Design Things: Drawing Things Together and Making Things Public

Pelle Ehn

Abstract This assemblage is based on the talk I gave at the EASST010 conference in Trento, Italy, September 03, 2010. It is composed of several kinds of materials. The ground structure is formed by the slides I showed at that occasion. These slides are commented in three different ways. Firstly by excerpts from the talk, secondly by comments added now when this assemblage is put together, and finally quotes from "Design Things", the book manuscript around which the talk circulated.

Keywords design; sociomateriality; things; controversy; assemblage.

Thank you for inviting me here. It is a big honour to be allowed to present in a community different from your own, and trying to make sense out of the things that I think I have learned from this community. Still, many of you will probably think I have just misused or misunderstood what it is all about.

I will not give a literature overview or an overview of the field. What I will do instead is something that could be called to design "things", by "drawing things together" and "making things public" – words and phrases that are familiar to you in this community.

TECNOSCIENZA
Italian Journal of Science & Technology Studies

the challenge: to draw *things* together

A Cautious Promethea? A Few Steps Toward a Philosophy of Design (with Special Attention to Peter Sloterdijk)
Keynote lecture for the *Networks of Design* meeting of the Design History Society
Falmouth, Cornwall, 3rd September 2008

bruno latour

"What is needed are tools that capture what has always been the hidden practice of modernist innovations: objects have always been projects; matters of fact have always been matters of concern."

"*dasein* ist design" (slotterdijk)

the *dasein* of design is *thinging*

What I want to do is to try to respond to a design challenge that Bruno Latour put forward two years ago to the Design History Society in Cornwell.

In that talk he observed that designers over the years have been so good at "drawing" – from four hundred years ago with the central perspective, to technical drawings, and onwards to today with the 3D CAD renderings. He asked: what if this kind of competences could be used to draw things together, to lay out the controversies in the objects of concern that are involved in the single object. Could this designerly way of approaching the object of design be a way to shift from drawing things, objects, to drawing things together? That is the challenge that I will look into. What is needed are tools that capture, in Latour´s words, what has always been the hidden practice of modernist innovation: objects have always been projects, matters of facts have always been matters of concern.

circulating references

design students in vienna and malmö making things take place

ATELIER architecture and technology for inspirational learning

Design Things by A.Telier

(The doing of) Design Things PhD summer school

design students in in pukeberg drawing Things together

My structure for this talk is a narrative of "circulating references", to borrow another of Latour's concepts familiar to most of you. It starts with the "drawing" practice of master design students in Vienna, Austria and Malmö, Sweden. They became involved in an EU research project called ATELIER, Architecture and Technology for Inspirational Learning, and that project designed a number of technological artefacts, objects, and potential things to enhance their "drawing" skills. These objects and these design practises became the grounding for a group of people, under the collective name of A.Telier, to try to reflect further on how "to draw things together" in a design practice.

A result of this transformation was another object, a manuscript for further circulation. This object was last week, or rather starting already half a year ago, transformed into a PhD course on "the doing of design things" and opened up as a "thing" for design students involved in "drawing controversial things together" ending up as new objects and "things" in transformed design student practices.

design and architecture students
in malmö and vienna "drawing" things

The two practical settings that inspired our search for inspirational design "drawing" environments were chosen to be complementary. One was a "traditional" master's program in architecture. It was complemented and contrasted by the setting of a new-media-oriented master's studio program in interaction design.

The Academy of Fine Arts is Vienna's main university of arts; its history goes back to 1692. The studio-like learning environment brings together a diversity of resources-disciplines, people, materials, and technologies. These resources include "hard facts" about context and requirements, images and metaphorical descriptions of qualities, such as atmosphere, movement, and spatial configurations, knowledge about construction, material, detail, and so on. The resources are multimedial—they range from physical objects like CAD plans, sketches, and scale models to samples, product catalogs, art books, and everyday objects, as well as immaterial resources, such as conversations and emotional reactions.

The School of Arts and Communication at Malmö University, is by contrast, very young. It opened in the autumn of 1998. The interaction design program at the master's level is a two-year full-time studio based program and applies a broad perspective on the interaction design field. Students have a mixed background including computer science, design, art, and music. Besides the computer, they typically work with a mixture of video clips, mock-ups, and other physical representations, such as scale models, prototypes, and so on. The design studio is their permanent base, but they also have access to a craft workshop for designing physical devices, a "black box" where they can create full-scale mock-ups of scenarios, and a well-equipped music studio to record sound and music.

The *Atelier* project studied design education practice, developed prototypes to enhance such education, introduced prototypes to different real-world settings (design and architecture classes) and, partly in collaboration with the students, reflected on the interventions to learn about how to improve both architecture and technology and the learning situation. This "pro-searching" is built on a user-collaborative approach involving users and researchers as reflective co designers and evolves from early explorations of practice and visions through field trials with gradually more integrated scenarios and

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prototypes for inspirational learning. (A.Telier manu-
script)
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The ATELIER project, as an EU project, produced lots of objects. These design artefacts were given names like the Texture Painter, the Mixed Object Table, the Interactive Stage, the Tangible Archive, the Physical Building Block, the Tangible Image Query, the eDiary, the Tracking Game Table…and I could go on…


ATELIER: qualities of inspirational design environments …

The interest of the project had to do with inspirational qualities of design environments. So we were interested in how qualities of such an environment could be supported, and we explored aspects like materiality and diversity of representations, creative density, connection, multiple travels, narrativity, reprogramming, dimensionality, scaling, configurability, etc. These were the kind of qualities that the project struggled to support. I will not talk much more about the project, but just conclude that most of this worked reasonably well. The students got quite subsumed into this new design environment, to the degree that they did not get out to do their design work into the field anymore. This great design environment was really too cocooning, with great "drawing" tools, but not really supporting "drawing things together".

ATELIER: … and out of the box and into controversial things
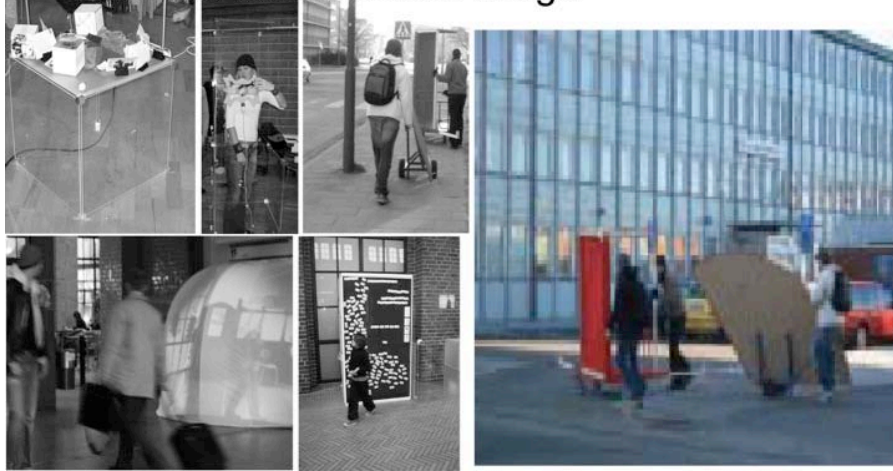
So towards the end of the project we literally had them move the design studio out of the box and into a controversial thing, into public space, etc. So that is how that project ended, on the one hand with a number of tools and an environment supporting designarly "drawing" of complex objects, but with the conclusion that these activities had to be moved out into public space and controversial things to really support engagement in "drawing things together".

"Design Things" by A.Telier

TABLE OF CONTENT

A group of us continued the work into something that became a manuscript, another designed object, that we in the end came to call "Design Things". We met for two years and worked on a manuscript that tried to deal with these issues, but not as an edited volume but as a collective writing. Even if we found a publisher in 2007, it turned out to be really controversial to act as a collective writer (now, four years later the book is eventually being circulated by the publisher, MIT Press September 2011).

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Even if "A.Telier" has been intensively doing research on
interaction design and related areas for the last twenty
years, his name is not known in the research community.
Probably from a strong case of shyness, or some other
form of psychological fragility, during these years he
(or she) has hidden behind a large variety of pseudonyms.
We know for certain that he has widely published and has
frequently appeared in Aarhus and Malmö as Pelle Ehn; in
Copenhagen he has also gone by the name of Thomas Binder.
In Italy he is well known as Giorgio De Michelis, while
in Wien he has adopted a feminine pseudonym: Ina Wagner.
Moreover, in recent years he has augmented the confusion
by creating new younger aliases: in Denmark and Sweden he
has appeared as Per Linde, while between Finland and Ita-
ly he appears under the name of Giulio Jacucci. This list
is not complete, but illustrates adequately a behavior
whose deep reasons merit attention. It seems as if he or
she needs a multiplicity of personalities to deal with a
complex subject like design, investigating and practicing
several aspects of it as well as proposing different
viewpoints on it, without being able to take a consist-
ently uniform point of view. A turning point in his/her
life has been the project Atelier (the name cannot be
casual!) where, with all his/her different names he/she
has played almost all the roles, multiplying him-/herself
like a Fregoli of research. At the end of the Atelier
project, A.Telier has spent some years reflecting on its
outcomes, coming out finally with this book—Design
Things—which he signs for the first time with his/her
true name.
So what is suggested is a "deconstruction" of the indi-
vidual designer and the object of design, an edifying ap-
proach for reflection and dialogue for, by, and with fel-
low designers and design researchers. This deconstruction
begins, following Heidegger, with the *things* themselves,
or more specifically in our case with sociomaterial *de-
sign thing*s. Such *things*, or rather events of "*thinging*"
(as Heidegger would put it), gather human beings; they
are events in the life of a community and play a central
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role in community members' common experience. In this spirit, Bruno Latour has called for "*thing* philosophy" and "object-oriented politics" (Latour and Weibel 2005), and by doing so has also challenged designers to make public the object of design. *Things* are not carved out of human relations, but rather of sociomaterial, "collectives of humans and nonhumans," through which the objects of concern are handled. At the same time, a designed artifact is potentially a thing made public, since once it is delivered to its users, it becomes matters of concern to them with its new possibilities of interaction. A turn toward *things* can, as will be elaborated upon, be seen as a movement away from "projecting" and toward design processes and strategies of "infrastructuring" and "*thinging*". (A.Telier manuscript)

from "things" (objects)
to "Things" (assemblies)

This shift of meaning in the word 'thing' is also of interest when we reflect upon how we as designers work, live and act in a public of design that permits the heterogeneity of perspectives and actors to engage in alignments of their conflicting objects of design.

things as governing assemblies and places
"thingings" as events in the life of a heterogenious communities
things as "collectives of humans and non-humans"

To a community like yours the complexity of "things" and objects are well known. This is not so much problematized in the design community, but just as Latour and others, we are struck by the etymology of the English word "thing".

The etymology of the English word "thing" reveals a jour-
ney from meaning an *assembly*, which was decided on be-
forehand to take place at a certain time and at a certain
place to deal with certain "matters of concern" to the
community, to meaning an *object*, "an entity of matter."
So, the term *thing* goes back originally to the governing
assemblies in ancient Nordic and Germanic societies. The-
se pre Christian things were assemblies, rituals, and
places where disputes were solved and political decisions
made. It is a prerequisite for understanding this journey
that if we live in total agreement, we do not need to
gather to solve disputes, since there are none. Instead,
the need for a neutral place, where conflicts can be ne-
gotiated, is motivated by a diversity of perspectives,
concerns, and interests. (A.Telier manuscript)

how can we draw things together?
how can we gather and collaborate
in and around design things?

This journey back and forth is interesting for us to consider. A suggestion in the manuscript is that "things" are going on in assemblies and places, "thingings" are events in the life of heterogeneous communities, and "things, as we have learnt from this community, may be seen as collectives of humans and non-humans. But for the design community we also have the question of an object out there, and the assembly of the design thing itself, but we also have the question that the object of design is not yet there.

So, this is our complexity: to deal with a "thing" that is not yet there, that does not yet exist. It seems like the vocabulary of "things" and objects could help us a

bit. For designers, there are two kinds of outcome of a design thing: there is the engineering outcome: devices providing access to functions, but at the same time there is the architectural outcome; "things" modifying the possible spaces of inter-action (functional, aesthetic, cultural, etc.). In the manuscript we investigates things, devices and the object of design.

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We propose a view of design as accessing, aligning, and
navigating among the "constituents" of the object of de-
sign. People interact with the object of design through
its constituents, be those constituents things, arti-
facts, or representations. In experiencing things, ob-
jects, and devices people are primarily involved not with
different types of materials, but in different kinds of
interaction. (A.Telier manuscript)
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(social) things and material (representatives)/ constituents

things =
• socio-material assemblies
≠ physical devices

design artifacts =
   participating representatives/constituents
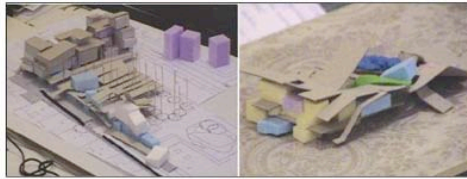≠factual representations

So when moving into the design studio, we have to deal with social "things" and material representatives or constituencies, "things" which are socio-material assemblies, but also thing as physical devices, and as design artefacts that we work with, the models and sketches etc., which in turn could be looked upon as partici-pating representatives or constituencies. This is very different from the idea of fac-tual representations. Design instead becomes a way of creating, importing, ma-nipulating, cancelling the different constituencies of this "thing" and its object of concern. So the question becomes how to do that. The manuscript explores this in terms of metamorphing of the object of design, by investigating the performativity

of "things" and by hinting at how designers may journey an emerging landscape of design and not least how in design projects and other design engagements designers may "draw things together".

design as metamorphing objects

a focus on the materials and artifacts
through which an object of design
evolves

design objects as *not* being unified or singular.....

design work proceeds through transformation,
articulation and objectifying of material
'representatives'
(constituents of the object of design)

How do designers mobilize, manage, and transform artifacts and their interpretations? Our approach explores how the web of "constituents" is weaved around a drifting object of design as the designer engages in its transformations. Design work is looked on as an act of "metamorphing," where design concepts are envisioned and realized through objectifying and manipulating a variety of representations. (A.Telier manuscript)

design as performing the thing
experience, expression, event
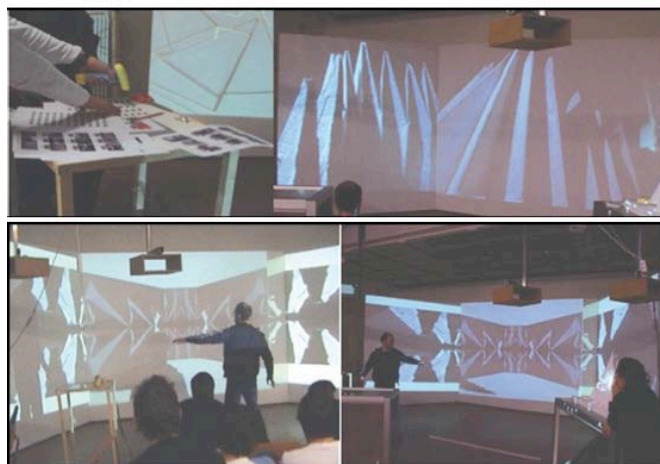
How do designers express and experience design objects?
The approach here is to describe and explain the evolu-
tion of the design through the designer's performance of
it. This includes considering narrative temporalities,
fictional spaces, and creative constraints as basic fea-
tures of performing design, and looking at characteris-
tics of staging design events. We suggest an interven-
tionist, participative and experiential understanding of
design as purposeful staging and accomplishing of events.
(A.Telier manuscript)

design as places imagined and enacted

herbert simon
problem-solving
abstract design space
decomposition of
and searching in
the design space
external to designer

donald schön
(+ problem-setting)
emerging as-if worlds
conversation with the situation; designer involved
(a journey into places)
as lived and imagined landscapes of design

We propose particular notions of place and landscape to
explain how the design environment is performed in the
work of designers and how a situational ground is enacted
and transformed as design artifacts emerge. We suggest
the concept of an "'emerging landscape"' as an alterna-
tive to the notion of an abstract design space, an expe-
rienced landscape in which the designer journeys and
dwells. (A.Telier manuscript)

"Objects have always been projects", but projects are preferably performed as Things

Let's now move to the design project thing and questions of participation and representation. Latour points out that objects have always been projects. But we could, from a designerly view, add that projects perform things. So, this mean, as I mentioned earlier, to design "things". For us in the design community this means a shift away both from a tradition of waterfall or other sequential models of analysis, design, construction and implementation, but also going beyond thinking of user participation as the ultimate solution. Questions have been raised like: how to construct a finished objects of design, what kind of task is that and how do you go about it, how do you align constituents around a shared problematic objects of concern, how do you make these practices reportable (all the work we do with ethnography, participation, fieldwork), how do we make these objects possible to manipulate, through working with sketches, models, prototypes, games, etc., and – last but not least – how is a design made into a public thing, how does it open up to controversies among participants in the project as well as outside, in workshops, exhibitions, public debates. In this view, designing and "drawing things together" becomes a matter of aligning, engaging, attaching representatives or constituents in the life cycle of design objects and devices, and in making and designing a thing, as this collective of humans and non-humans.

There are at least to two strategies to draw things together in design projects: to focus on "use-before-use" or "design-after-design" as Johan Redström has put it.

drawing things together I:
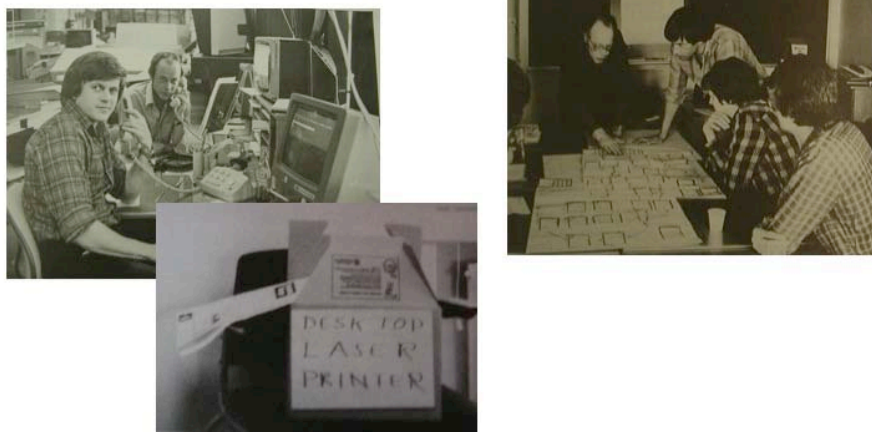participatory design thinging
"use before use"

- strategy:
- focusing on Things (assemblies) before things (objects) and use before actual use
- by user participation in design

Let's start with use. This is the traditional way to go about drawing things together in my own field and is often referenced as Participatory Design. Basically, the idea is to say: well, Let's invite users – we know who they are, who the human constituencies are – and have them participate and, by that way, envision a future use, and we use all these tools, all scenarios and prototypes to do that. It could be said: to focus on assemblies before objects, and use before actual use. Design by doing as prototyping, design by playing as performing of visions, and more generally design by participation as the making of shared design things, are key elements in engaging participants/constituents in this approach to drawing things together. I will not go into any details here. So this is a very unfair history of Participatory Design in thirty seconds (Ehn 1988; Greenbaum and Kyng 1991).
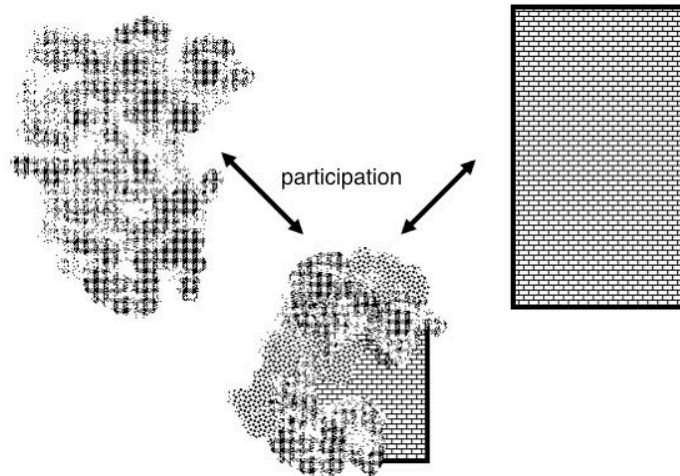
"design-by-doing": prototyping
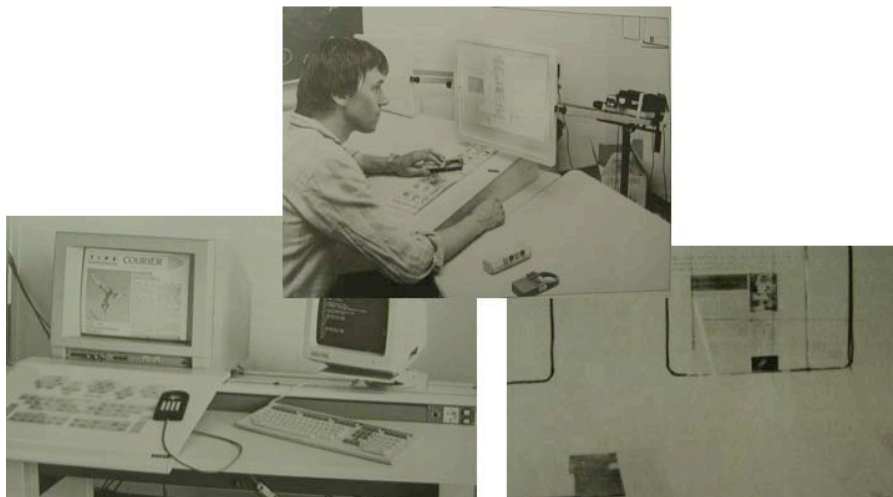
"design-by-playing": performing visions

design and participation

design by participation - making a design thing

drawing things together II:
infrastructuring Things
"design after design"
strategy:
- opening up for potential design after actual design
  by deferring some design to use
- from design things aiming at useful products and
  services, to design things to create good
  environments for future design things at use time
- configurable open-ended social, technical and
  spatial infrastructures/ or open-ended
  prototypical practices.

This is maybe also the right moment to pay tribute to Susan (Leigh Star), to her concept of processes of on-going infrastructuring (and special attention to those being marginalized in these processes). This is a question of how to draw things together for "design after design". What we need to do is to design a thing that opens up for potential design after the actual design in the project has taken place, to defer some of the design until later on, assuming that people would be interested in doing that (an assumption that could be questioned). We go from designing things aimed at use of products and services, to design things, to create good environment for future design things, in the future, at use time, wherever and whenever that might be.

infrastructuring

- not "substrate" on which "tools" runs or operates, but
- "substance" that emerges *in situ*
- relational concept: it becomes infrastructure in relation to organized practices
- *"an infrastructure occurs when the tension between local and global is resolved"* (Star & Ruhleder, 96)

shaped over extended timeframes:
- selection, design, development, deployment, enactment
- mediation, interpretation, articulation
- adaptation, appropriation, tailoring, re-design, maintenance

We should not focus on the infrastructure but on the process of infrastructuring, which is ongoing between the here and now and somewhere in a future we know very little about. There are a lot of practices involved in this: selection, design, development, employment, enactment and, later on, with other actors, articulation, adoption, appropriation… The list could be much longer. All these kinds of practices seem to be involved in this infrastructuring and it becomes an important work how we make it possible for diverse actors to get involved into the performing of these kinds of practices. In the manuscript we suggest some strategies – protocolling, formatting, configuring, working with components, working with patterns, working with ontologies, working with ecologies of things etc. That has to be for another talk, or for the book, if it eventually comes out.

out of the box and into controversial things ?

Despite all the potential merit of drawing things together through strategies of designing as engaging users in potential use before actual use or designing platforms that open up for design after design in actual use there are challenges beyond this, so to say out of the box and into participation in controversial public events.

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Where will the design studio of the future be situated,
who will participate, and what kind of "design games"
will they play? Is there a new role for the professional
designer to play that takes place "outside the box," by
participating in controversial public events? In the fi-
nal chapter we reflect on such issues of design "outside
the box," extending design into political processes, pub-
lic debates, and possibly even subversive but creative
misuse. In doing so we reflect on values that guide such
design and we look into a few controversial issues, such
as: Are designers the enemy of design? (A.Telier manu-
script)
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Call for participation:

NORDES PHD SUMMER SCHOOL 2010
(The doing of) Design Things

Pukeberg, Nybro, Sweden, 23.8 – 27.8, 2010
Last day of registration April 19. 2010

Design deals with things, but what does that suggest? In *design practice* the things we deal with may be *objects*, products, artifacts and services, but also *assemblages*, processes, projects and even parliaments. This diversity also goes for contemporary *design thinking*, focusing things such as design collaborations as well as prototypes and "matters of concern". This diversity may be noticed in the etymology of the English word "thing" which reveals a journey from a meaning of an assembly, like the governing assemblies in ancient Nordic and Germanic societies, to a meaning of "an entity of matter". In short: How are design things being done in contemporary design practice, thinking and theory.

The Nordic Design Research Conference (NORDES) summer school 2010 is addressing such design theory issues conceptually and exploratory in a five-day course for Ph.D students. Each day will have a specific design thing theme (see below), and each theme will be explored both in a reflective seminar and a performative workshop.

The five seminars will be based on themes and chapters in *Design Things* (A.Telier

(The doing of)
Design Things
PhD summer school

The book is not yet out, as I said. The final manuscript was sent to MIT Press a year ago, so I do not know if it is a book object or not, but at least it has been circulated into another kind of activity, the Nordic Design Summer School, which was held last week in Pukeberg, in the forests of Sweden, with participants from all the Nordic countries and from the US and Germany: 41 design PhD students who,

during a week, read the manuscript, had seminars in the morning and workshops in the afternoon. In this way, they were designing parliaments or parliamentary technologies (Latour and Weibel 2005), and mapping controversial issues. As a main assignment, they were probed to design ways of "drawing things together".

from designing design parliaments and
parliamentary technologis,
to mapping controversial issues
to drawing things together (matters of concern)

I would like to quickly go through how they appropriated and transformed what started as design student practices in Vienna and Malmö, became the design of collaborative things in a European design research project, and then became a manuscript. Of course this is not a linear story, there are a lot of actors participating all over, going in and out.

design things and parliamentary technologies
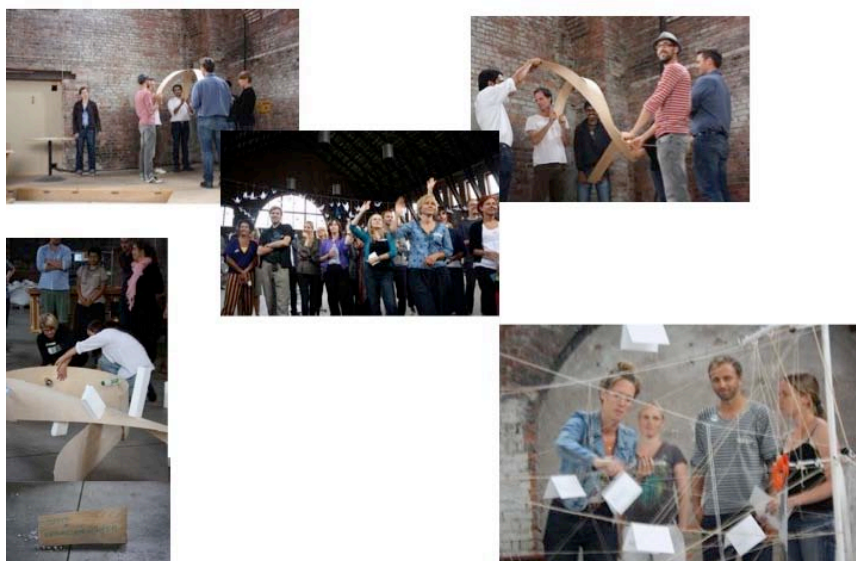
Here are some examples from day one on drawing things together, on that day with a focus on parliamentary technologies. The pictures on the top show an interactive wave machine, where the waves were responses to controversies but also participated in them. Down left is a space for eternal encounters and to the right representations of the ongoing and becoming of networks.

mapping controvercies
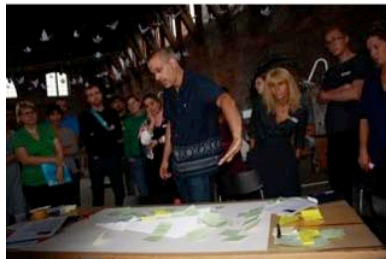
On the next two days, the design students were mapping controveries. To the left opening up and laying out controversies from already public stories, and to the right, on the following day, being much more concrete in the square in the city of Kalmar. The square, recently being redesigned by a well-known architect, had become big controversy in the city. The design students did, based on their interpretations of the controversy, interventions to create dialogues around the controversy with citizens passing the square.

closing design thing and opening up matters of concern

The main work was, however, the closing design things opening up matters of concern on the last day of the summer school. For this the design students gathered in groups on matters of concern that they would like to work on for the whole week, and the assignment was to organise a design proposal. The things they "draw together" ranged from "material" controversies to open-ended design things.

material "controvercies"

Some of them were very simple. One example is the thing in which 16 cubes with different materials participated. The human participants were asked to judge and discuss which one was best. Maybe this was not a deep and essential controversy, but it is interesting that even (or especially) among designers it was not so easy to agree in judgements.

Another group worked on environmental issues. They challenged the traditional environmentalist "Apocalypse Later" approach (postponing the catastrophe), by mockingly suggesting a strategy of "Apocalypse Faster". There would be things like the 10.000 Miles Food Certificate, the Energy Abuse Meter, and the Ultra-safe Vehicle for Shopping etc. They tried to engage people in this campaign.

Another proposal, "band aid", was about packages to be distributed the market. Examples included a "do-it-yourself gardening pack", and "a personal rape evidence kit". The suggested kits were close to products that already exist, and they were piggybacking on the interest in such projects. But the interventions were really responses to articles on existing major controversies, like on contaminated ground or the demands for hard evidences in cases of rape. The designers intervention also included engaging the audience in how they would best market these products.
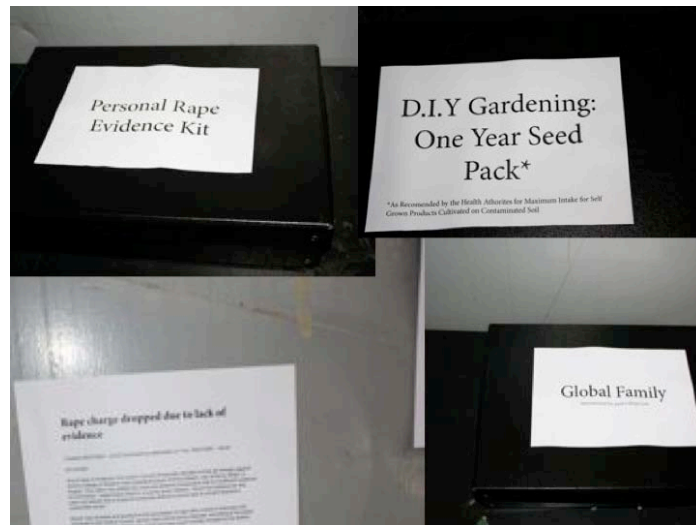
The final group, working on the platforms for open ended design (design after design), draw all the participants together in a reflective thing evaluating the design summer school, revealing controversies, and opening up for further design engagements and things after the summer school.

bringing the thing together
(locally) open ended design

I do not know if these "circulating references", this weave of successive transformations, from design student "drawing" practices, to the design of artefacts supporting such collaborative design "drawing", to a view of design as the performance of controversial "design things" and finally back to design student practices of "drawing things together" compose a proper response to the challenge put forward by Bruno Latour, but I hope to have shown that the design research community takes the challenge of "drawing things together" seriously, and that we in our pragmatic and designerly way try to put science and technology studies at work.

Thank you.

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