

Playful stories and risky proposals

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The question of whether practice-based or artistic research is possible in its own right has been an issue of much debate and confusion in the last few years, as has the issue of how – or if at all - interactivity and narrativity can co-exist.

Spending five years on a PhD thesis in interaction design, which had at its core a series of diverse projects and concepts investigating collaborative narrative in digital media, has inevitably meant confronting both of these issues. My way of finally finding a way to deal with them is, I think, reflected in the way I ended up phrasing and emphasizing the following questions: How and under which conditions is knowledge articulated in creative work? Are there approaches to narrative in digital media that can be considered more productive than others?

A short description of what I have been and am currently working on might first of all be appropriate. For the moment I work at K3 (the Art and

Communication department) at Malmö University, as head of the Media and Cultural Studies program. In my undergraduate education, I studied literature, and science and technology studies.

Employed by the university, but funded by and working in the Interactive Institute's Narrativity Studio, in that very same building, I spent five years working on my PhD thesis in interaction design, a thesis presented a little bit more than a year ago. These formal arrangements meant that I on a daily basis experienced a lot of the conflicts that Michael Gibbons describes as central in what he and others call "mode 2" in current knowledge production, which I will talk more about soon.

I also have a professional background in the culture industry as a freelance journalist – mainly as a theatre reviewer. Writing theatre critique is something I still do, an ongoing pursuit that has had a strong influence on my work with collaborative narrative in interaction design.

About the presentation

There are two main and intertwined topics in this presentation. One of them concerns thoughts about and tentative conclusions concerning creative practice as knowledge production, the other one is more particular to my work on collaborative narrative in digital media. But first of all, I will give you the setting, the context in which my PhD work, between autumn 1998 and autumn 2003 took place.

Context/mode 1/mode2

K3, Malmö University's School of Art and Communication, started in autumn 1998 with the very explicit aim to renew what is sometimes called the Scandinavian user-oriented design tradition, mainly in the areas of digital media and technology, combined with critical reflection fuelled by contemporary cultural theory. The research conducted at the school was from the start, a close cooperation with the, at the time, newly founded Interactive Institute. The Interactive Institute could then be described as a strategic research initiative and a distributed research organization that was supposed to use the creative force of computer nerds and digital artists in research and development (much in tune with the still quite strong MIT hype: all in order to benefit the Swedish IT-industry). As I mentioned earlier, I was formally employed by the former and funded by the latter, two organisations that were forced to revise their internal relationships several times during these five years, ending up in the shutdown of the two II studios in Malmö by the end of 2003.

Both K3 and the Interactive Institute had and still have what many would call a non-conventional definition of research, and approach to the role of design and art in knowledge production. However, they differ in their respective institutional framework. K3 is legally and formally placed within the academic world, which produces certain conditions for legitimizing the role of practice and creative work. The Interactive Institute had the possibility and freedom to employ artists and practitioners lacking PhD-degrees as senior researchers, creating a different kind of research environment. On the other hand, the Interactive Institute was supposed to get industrial stakeholders to finance research activities, a demand that over time became more and more pressing, one which created a lot of confusion concerning what could be regarded as beneficial (or not) for the Swedish IT-industry. Related concerns included

what "Swedish" actually means in a global economy as well as how the term "beneficial" should be interpreted: for example, as something that boosts share prices in the short term (six months), or something that seeds thriving companies in the long term (five to ten years).

Very few things concerning the question of "What is research?" could be taken for granted in this environment. For a PhD-student this was rather exhausting – but on the whole, I think those discussions and controversies were productive. Who are the stakeholders? For whom do we actually produce knowledge? What kind of outcomes can be expected? What is the role of the artifacts and prototypes? How do we achieve balance between creative production and critical reflection?

Michael Gibbons, author of *The New Production of Knowledge*¹, a book published 1994, points out that these kinds of controversies are part of a general transition between what he calls "mode 1" and "mode 2" in the knowledge production of Western societies. In "mode 1", problems are posed and solved within the academic sphere and its social context. In "mode 2" problems are posed and solved in application contexts, and researchers from within academia do not necessarily have the last say concerning what is regarded as good or bad research. Multidisciplinarity and heterogeneity in research environments, as well as new kinds of contracts between society and its research entities also characterises "mode 2" according to Gibbons.

I would claim that the question of practice-based research: a more formalised and explicit knowledge production within the field of art and design, is only one of those controversies, and as such is tied to other issues in the transition between "mode 1" and "mode 2." In the Narrativity Studio we could all notice a change of focus in the way we approached this question during the five year lifespan of the studio. In the beginning, the focus was on the problematic role of prototypes and artifacts – over time this became subordinated to the question of how, and in company with whom, we pose our questions, and how we give shape to and transmit the knowledge we produce. There was also a shift of focus in both my own and the Narrativity Studio's approach to narrative in digital media. In 1998, we talked about narrative structure, about non-linear narrative, and about the necessary properties for narrative sequences in such a non-linear or interactive narrative. Gradually, we abandoned this terminology. Our interest in physical spaces rather than virtual spaces as narrative environments grew, the interplay between fiction and reality came into focus, and with that, the question of who is telling the stories and why...

Examples

Before I go into exploring what the consequences of these lines of thoughts are, I will try to give some visual support to my thoughts on narrative and knowledge production in the realm of interaction design. An important part of my dissertation consisted of six art and design projects. Some of them were full-blown physical prototypes, the largest of these, Avatopia, was implemented as a TV and Web production together with Swedish Television. Others were merely sketches and ideas that articulated something about how to create conditions for collaborative narrative. By collaborative narrative, I mean people collaborating in creating or acting stories together in such a way that each participant perceives his or her own actions – as well as the actions of others – in some way necessary

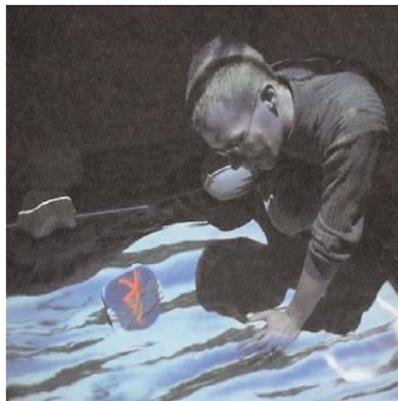
1. Gibbons, Michael (1994) *The New Production of Knowledge. The Dynamics of Science and Research in Contemporary Societies*. (London, Sage).
A continued and updated discussion is found in Nowotny, Helga; Scott, Peter & Michael Gibbons (2001) *Rethinking Science. Knowledge and Public in an Age of Uncertainty*. (Cambridge, Polity Press)

for the story to take place. A well known example here would be role playing games. It should be mentioned that the concept of collaborative narrative does not, for me, stand in opposition to less explicitly collaborative forms of storytelling. Furthermore, I do not see collaborative narrative as something inherently suited to digital media; nonetheless it is something I am intently interested in.

Runecast

This project was created in order to create both a common research ground and a showpiece for the Narrativity Studio. As a starting point, we took the ancient Icelandic text Voluspaa, which retains much of the structure of the oral tradition of storytelling and thus as has an unusual and fascinating time-space structure. In Voluspaa, the god Odin tries to get answers from the female seer about the end of the world, something which she very hesitantly provides, but her visions are fragments from both the past and the future connected to each other by thematic imagery and alliteration.

In our conceptual work we transferred this to a situation in which the user came to a fortune teller and tried to make sense of obscure sayings, while at the same time connecting it to “rune casting,” an ancient Nordic way of predicting the future, playing ironically with the New Age connotations and trying to create a place for reflection and rest. The physical design finally took form of a “well” – a pool of white chisel sand, on top of which we projected the graphical interface. The user interacted with the seer, the Vala, by putting stones (of approximately one kilo) in the places the projected Vala suggested with her hands. The programming structure was quite rigid, but was combined with strong elements of randomness, and in the more elaborate version the installation we outlined, this structure also would respond to nearby sound, picking up phrases, respond to rhythm, temperature, time of year and day – thus establishing a relation to the whole school. The most interesting immediate outcome was the rather strong construction of the character Vala, who was made believable via very simple means, as well as the sensual qualities of image projection on sand, something that served as an invitation to meditative play.



The Video Sandbox

The next project was inspired by the sensual qualities of Runecast and of the idea that building fictional landscapes is a central component in storytelling (think of Tolkien’s Midgaard!) and narrative play. We used the same physical interface, but instead used colorful hexagonal puzzle pieces that were connected to tactile sound in the projected digital interface. The puzzle pieces could be placed onto and moved over the sand.

The Video Sandbox indeed turned out to be a wonderful and imaginative play environment, but in our view it was not very effective as a starting point for collaborative narrative.

Psst – the Programmable Sound Scape Toy

The idea behind Psst was to build a test platform for narrative play with objects, characters, and sounds. While the original idea was that children should be able to assign sounds to characters and objects and thus create their own stories, over time and through the design process, it instead became something much



more specific. In fact, moving beyond a mere test platform Psst evolved into a fictional universe with nine rather bizarre handheld and movable characters, the “psstians”, that live their lives on colored boxes. The psstians are connected to a large database of event sounds and utterings in a very expressive nonsense language – a late design choice that turned out to be a fortunate one, since it made the characters psychologically very believable in their weirdness, yet allowed great space for interpretation.

Psst was tested in children’s play in a number of diverse circumstances and displayed a much greater narrative potential than The Video Sandbox, but more in terms of shared experience than collaboration. The psstians and their boxes also lived a life in the Narrativity Studio, as a collection of intervening fictional colleagues: the I-buttons placed under each psstian were sensitive to vibrations and caused the computer to interpret a nearby vibration as a move to a new place on the platform, thereby causing the psstians to utter random phrases. This meant that the psstians made random interventions in our daily routines and meetings. We collaboratively made sense of and interpreted their sentences as part of our discussions and doings – thus creating a very interesting merge between fact and fiction.



Avatopia

Avatopia started out in the year 2000 as a joint research and development project, involving the Interactive Institute, Swedish Television, and the House of Animation.

The aim was to investigate the use of avatar worlds and of collaborative animation and storytelling in such a world in relation to broadcast programming for youth.

We immediately came up with an idea that guided us through the design process, one that enjoyed the continual approval of teenagers (about 50) from the south of Sweden, who very early on became involved in the project. This idea was that the combination of an avatar world and public service broadcast TV could be used in order to empower young people in their current and future role as citizens.

In this sense, the intention of Avatopia was to become a space for defining what were for them important societal and political questions, as well as a place to organize themselves and act on these questions. The project was not intended as a substitute to real world action and physical meetings, but as a complement and resource.

The role of broadcast TV should be to introduce the avatar world, with the help of a narrative, and to reflect, follow up, and give emphasis to what was done in Avatopia. TV programming could also be used to initiate discussions and topics, and to do journalistic pieces on issues that concerned the avatopians. The idea was that broadcast TV should be used to support and nurture what was happening in Avatopia. However, its introduction also included the potential to contradict and complicate discussions and events in the avatar world.

The functionality, graphic design, and social rules in Avatopia – as well as the relation between the avatar world and broadcast TV – was worked out in a rather long process of co-design between a number of teenagers together with people from the participating organizations. Avatopia was launched in September 2003, promoted by a four part drama documentary starring some of the teenage co-designers, and was up and running until the end of that same year, when it unfortunately had to close down due to the downsizing and restructuring process that was took place at the Swedish Television during that same autumn.

Knowledge production in the art/design field

These are brief accounts and descriptions of some of the different projects that were part of my dissertation work² and that autonomously provide good examples (more or less) of how one can create conditions for collaborative narrative in digital media.

During these five years we, at least in the beginning, read texts and had other people lecturing us about the particularity of artistic research and design as research, people that talked about artistic methodology, about what was special and different with artefacts as compared to texts and words. What came out of this was more confusing than clarifying when we tried to match it against what we perceived we were actually doing, indeed almost as confusing as trying to follow models of conventional experimental research.

After a while, I started to recall my earlier studies in science and technology studies where you find a much more nuanced and intriguing picture of research as human activity than those very monolithic pictures of science and research. This led me to start thinking that there was above all something wrong with the picture of “artistic research” vs. “conventional research.”

In the aftermath of the science wars

Rather than arguing a special case for design as research, I started to ask myself if it would not be more useful to question what is often taken for granted in the distinction between theory and practice, in the distinction between formal scientific method and creative action. One can put the question this way: why is knowledge in praxis – creation and action – so problematic in the view of conventional scientific epistemology?

What was again and again repeated from the perspective of conventional epistemology was that art and knowledge in action are based on aesthetic and ethical judgment and values – whereas research is, at least in principle and ideally, devoid of values. This assumption surfaced and became apparent when it came to the question of who did the research. In fact many designers and artists express an anxiety when trying to assume the roles of researchers³; an anxiety so common that it might be considered structural. Images of the researcher as

distanced, objective, and analytical seemed, in these situations, to clash with the artist as an emotional, irrational and subjective being – even if the actual artists didn’t describe themselves in these terms.

If you accept this description of conventional research, as well as of art and artists, the solution would obviously be to find methods for artistic- or practice based research that become value-free, to find methods and theories that are independent of the individual and contextual we otherwise associate with art and design. Based on that very same assumptions you could instead choose to positively stress the different nature of artistic and creative processes and claim that it should lead to an essentially different kind of research, in a way very much similar to the claim that more women in board rooms or in politics (with the force of nature) bring soft values to the agenda...

But if you instead look at the empirical accounts of research that have been one of the result of a couple of decades of science and technology studies, one could instead question the picture nurturing these assumptions.

Not only has the idea of absence of values nothing to do with actual scientific practice, it is also, as most notably feminist and postcolonial theorists have thoroughly demonstrated and argued, not even very adequate as an ideal. They, have also questioned the idea of a separation of the context of discovery from the context of validation. Instead, they stress that the way in which research questions are asked must be put into question as much as scientific methods usually are scrutinized (there are indeed no methods that can absolve themselves from the many potential biases we have in our way of regarding some questions as valid research questions, some problems as legitimate problems, if you will. And indeed, they stress that researchers to a much higher degree should be made accountable for the knowledge they produce, in sharp contrast to the “diplomatic immunity” that the presumed objectivity of scientific method has produced for such a long time.

Situated knowledge

To question the objectivity of researchers and research methods, and pinpoint the relationship between what are accepted as valid research questions and the social and cultural position of the researcher does not, however, equate to a relativistic standpoint. Donna Haraway on the contrary, demonstrates that the idea of an absolute truth, an absolute objectivity on one hand and the idea of relativism on the other, are in fact two sides of the very same coin, both representing related ways of doing what she calls “the God-trick.” The idea that there exist places and positions from which you can look at the world in an objective way – and the idea that it really doesn’t matter from where you look – are indeed related in a slightly godlike manner.

Instead, Haraway stresses that knowledge is always partial. Different types of knowledge are also situated in real persons and bodies, particular historic times and contexts. Furthermore, knowledge is never an innocent matter: it does matter, and has consequences. Haraway also stresses that making a declaration of your personal social and cultural background, hiding in subjectivity, is not the solution – it is of far greater importance is to discuss one’s intentions in knowledge production, to reflect on and take responsibility for the consequences of these intentions. Validity is definitely thus also about for whom and why something is considered an interesting research field or question. “Cui bono” – who gains from this?

2. Gislén, Ylva (2003)
Rum för handling. Kollaborativt berättande i digitala medier. Diss. Department of Human Work Science, Media Technology and Humanities. Blekinge Institute of Technology (Karlskrona). Downloadable at www.bth.se/fou

3. See for example
Candlin, Fiona (2000)
“A Proper Anxiety? Practice Based PhDs and Academic Unease.” Conference Paper. *Art and Design. Research into Practice.* (Hertfordshire)

The concept of situated knowledge, the attention drawn to problem formulation, and such a perspective on validity seem to withdraw many of the underlying assumptions in the art and design/research dichotomy, as well as in the dichotomy between theory and practice, and seems to provide a much more fruitful basis for knowledge production in the field of art and design.

Lessons learned from design theory

There is indeed a similar lesson to be learned from design theory. The design theory movement in the early sixties, initiated by (amongst others) Christopher Alexander and John Chris Jones⁴, began as an attempt to open up and demystify the design process in order to make it accessible to input from users and other relevant knowledge domains that seemed necessary in relation to the new large scale industrial/architectural design era. But this, perhaps more modest aim, was soon overshadowed by the idea that you could design a scientific discipline in the same sense as one perceived (for example) Newtonian physics, as a discovery of and quest for general models and laws, that would cut as an Occam's razor through the messiness and conflicts of value that characterise so many design processes. But over the following decades, it was demonstrated that such an idea of a design science led to bad design, solutions that somehow seemed to foster insensitivity within design practice. For many reasons, it seemed that this was not a useful approach to what is considered useful knowledge in the design field. In fact, both values as well as sensitivity towards the concrete and specific, are an important part of good design practice, and thus probably should be part of both design knowledge and knowledge production.

Donald Schön has since done some very thorough investigation into how good designers and practitioners actually think, and in particular, into processes where what he calls "reflection in action" – comparisons with previous problems and situations and anecdotes, together with an attentiveness towards the new and particular – are central features of "theory in action" in both education and knowledge production⁵.

Knowledge construction as a collective process!

Another, seemingly banal, aspect that is worth pointing out when it comes to research into art or design practice, is that research and knowledge production are collective processes. The French chemist and theorist of science Isabelle Stengers points out how this is often overseen in the search for methodological criteria of good and bad research. However, there is no method that can once and for all guarantee the superior validity of science: the whole thing about it is that it is an organised, collective process, in which results and ways of doing things are continuously discussed and questioned. The possible quality of research as knowledge production lies entirely in these institutionalized detours.⁶ This is, in my view, very important to consider in the discussion about artistic research and practice-based research, since argument often tend to focus on problems of methodology. But perhaps it should be more about building infrastructures: meeting places, conferences, seminars, and journals on our own premises?

Rules of thumb for the design of narrative spaces

Rather than arguing a special case for art and design in research, one could thus argue the other way around: the situatedness, the ethical dilemmas, the

dependence on collective processes, are characteristic of all knowledge production. So, instead of trying to avoid all matters of ethics and aesthetics (as supposedly "unscientific") one could argue in favor of recognizing them as vital aspects of all possible knowledge production.. The domain of ethical and aesthetic choice, which in "science as usual" is regarded with suspicion as very insecure epistemological terrain, could, when it comes to for example interaction design as well as design in general, be regarded as a place for a rather secure and well grounded knowledge construction. Ways of looking at things are indeed perfectly possible to open up for investigation, argumentation, and reformulation. I thus posed my own research question like this: "Which ways of looking at things are more likely to produce interesting narratives?" and used the experience, all our sketches, conceptual ideals, and discussions as material for constructing guidelines and metaphors that carried the knowledge gained. This knowledge is thus also mainly about the interaction designers' approach towards the audience and perspective on narrative. I've also tried to incorporate both my experience as a frequent theatre visitor and reviewer, and the implications of the so called "narrative turn" in the human and social sciences during the last two decades.

Narrative structure vs. narrative agreements and conventions

The first assumption was that neither narrative in general, nor collaborative narratives in digital media could be characterized as objects with certain properties. This is very much the implication of recent research into the role of narrative, but also follows the clash between theory and emerging practice of narrative in digital media.

More than something that can be defined in terms of a particular internal linguistic or meta-linguistic structure, narrative should probably be seen as a constantly changing kind of activity, that primarily seems to hover around the question of possible human action: and reasons and contexts for those actions. Furthermore, as speech act theory points out, our everyday narratives seems to be provoked and produced by actions that (in that particular context) are perceived as problematic. The telling of a story invites a common discussion and judgment of the action in question, as well as of the explanations that can be applied to it. The different markers we use for signalling the telling of a story also seems to alert a readiness to interpreting what is told in metaphorical and symbolic terms. When Jerome Bruner stresses that stories always move from the particular to the general, he points to this phenomenon (as well as to the fact that stories always contain moral judgement, even if they cannot be reduced to illustrations of any moral principle).⁷ What is considered a story thus varies not only from time to time and culture to culture, but also from occasion to occasion.

Agreements

The telling and listening to stories should rather be described as a series of more or less silent agreements. One could say we enter an agreement upon spending a certain amount of time on a book when buying or opening it, or when entering a cinema for example, we enter agreements in terms of adhering to certain behavioral rules. Examples here would be reading a book from the first page to the last – although nothing prevents us from doing otherwise – as well as the change in the mouse symbol on a computer screen to indicate an active hypertext link.

4. Alexander, Christopher (1964) *Notes on the Synthesis of Form*. (Cambridge, Massachusetts: Harvard University Press); Jones, John Chris (1970) *Design Methods*. (London, Wiley) The latest edition of the latter book, from 1992, is of particular interest in this discussion: it contains the forewords from all three editions since 1970, thus in itself forming a selfcritical and reflexive document over the ideas inherent in the concept of design theory and methodology.

5. Schön, Donald (1983) *The Reflective Practitioner. How Professionals Think in Action*. (New York, Basic Books) and (1987) *Educating the Reflective Practitioner. Toward a New Design for Teaching and Learning in the Professions*. (San Fransisco, Jossey-Bass)

6. Very little of Isabelle Stengers writings is translated into English, even if it have had a quite an impact on contemporary theory of science: a good overview of her thinking in the collection of essays printed in Stengers, Isabelle (1997) *Power and Invention. Situating Science* (Minneapolis & London, University of Minnesota Press).

7. Bruner, Jerome (1991) "The Narrative Construction of Reality." *Critical Inquiry*. Vol 18 (Chicago, The University of Chicago), s 1–21

However, there also have to be agreements about which genre and style (elements relevant to aesthetic references) we are dealing with such that it is clear which kinds of understanding are taken for granted, and which could possibly be altered along the way. This counts for all narratives. The difference when it comes to digital media is that you can't take anything for granted. If you're writing a book or making a movie, the most basic agreements are by now completely understood. For example, you can trust people not to look at the last page of a thriller to see who's the killer – whereas in digital media, one very often has to be more careful, more spelled out, and more attentive to possible misunderstandings. Once established, many people recognise them as such, take them for granted (the changing cursor is by now an established signal in interaction design), and these kinds of agreements can be very stable over time. But when you try to establish new ones, it is simply easiest to do it in relation to a specific audience, not only a target group, but an audience that you get to know and want to tell something to. Greek and Shakespearian drama might thus have gained their “universality” from a close relationship between narrator and audience.

Action sphere – agency

What is furthermore particular about digital media is the agreement you have to make concerning the user's action sphere. Agency, or action sphere, is one of the more important features defining genres in all narratives in terms of – for example – what kind of actions we expect from a fairy tale princess or a cowboy-hero in a Western movie. But in digital media, you also have a potential concrete action sphere for the user/audience.

While one has to stress the importance of designing this in a meaningful and consistent way, it doesn't though, as has often been taken for granted, have to mean acting as a character within a story. In fact, this is one of the questions you have to pose: which position do I want the audience to take in relation to the narrative – act a character, be co-narrators, editors, etc.?

As the expectations of the user/audience are one of the more important elements to play with, it could, in fact be very problematic to assume that users will take on main roles, as a main role comes with great expectations in terms of its possible action sphere, thus causing a great disappointment when these expectations are not met (as they often are not in digital media). Instead, minor roles might be much more rewarding and satisfactory, and might be the reason interactive detective stories are so successful: the detective doesn't usually have a main role in the conflict – s/he's mainly uncovering it.

Distribution of agency

When it comes to collaborative narrative, you also have to deal with distribution of agency, and here we could draw some conclusions from design projects: a slightly uneven distribution of agency seems to encourage and nurture collaboration.

Movement between narrative and narrative setting

Naturalism is not dead – at least not in theory about narrative in digital media. There has been a lot of talk about immersion as the quality to strive for in digital media, as well as the value of personalized narrative experience. But the strength of narrative lies in the movement between the common and the personal, and

the awareness of an element of construction does not stand in the way of a strong sense of involvement, it might even encourage engagement (as evidenced in children's play).

It is in fact rather of great importance to create possibilities for people to move between what they perceive as the narrative and reality, which is why the use of – for example – sensors and projections in physical space, rather than completely virtual environments on screen or in 3D-caves, turns out to be advantageous since these movements are naturally facilitated in the former.

Subtle/ambiguous interaction

Narratives are serious business, and they do have implications for our common reality. But that doesn't mean narratives shouldn't be allowed to fool the audience! The discussion of narrativity vs. interactivity has often assumed that interactions should be meaningful on the programming level, whereas users ask for a rewarding experience, something to laugh at and something to think about. The general expectation one has about digital media is then about interaction: when I do something in the interface, something will happen. And frankly, if nothing – or something that is completely random – happens, I will still assume that there is a logic behind it. It is thus perfectly possible to cheat, to use chance or discrete or subtle changes in order to create the impression that there's more intelligence to an interface than there actually is.

Playful stories and risky proposals – a conclusion of sorts

Knowledge production and knowledge construction

If we now return to the more general discussion of practice-based research, there are some phrases that I've found to be useful and clarifying. The first two are “knowledge production” and/or “knowledge construction.”

Knowledge production is a useful word since it, much more than the fuzzier word research, forces us to ask questions such as: What knowledge do we need to produce? Are artists and designers in need of knowledge? For whom and why do we want to produce knowledge? How do we make the knowledge reliable? Which accounts from which perspectives are necessary, what kind of documentation is needed, and how do we determine the quality of analysis? Which way of articulating and presenting the knowledge gained is the most productive?

And remember: knowledge has to be recognised as such by somebody else. Writing indeed has advantages in the presentation and articulation of knowledge compared to artefacts and actions, but these advantages have to do primarily with the consistency over of the written language over time and space. Text travels lightly, and is easily made accessible. The potential problems with artefacts and actions (in a dance performance for example) are not that the nature of knowledge they carry is different or more problematic or less transparent. The potential problem is that they might be hard to physically access.

At the Theatre Academy in Malmö, where I've been involved in the development of a master's program, we have discussed those issues, and it is evident that DVD technology meets the same criteria of relative consistency over time and space as does writing. Furthermore, the DVD format allows not only the documentation of an actor's performances, it also allows for the possibility of

adding filmic references to other performances, thus adding several layers of commentary. However, just as the question of writing in knowledge production in the field of art and design might have more to do with how you write than with anything else, filming actually requires a lot of experimentation in regard to recording an actor's performance in such a way that it conveys the necessary information. Accessibility and adequacy to the specific knowledge construction in question are the key words when it comes to documenting and conveying results.

Articulations

Another word I've found useful is articulation. Verbal action or physical action have the same properties on some level if you understand them as articulations: they are expressions of both the intentional and unintentional and they are never finite in the sense that they can always be interpreted and reinterpreted. Even if you think before you write something down, there are always intentions in the text that you're not fully aware of, or that will be understood differently (or not at all) by somebody coming from another context. This is not to say that your conscious intentions do not matter and that everything is in the text, but rather to say that the matter is never closed. There are also some things you cannot be aware of or nor even think of before they are articulated in action and/or in a material form: are made visible, and become a part of something. Can we learn to think of writing, acting, and designing as articulation, in never-ending cycles of possible reflection and interpretation?

Translatable knowledge

The concept of translatable knowledge is also quite useful. It takes on meaning in the paradox that knowledge in action is based on previous experiences, but has to be reformulated in each new situation. Knowledge production in design will thus consistently be about articulating arguments, values, and tropes that can serve as guidelines for future unforeseen situations, rather than generalized theories. The phrase (translatable knowledge) also signals the need for translation and adaptation to new contexts, as well as the need to be cautious and attentive to complexity and change.

Elements of risk and play

And finally there's yet another thing to say about how to go about knowledge production in the design field, and that's to adopt a totally different and provocative notion of objectivity. Bruno Latour argues that the difference between the natural sciences and the humanities is not that the former is about things and the latter about organisms, but rather that these things and organisms don't care about the researchers intentions. As he puts it:

*"they will have no scruples whatsoever to object to the scientist's claim by behaving in the most undisciplined ways, blocking the experiments, disappearing from view, dying, refusing to replicate or exploring the laboratory to pieces."*⁸

But humans are seldom disinterested. This has caused, in particular, the social sciences to create methodologies in which one tries to ensure that people do not know they are the subject of inquiries. But Latour states that this is due to

a fundamental and quite disastrous misunderstanding of what the larger project of the natural sciences is really about. Experimentation within these disciplines is about, often with great difficulty, creating the circumstances in which things and organisms can object to what scientists think about them. How do we then create those rare situations in which this type of objectivity can be achieved, where people can pose their own questions, and are allowed to complicate matters?

The most important lesson I've learned during my five years as a design PhD is the one about playful investigation and suggestion. Where there is something to tell, something to playfully risk, there is also the opportunity for other human beings to contribute to common stories and for artifacts and humans alike to be heard, in their own rights and in complex ways.

How do you create conditions for the element of play in the investigative and creative process in which you involve the audience/user, conditions putting the intentions of the artifacts and the roles of designer and user at risk in a generative dynamic of reconstruction/redefinition?

Let the world be involved in our knowledge constructions! We ought to recognise the controversies, value conflicts, and insecurities that lie at the heart of our projects, but in this very serious work playfulness is an absolute necessity in terms of its relation between the designer/researcher and the human beings we too often call users.

8. Latour, Bruno (1999) "When Things Strike Back: a Possible Contribution of Science Studies to Social Sciences". *British Journal of Sociology*. Special Millenium Issue edited by John Urry. Vol 51, no 1, s 105-123