical and aesthetic. The specific workshops set up the possibilities to negotiate and co-produce the materials, spaces and stories of 'tomorrow's school life' through dialogue with the material-discursive present.

Researching these processes of becoming, my focus was on the simultaneous constitution of both meaning and matter, inspired by Barad (2007) as wor(l)ds in the making.

The ideas of the future school were shaped through learning about design categories (light, colors, acoustics, materials etc.), telling stories about the good school life on different school locations, and ended up with model building (and negotiations with the architects who made the school building), 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 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?". 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 places for learning.

## The context of the design process

I am occupied with how spacetime-mattering of school life is worked and reworked through the design process, as fantasies of the future as well as sensations of/from the past and present was woven into choices of (and agential forces of) materials, layout of spaces and storying of school life and learning. 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’.

Contemporary educational 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 and they are ways of forcing changes of how teachers teach: Change the spaces, the practices will change accordingly, the logic seems to be. In that respect, the architectural intervention of changing school buildings by building new schools or re-modeling existing schools is a response to a societal and a managerial challenge of changing ‘the school of the industrial society’ in light of the post-industrial era: The school system must produce humans with the skills/capacity for ‘innovation’ and students who do not do what they do because they are told to, but instead because they ‘desire learning’ (see fx. OECD, 2013). One could say that the school of the future is a school always hunting for new capacities of the learners - opening the bodies and minds to make them always “ready for (more) learning” (Juelskjær and Staunæs 2014). But it is not all that clear what the consequences are in the lived school life and the management of the same – or how the buildings and interiors in fact may contribute. In the analysis now following, we will see how design translate the organization of school and how design translate affective economies of schooling and may assist in producing learning-able bodies (‘calm’ and ‘desiring learning’) but may also (as we shall also see) enact other translations, circulations, intensifications as it works as an art of managing.

## Becoming learning students with furniture

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 to think of the specificities of bodies and chairs and students as constituted by the intra-action, one may ask: What were the becoming of “fusing forms” (ibid.) of furniture and bodies to produce students in the design process? 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. In the process of becoming a student in the specific fused forms and in the storying of this process, within the design process 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. 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 subtly 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, as the students have come to experience and know schooling and themselves as students within and across spatio-temporal arrangements. 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.

Specifically, then, as the students were in the process of making the models and reflecting on (their experiences of) school life, the material-discursive dichotomy of soft-hard 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 enacted. For instance, in groups, the students were walking and talking while paying attention to the school landscape, sensing what the different lighting, 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 design process 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, furniture and futures are ‘up for governing’, they are ‘arrested’ and molded by the organization, an aspect now to be looked at.

## Negotiating (future) fusions and authority

So soft and hard seating were enacted with negative and positive sensations of being and learning. 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 the organization, as what is shaped is ‘future desire for learning’; and thus, affectivity is vital in the design process. 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. 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. In their counter storying, students enacted material-discursive resources such as: Hard chairs do not facilitate (desire for) learning ("I read better in bed and on the couch"... "the chairs in class are so hard").

The stories are specifically mobilized through these fusions (or intra-actions) of bodies and furniture 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. This line of storying may be more effective or powerful within the context of the design process than

in the everyday negotiations among students and teachers, because the students are given the ‘center voice’ in the project enabling the student to stick to the storying of knowing how one’s body senses the material-discursive conditions of learning, knowing what one feels.

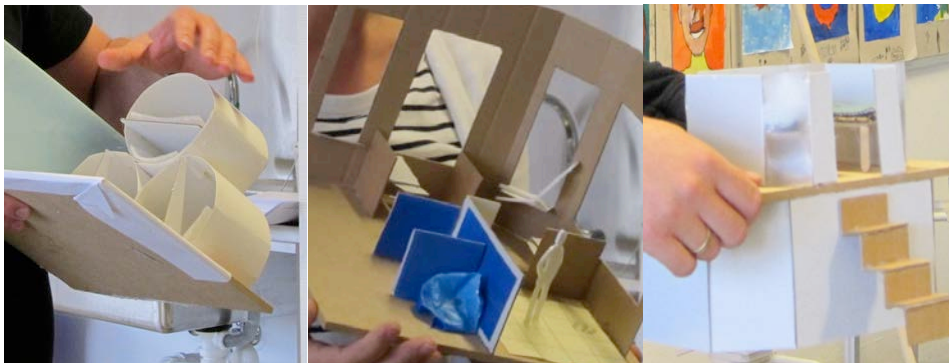
Teacher subjectivity is also affected and affectively charged throughout the unfolding of the stories, and looking into this analytically it is important to note the specific spatio-temporal dynamics in the empirical example: Students produced a future through sensing and storying a (material-discursive) present: They had gone through tasks of paying attention to architectural categories of light, colors, construction, soundscape, materials, activities and from that task, they 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 as well as the authority of the teacher in being the one who knows/controls, is challenged. The teacher negotiates the storying. But it is not easy to argue against the authority of the sensing student body. The concern about ‘the fusion of laziness’ is not easily getting value and voice. The teacher mobilizes ‘a present’ (or ‘facts’) in casu situations he has witnessed of other students: They look tired. He argues through 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 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: A student reply I will work - perhaps the only possible reply at that moment. A ‘contract’ for the future is conducted. The design process enacts a negotiation of 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-to-learning-body, an excited body? The question is central and “deliciously odd” (Foucault, 1994). 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. One could conclude that tension of negotiation of authority and specific bodies are outputs or results of the design process.

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? Focus will be maintained on the performativities of spacetime mattering and the affective fabrics of the design processes.

## Arrested bodies

In their workshop, teachers and leaders worked on spaces for specific categories of students like “ADHD students”, “teenage girl, doing well in school”, “the nerd”, “quiet and shy student”.



Picture A

Picture B

Picture C

**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, enclosing the elevated area.

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 an 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 did not situate 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, as exemplified in the quotes above. Elsewhere, I have characterized such future/current learning spaces familiar with the ones modeled in the project, as “choice-accelerated-spaces” (Juelskjaer, 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, as the teacher becomes some version of a ‘visitor’ in the students differentiated learning environment. In other words, the obviousness of school life is challenged, and it is not all that certain what the teacher becomes, how teacher-student relations will be played out, how the teacher may ‘secure/control’ that learning takes place etc. 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 modeled.

Teachers did neither talk about how to interact with the students nor 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 spaces and interior would facilitate concentration and have the capacity to ‘arrest the bodies’ and turn the bodies into learning students. Human (institutional) authority and monitoring is thus transformed and/while build into the models – and the space and interior. This distribution of agency, as produced by the design process, is quite interesting.

Further investigating the materiality and the interwoven storying of the spaces and interior, the sites/spaces were - bodily - inviting and had a “good atmosphere”; calm and quiet, producing the learning-able student body. The ‘learning-able body’ of the design process 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 (and the absence of addressing the how of the presence), the design process produced an intensified and differentiated human 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).*

Teachers and leaders had reflections and material solutions concerning students’ gazes: Either students 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. So the design process enacted intensified awareness concerning the visual sense and how this sense should be ‘managed’/governed in order to enhance – and not disturb – learning. Furthermore, “restless” bodies with too much energy, and bodies needing comfort (“putting up the feet”) was enacted as bodies with needs and desires to be understood, cared for and ‘managed’ (instead of disciplined in the old-fashioned sense of it). One might note, though, how the design process co-constructs category production (and in-exclusion): The contours of a dichotomy between two categories may emerge out of the design: “the good, able, student that can – and may – work anywhere” and the “the student with problems that we may put in the enclosed, carefully and well-meaningly designed – corner”. These categories and their ‘spaces of existence’ may lead to criteria for benefits and punishment. Then it may be important to ask ethical or deconstructive questions of “Who may become what, through which material-discursive intra-actions – and who/what is excluded from becoming and with what consequences for the conditions

of living”? “How do organizational (and design) processes produce someone who “needs to be left alone” and “what are the material-discursive conditions of not being ‘trapped’ in those categories and the designs allocated”? Or even “how may design enable the human ‘escape’ from that very design?”<sup>3</sup>

## Learning from design

The design process starts (always) ‘in the middle’. As an intervention in a messy, complex organizational reality-in-becoming, it produces, transforms – and manages – that very reality, with real effects. The specific process and the materials that were used in “Sensing my school”, becomes ‘vibrant matter’ (Bennet, 2010) enacting stories of schooling and hopes for the future. The softness of seating arrangements for example, became particularly vibrant and particularly agentic as it was enacted within a design process that had a strong emphasis on the right of children to ‘voice’ (that is; enact and be enacted by) their experiences of sensing material and spatial qualities in relation to processes of learning and schooling.

At the same time the analysis shows how the fact that the design process start in the middle of ongoing (organizational) life is important to be aware of. The team had qualifications on voicing children – whereby the students were enabled to insist on certain experiences, whereby producing something else than was already ‘there’. But the team had no specific knowledge about the complexity of school organization, or knowledge on what are current shortcomings in pedagogy and didactics as well as what are problematics in how – in terms of management/leadership – to steer the school in the transformation into ‘the future’. The effect is that the design process, as it engages with teachers and leaders, enacts shortcomings of the futures that are already lived: The teachers ‘disappear’ in their own modeling and storying of future spaces of learning. Hereby the design process unintentionally performs contemporary problems; a lack of visions for nuanced interactions between teacher and students (while enhancing learning) in the new/future spaces.

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<sup>3</sup> Certainly, this is a complex discussion of in- exclusion that is beyond the scope of this paper to address in any length. Here I only wish to stress how design processes may accelerate unintended category productions and how new problematics concerning categories in school may be added as the categories are ‘spatialized’ in these new ways. And I ponder about if and how so, design may work against becoming ‘category-traps’.

Subtly, within the design process of “Sensing my school” with its focus on the students and on building environments for student learning, a future of the build environment was produced that substituted the need for the presence of the teacher with the presence of the good, student-centered physical environment. The question of learning was turned into an affair between specific categories of students-bodies-materialities/spaces. Specific material-discursive futures are effected. Consequently, it becomes up to the fusion of bodies and furniture to produce a (strong enough) desire to learn. The spaces are to produce the desire to learn through hitting the bodily sensations of becoming. This future accentuates management of and through the environment and there are consequences of this specific art of managing. 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 design process weaves past and 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 pedagogic and curricular reflections but also ethical considerations concerning the intra-action of bodies, social categories and space/interior: In the material process of modeling and storying the agencies of the models shows how design processes (as complex, material-discursive assemblages) are not innocent, but contribute to category production, in-exclusions and may ‘work’ beyond cognition hitting the senses, with possible (intended as well as unintended) effects for futures-to-come as well as pasts to live and sense.

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