Artefacts and the performance of an exhibition

Abstract
This article explores the role of mediating artefacts in children's encounters with a museum of natural history. Using actor network theory it explores how a specific artefact shapes the way users relate to exhibited objects and how the artefact guides users’ movements in the exhibition. The mediated performance of an exhibition is explored through an empirical case.

Keywords
Mediation • Artefacts • Performance • Museum

The boy looks for answers. He plunges deep into the blue, blue. Hears the eerie sound of huge underwater mammals. Singing. Howling. He swims, he climbs, he crawls. Nostrils loaded with a rancid smell of whale he steps on land. Walks the shore. Feels the soft texture of Brown Bear between his fingers.

I am The-Bear-You-May-Touch.
Find me in the exhibition and feel how silky my fur is.
I like to eat both animals and plants.
Find me on the computer and mark what I eat.
Plants. Ants. Dead animals.
During winter it is difficult for me to find food, so I find a warm cave and sleep.
Can you draw me in my cave?

Later he sneaks, his body clad in animal. Soft. Foxy, fur toupee. He approaches her from behind. Sister sweet. Long, blond hair. She is absorbed, she looks through the lens, zooms in, catches a bear. CLICK. He jumps. Sharp carnivore fangs.
Inquiry: How artefacts participate in the performance of an exhibition

This article focuses on interaction in a modern museum of natural history. The article explores what mediating artefacts do to the way children encounter a museum exhibition. Central attention is given to a portable device called the exercise pamphlet, but other artefacts are also involved in the analysis: digital nature-bases, animal costumes and mobile phone cameras. The aim is to illustrate how artefacts participate in visitors’ performances of a museum exhibition.

The initial text in the article is based on an exercise pamphlet called “Say hello to us” and on empirical observation of two children, Jakob (9) and Camilla (13), and their encounter with the museum exhibition (audio 0013). (See Czarniawska (2004) for a discussion of the use of narrative in social science.)

In the observation the boy, Jakob, uses the mediating artefact of an exercise pamphlet. It takes him to different areas of the museum and instructs him to do several things. He is told to touch a bear, and he is told to find a computer in order to obtain information on it. Jakob also interacts with another mediating artefact. He encounters an animal costume, which children are allowed to dress up in. He puts on the fur of a fox. Wearing it he attacks his older sister, Camilla, while she is using her mobile phone camera to take a picture of an exhibited bear.

The points which the article will make about the role of mediating artefacts in children’s encounters with the museum are that: 1) exercise pamphlets guide and prescribe how users move around in the exhibition, 2) the prescriptions made by exercise pamphlets are contested and negotiated by other artefacts, 3) users switch between different artefacts, and 4) with these shifts follow shifting networks and spatialities.

What users do in and with an exhibition – and specifically what they do with mediating artefacts in the exhibition – are central interactions in a museum. The study of these interactions provides insights which are useful in the pedagogic practices which take place in and make use of a museum exhibition. It shows how children use an artefact, which is produced for the purpose of teaching them natural history/biology. It shows how such an artefact may both enhance and diminish children’s interaction with another artefact, which also has the purpose of teaching children natural history/biology: computer databases. Furthermore it shows how artefacts which are full of pedagogic intentions, such as the exercise pamphlet, exist parallel with users’ interactions with other artefacts, which are not necessarily loaded with pedagogy in the same manner as the exercise pamphlet. An example of this is the mobile phone camera, which visitors’ use frequently, but which is not embedded in the museum’s institutionalized pedagogic practice.
Method: Fieldwork in a museum

The article is empirically generated from fieldwork at a museum of natural history. Data has been collected throughout the course of a year. The research is based on several types of qualitative data consisting of observations in the museum, a special kind of video-registration, which has been developed for researching visitor experiences in exhibition spaces (Ingemann 1999, 2002) and qualitative interviews.

Observation data has been collected with visitors ranging from the age of 2 to after retirement, but towards the end of the data collection process, increasingly focus was placed on children aged 7–13. The collected data is extensive and covers children on both leisure visits and school trips. In the further work with data, it has been useful to focus on a smaller number of children, and to extract their data from the larger pool of data in order to build coherent accounts of their visits. In this way data is rearranged to portray the actions of one child (with fellow visitors) at a time.

This re-arrangement of the observation data is supported by another central data source. An important type of data collection which has been used in the project is the registration of visitor interaction with the help of a pair of video-glasses. Museum visitors wear a pair of glasses with a built in camera and microphone. The camera registers what the museum visitor looks at, how long they look at it, when they move and to where. Furthermore it registers what they say, when and how. This enables a close analysis of how subject-object and subject-subject-object interactions occur. This type of in-depth registration has been carried out with five visitors. A variation of this method, where the researcher wears the video-glasses and follows the visitor, has been used for two more visitors. They have all been on leisure visits to the museum, and have been accompanied by family members. The latter variant of the method has also been used for a series of institutional visits.

Qualitative interviews have been carried out with both visitors and employees. The data presented in this article are from a series of interviews and four observation sessions: walking observations of Camilla and Jakob. They are a sister and brother aged 13 and 9. They are at the museum with their mother and grandmother. The family has purchased an exercise pamphlet for Jakob. This observation was registered as an audio-recording, where I described what the children did. I did not have an agreement with them in advance, but during a break in their visit, I approached them, told them about my project, and conducted an on-site mini-interview. The audio of my observations and the interview have been fully transcribed.

A video-registration where Fie, a 7-year old girl, wears the glasses. She is at the museum with her older brother and her mother and father. Both Fie and her brother Teis have exercise pamphlets. They have two different kinds of exercise pamphlets. The purchase of these happens at the family’s own initiative. Towards the end of the museum
visit, when Fie wanted to take the glasses off, I conducted an on-site mini-interview with her and her family. The video and interview have been fully transcribed.

A video-registration where Bea, a 10-year old girl, wears the glasses. She is at the museum with her parents, an older brother and two younger sisters. Bea and her family have two different kinds of exercise pamphlets with them. I know this family in advance, and have asked them to participate in the project. The acquisition of the exercise pamphlets is suggested by me. The video has been fully transcribed.

A video-registered observation where I wear the glasses and follow Johannes (9), Ane (12) and Sara (13) as they visit the exhibition. They are at the museum with their mother and grandmother. Exercise pamphlets are purchased for all three of them. Johannes has one kind of exercise pamphlet, Ane and Sara have another kind. I did not have an advance agreement with these children. The video has been fully transcribed.

The analysis of data has occurred at four stages: in the field, during transcription, while reading the transcribed data and while writing. Data are analyzed through theoretical interpretation (Kvale 1984). The primary intellectual tradition which is used is actor network theory.

**Include materiality to understand performance**

There is a growing orientation towards materiality within social science. Pels, Hetherington and Vandenberghe (2002, p.5) call it ‘a new materialism’: “Objects are back in strength in contemporary social theory… After poststructuralism and constructivism has melted everything that was solid into air, it was perhaps time that we noticed once again the sensuous immediacy of the objects we live, work and converse with, in which we routinely place our trust, which we love and hate, which bind us as much as we bind them.” (Pels, Hetherington and Vandenberghe 2002, p.1.).

This orientation towards materiality is also found within the research fields of museum studies (Hetherington 1997, Hetherington 2002), leisure and tourism studies (Bærenholdt 2007, Haldrup 2006, Haldrup and Larsen 2006, Ooi 2005) and within the broader field of geography (Murdoch 1998).

When the article focuses on the performance of a museum exhibition, it does so because it draws on research within cultural and social geography, which asserts that in order to understand a place such as an exhibition, it is necessary to understand how this place is performed by users (Bærenholdt 2007, Bærenholdt et al. 2004). This performance perspective draws heavily on practice theories, and is rooted in a cultural and social geographic tradition, which sees place and space as practiced and relational. (Bærenholdt 2007, Haldrup and Larsen, 2006, Haldrup 2006, Murdoch 1998, Simonsen 2005). It implies: “that no sharp dividing line should be drawn between leisure, tourism and everyday life practices. (…) they connect, overlap and are woven together in human, social and embodied practice through various performances (such as movement and
memory) of various tourist and leisure spaces.” (Haldrup and Larsen 2006, p.276).

Research in this tradition stresses that material artefacts are central to how users practice, perform and experience place: “Nature, landscape and leisure spaces emerge from the material ‘lay geographies’ performed by their practitioner. They are not prefigured but made – and made sense of – through practical actions. (…) Places and landscapes are not encountered ‘naked’ but through the deployment of a variety of ‘prosthetic’ objects and technologies. Technologies are central to how people appear to grasp the world and make sense of it. They are crucial to how places are (or can be) encountered and perceived.” (Haldrup and Larsen 2006, p. 279 f.).

In order to understand how users perform a place we must closely study which material artefacts users interact with and how these interactions take form.

This article presents such a study of how users encounter a place with things. Using an actor network theoretical vocabulary it explores how a specific artefact, the exercise pamphlet shapes the way in which users relate to exhibited objects and how the exercise pamphlet guides the user’s actions and movements in the exhibition. It illustrates how visitors interact with portable artefacts while performing an exhibition. The analysis uses an actor network analysis to portray an empirical case of how artefacts participate in the performance of a museum exhibition.

Case: The museum exhibition
The museum opened in 2005. An important feature of the museum is its modern architecture. The exhibition is located in a large circular space with an open core in the centre. It is divided into three levels, Water, Land and Air. The animals are exhibited on podiums and not as in traditional museums of natural history, shown in their habitat. The animals are staged with light and music which changes all the time. On Land a multimedia show plays continuously 24 hours of day and night in a loop of 1½ hours. Sound and light change from the energetic rhythm of sunrise to calm, starry night. At times thunder and rain break the air.

Signs with the names of animals are seen in proximity to the animals, but no further information is provided here. Information about the exhibited animals may be found on computers called nature-bases. A nature-base is a computer and mouse setup positioned in different locations in the exhibition. The idea is that by using these computers visitors can seek out information about the animals in which they are interested. Furthermore the computers are included as reference points in the formalised educational activities which the museum offers to visiting schools.

In evaluations visitors have expressed that they experience a lack of accessible text about the exhibited animals. To compensate for this some columns with display text have been added to the exhibition.
Encountering the exhibition with exercise pamphlets
A common way for children to experience the exhibition is by means of different kinds of exercise pamphlets. Exercise pamphlets are sold at the entrance to the museum and are used by children visiting the museum with both their families and on school trips. Almost a third of the children who visit the museum do so in the company of an exercise pamphlet (statistics from museum).

Exercise pamphlets are a printed set of papers. Some exercise pamphlets contain questions about the subject matter of biology and about the exhibited animals. Other exercise pamphlets have pictures of animals, which may or may not be found in the exhibition, and a task for the visitor to complete.

The museum continuously produces exercise pamphlets, and there are variations among them, both as regards content and where the visitors should go in order to solve exercises. Answers to the exercises may be obtained from the exhibition and its related information architecture – for example in digital nature-bases, but also on posters in special exhibitions and in other written material.

Children are awarded a prize (in the form of a poster) when they have completed the exercises.

Exercise pamphlets guide users and prescribe their movements
Following actor network theory, we may explore the exercise pamphlet as an entity which participates in the performance of a network of relations. To understand an entity we have to understand its relations to other entities (Law and Hassard 1999).

In the initial quote from the exercise about the brown bear, we can clearly see how relations are inscribed in the exercise pamphlet (for example a relation to an exhibited bear). With these relations are also inscribed suggestions as to how the user should interact with the exhibition. The exercise pamphlet both directs the user to a location in the exhibition: “find me in the exhibition”, and “find me on the computer”, and instructs the user what to do: “feel how silky my fur is”, “mark what I eat”.

In this way the exercise pamphlet shapes the child’s interaction with the exhibition. The child’s attention is directed toward specific aspects of the animal (how the fur feels, what the animal eats), to specific aspects of the exhibition (that there is a bear on exhibition, and that this bear is an animal which it is permitted to touch) and to specific locations in the exhibition (go to the computer).

This latter aspect – that an exercise pamphlet makes the child go to specific locations in the exhibition – may also be seen in the following video-transcript. Fie (7) is at the museum with her mother, father and older brother. Fie is wearing video-glasses. The visitors have spent some time on level Water, and are now on their way to Land.
They walk up the stairs from Water to Land and Fie comes to a point where she can see something that to her resembles a musk ox.
Fie: Oh- Søøøreen-ng (the name of her father, said in an eager, singing manner): I have found the one for our last missing question.
Her father doesn’t reply.
He says to his wife: Those exercise lists should be banned.
Fie ignores this. She once again tries to involve him in her action.
Fie: But Dad, it’s right over here
Fie: Yeah, but I’m gonna go right over there, because there it is.
Dad: OK
Fie: see ya’

(00:22:00)

Fie takes off walking. She enters the exhibition on level Land. She passes elk, reindeer, a large brown bear, she doesn’t look at them, and she doesn’t stop at them. She goes directly to the Arctic podium.

(00:22:50)

She arrives at the Arctic podium. Looks around a little. Sees a column sign. The text is in English.
Fie: English
She moves. Finds the Danish text. Reads out loud:
Fie (reading out loud): Musk ox, it was a musk ox.
Writes on her exercise sheet while vocalizing: “muuuuuuskk –ooooox.”
Continues writing and vocalizing: oooooooooo-x.
She turns around, sees her brother who says her name.
Teis: Fie
Fie: It was a musk ox, like I said.
She hums, stands, looks around for a little while.

(video 005)

This interaction shows that the exercise pamphlet establishes relations between itself, a user, exhibited objects and accompanying information architecture. The exercise pamphlet is not a separate entity. It is an entity which is associated with (and associates itself to) other objects. The exercise pamphlet establishes relations between the exhibited animals and the visitor.

The exercise pamphlet is central in the creation of a network. It draws together certain objects in the exhibition, and establishes connections between these objects and visitors. The exercise pamphlet participates in the creation of a net of associations. This net of associations is made manifest when the exercise pamphlet and user interact. The exercise pamphlet contributes to certain modes of movement, where the museum is performed
spatially and temporally according to an order which the exercise pamphlet participates in creating.

10-year old Torkild, who is at the museum for his third time, explains how the exercise pamphlet takes him around in the exhibition:

Torkild: You go and find the animal, and then you can read what it says there.
Int: And what does it say? You see, I haven’t tried to solve these exercises, so I don’t really know what you do.
Torkild: Well, it says, for example, if it is a sparrow, then it has this number, down below on a sign, a little sign, a medium sized sign, and then you can go to the computer and read on it.
Int: OK. And what are the exercises about?
Torkild: Well, that you have to walk around and find the animals and stuff.

(audio 0027)

The exercise pamphlet guides the boy to specific locations in the exhibition. In Torkild’s explanation of how he finds answers, we can see that several entities are related. The exercise pamphlet is the initial entity. The pamphlet mentions an animal that he is to solve an exercise about. Torkild’s strategy for doing this is to find the exhibited animal on a podium. He knows that there is a sign located nearby, and on that sign is a number. This is the third entity. With the number he can access information on the computer, which becomes the fourth entity in this net of actions.

The exercise pamphlets create certain forms of action, and with/in these actions relations are established between users and exhibited objects. In this way exercise pamphlets are central in the creation of networks of action.

The exercise pamphlet tries to prescribe the behaviour of the entities which are aligned in its network – the user of course being the most mobile entity. The exercise pamphlet “defines a framework of action along with which the entities and spaces are supposed to act. (Akrich 1992).” (Murdoch 1998, p. 363).

The exercise pamphlet is part of a standardised network, which attempts to configure the visitor into a specific set of actions, to inscribe certain patterns of action on the visitor, and thus to inscribe specific performances of the exhibition.

The exercise pamphlet negotiates with other objects

In the following excerpt we see another example of how an exercise pamphlet pulls at a visitor, but we also see how this pull does not stand alone. First the exercise pamphlet pulls the visitor from a conversation about how climate changes affect polar bears to some stolen Easter eggs. Then this course is interrupted by a digital nature-base which says something about whales. Ultimately the exercise pamphlet comes back strong – enforced by the body mass of a walrus.
Bea (10) walks down the stairs with her brother Anton (12). Bea carries an exercise pamphlet. The purpose of the exercises is to find "the animals who have stolen an Easter egg". At different places in the exhibition a colourful Easter egg is placed next to an exhibited animal; the animal has stolen an egg. The exercise pamphlet carries pictures of these animals, and of some more animals who have not stolen any eggs. The task is to put a mark next to the animals that have stolen an egg.

Bea and Anton are talking. They have just passed a polar bear and Anton says that they are becoming extinct.

(00:06:00)

Bea: Why are they becoming extinct?
Anton: Well, because the ice is melting, you know.
Anton: And they are called polar bears. They live on the ice, and then they don’t have any ice to live on.
Bea: What a pity for them, huh.
Bea: I wouldn’t mind having polar bears in Denmark. No, no.
Bea (exclaims): It has stolen an Easter egg!
Anton: Yes! It has!
Bea: juhuu
They take off running down the stairs.

(video 007)

When Bea arrives at the bottom of the flight of stairs, she sees a computer, a nature-base. It is the first one she sees on her museum visit. As she stops at the nature-base, she asks her father who has also come down the stairs, what it is.

Bea: What is it?
Father: It is something where you can enter and read about it.
F: Try to click on Water, which is where we are now.
Bea: And Land as well.
Bea: Where do we start?
F (reads out loud): Choose an animal from where it lives, or change the overall category by clicking
F: well that’s up to you
Bea (reads out loud, hesitantly): Toothed whales and balee-
F: Baleen whales, those are the largest.
Bea (reads out loud): Did you know that…
F: the humpback whale

(00:07:30)
Bea (looks at nature-base screen, clicks mouse, reads out loud): The humpback whales are known for the longest and most complex singing... I can’t read that
F: the most complex singing... that means that, there are a lot – it means that language-wise it is
Bea: the one that talks the most
F: yeah
F: wow – 180 DB – that’s incredibly much – it’s more powerful than a jet plane

(00:07:44)

Bea looks at her dad.
F: it is...
Bea continues to gaze around.
Bea (fulfils his sentence): ...oh, wow, really incredible – (sees the walrus, interrupts herself): Did you put an X next to the walrus?
F: No, I haven’t put any X’es anywhere; don’t you want to do it?
Bea: yeah

(video 007)

This excerpt shows how the nature-base exerts enough force on Bea to stop her movement towards the Easter egg – walrus constellation, but also how it does not keep her there for very long.

In the excerpt above, the two entities (the exercise pamphlet and the nature-base) do not enforce each other, but rather compete with each other for the visitor’s attention. They pull in different directions. This shows that the museum’s mediating artefacts negotiate about the user’s attention among themselves and with the exhibited objects. The nature-base steals the visitor from the exercise pamphlet for a moment, but not for long. When the visitor looks around, she sees the walrus, and this huge exhibited object turns her attention back to the exercise pamphlet and the task: has the walrus stolen an Easter egg?

The exercise pamphlet provides a specific kind of optic for the user. It directs the user’s attention towards specific objects. The exercise pamphlet is linked to the Easter egg. The Easter egg and the exercise pamphlet mutually enforce each other. They are two associated entities that bring each other into the girl’s sphere of attention. The exercise pamphlet and its related objects compete/negotiate with other entities for the user’s attention. In the excerpt above, the exercise pamphlet-Easter egg constellation (and the purpose which is built into this constellation), are able to background the polar bear and the effects of climate change, as well as the information offered by nature-bases.

The digital nature-base may be entirely bypassed, for example, if the exercise pamphlet does not make an explicit reference to the computer, or it may be involved as a central part of solving the questions in the exercise pamphlet.
In the exercise pamphlets which Jakob and Torkild were using, mutually enforcing relations were established between the exercise pamphlet and the computer database. The computer database was explicitly made relevant by the exercise pamphlet. This portrayal of how the exercise pamphlet is linked to other entities, says something about how the digital nature-bases participate in the visitor’s encounter with the museum. The nature-bases are brought to the children’s attention when questions are directed towards information, which may be found on the computers (audio 0028, 0029, 0030, 0031, 0032). 12-year old Peter sums it up when I ask him what he thinks about the nature-base: “Well, it’s good to use if you have to answer these questions” (audio 0032). Peter judges the digital nature-base for its use-value. It is valuable when it helps him carry out the activity he is engaged in. It is valuable when it is made relevant by the exercise pamphlet.

How does the exercise pamphlet exert influence

In which manner does the exercise pamphlet (and its related entities) exert influence on people? This is one of the tricky discussions in the relationship between materiality and sociality: which causalities are at play and how is action determined? (Latour 2005).

Using actor network theory, the museum building as a whole may be seen as a network. The links between walls, flooring, stairs and ceilings are (relatively) stable. These entities do not move around (very much), and they create fairly predictable patterns of movement. People tend to walk through door openings, rather than through walls, for example. These artefacts, which are designed in a manner so that their interpretive flexibility (Gherardi and Nicolini 2003) is limited, have a tendency to produce specific effects in user’s actions. If we look at the physical structure of the museum it seems appropriate to talk about relatively deterministic relations where materiality structures sociality.

The exercise pamphlet does not produce patterns of movement that are as predictable as the ones exerted by the solid entities of walls and flooring. The exercise pamphlets are artefacts with more open interpretive possibilities. They may be folded into airplanes. They may be thrown away. They may be disregarded in many ways. But they aren’t.

The pamphlet does not exert as strong a prescriptive pattern on users as the solid structure of the building does, but nevertheless the pamphlet creates certain patterns of action. The exercise pamphlet has a force; it focuses attention and in this way envisions a certain horizon of possible actions. The exercise pamphlet in this sense shapes the visitor’s seeing and doing of the exhibition. It and its aligned entities prescribe the way the exhibition is performed.

The exercise pamphlet to a large extent is acted upon in manners which are not entirely dissimilar to the sender’s intention. This does not mean that there are not interesting issues to explore as regards differences in the perspective of sense-giver and sense-maker (Pratt and Rafaeli 2006). There are. Sense-makers (visitors) come across problems
in understanding the exercises. *What exactly does this mean? Where am I supposed to find this information?* But there still seems to be a balance, where the exercise pamphlets are ‘good enough’ in use, in museum visitor practice, to not be discarded.

Visitors perform the museum space with the exercise pamphlet as a central force of movement. The visitor performs the exhibition in accordance with the temporal and spatial order suggested by the exercise pamphlet. In actor network theory “networks and spaces are generated together” (Murdoch 1998, p. 360). Space is seen as an effect of associations between entities. Space is relational: space becomes a question of how network elements are related (Mol and Law, 1994, p.650).

Above are two examples of networked space. The physical structure of the museum – the links between all of the materials which it consists of – configures space, as does the exercise pamphlet: when the exercise pamphlet, user and other entities are in action together, they configure space. Both of these examples illustrate what Murdoch calls ‘spaces of prescription’ (Murdoch 1998), but as indicated, the strength of the prescriptions are not identical. The prescriptions made by the exercise pamphlets are more subject to negotiation, than the prescriptions made by walls and flooring.

Users switch between different artefacts

The vision, actions and movements of visitors are not exclusively prescribed by exercise pamphlets. As is shown in the empirical excerpts, visitors also orient themselves towards objects which are not mentioned by the exercise pamphlets, and they interact with other mediating artefacts than the exercise pamphlets.

The connections which are established to and from the exercise pamphlet co-exist with other connections. Users relate to the museum exhibition through the mediating artefact of the exercise pamphlet, but they also do so by connecting themselves to other entities. In users’ interactions with the museum exhibition, we can see the emergence of not only one network, but of several more or less stable alignments.

Users relate to distinct objects, and with this relating they contribute with action to distinct networks. In this manner distinct spatialities are enacted. The space which is produced by the exercise pamphlet co-exists with other spaces. Distinct configurations between users, mediating artefacts, exhibited animals and the material landscape of the exhibition produce distinct, overlapping spatialities.

This is made quite clear in the following interaction, where we again may see how the exercise pamphlet guides users, and this time in collective action, but also how Ane (12) and Sara (13) relate to the exhibition both with the exercise pamphlet and with a mobile phone camera.

Ane and Sara are at the museum with Ane’s brother Johannes (9), and their mother and grandmother.
The two girls look at the picture on the phone. The boy looks at one of the animals on the podium. Sara moves her attention from the phone, moves towards Johannes who has an exercise pamphlet in his hands. Ane looks at the phone for a little longer, then takes the phone down and looks at the podium. Sara and Johannes move around the podium, Ane follows. Suddenly Johannes exclaims something, and moves forward at a high speed, with the exercise pamphlet raised in his hands. He has seen an animal with an Easter egg next to it. The two girls follow. Johannes uses the podium to lean the exercise board on, flips a page, says “which one is that one?” Sara looks over Johannes’s shoulder at his exercise board, she then moves to the nature base right behind them. Ane is absorbed in her mobile phone.

(00:12:36)

Johannes looks at the exercise board, pointing to a picture, he says: “It’s this one.” Johannes is occupied with his exercise board, Ane with her mobile phone. Johannes flips one page forward, and one page back, then says: “we also have to find…” Ane looks at the exercise board, briefly, then looks back at her mobile phone. Johannes calls Sara, she comes over. Sara and Johannes move from the podium, go to the Arctic podium. Ane follows, steps in next to Sara. “I want to take a picture of that one” (Polar Wolf). Johannes leans over, looking at the exercise pamphlet. He uses the podium as a table. Ane takes off: “I’m gonna go take a picture of the hare.” Sara bends over, also looks at the exercise pamphlet. Using his pencil, Johannes points to something on the podium. In one movement he flips the pages closed and stands up.

Ane has gone around to the other side of the podium, mobile phone in front of her. She says: “I’ve found some that have an Easter egg,” she looks around, looks for the others, realizes they aren’t there, moves quickly away from the podium, calls out: “Sara, I’ve found one that has an Easter egg,” she goes back to the podium. Her mobile phone is in her hand, not in use right now, the others approach the podium, she points to the podium. Johannes says: “Where?” “There”, says Sara. Ane is oriented towards her mobile phone again. Johannes leans over on the podium, flips the pages, makes a mark, walks away. Ane bends over, photographs a small white fox. Sara looks at a wall-mounted screen. (00:14:32)

(Video 008)

In this excerpt the visitors engage in interaction with different kinds of artefacts and these artefacts coexist as networks in action. Ane is engaged in two networks of action. She is primarily oriented towards her activity of photography and using her mobile phone camera as a way of connecting to the exhibited animals, but she is also loosely coupled to the activity which evolves around the object of the exercise pamphlet. Sara is carrying an exercise pamphlet in her hands, but she is not engaged in solving it. Instead she is engaged in interaction with two other portable artefacts: Johannes’s exercise pamphlet and Ane’s mobile phone camera. At this point the exercise pamphlet is primary in Johannes’s performance of the exhibition, but a little while later, he gets dressed up in an animal costume and performs the exhibition in interaction with that portable artefact. Just like Jakob.
In these interactions the children have one artefact, which seems primary to them. The mobile phone is primary in Ane’s actions. The exercise pamphlet is primary in Johannes’s. But they also align themselves with the action nets which evolve from the objects which their relative carries. Ane randomly participates in Johannes’s endeavour and vice versa. Sara participates in both modes of performing the exhibition (with an exercise pamphlet and with a mobile phone camera).

Shifting networks are multiple spatialities

The shifting interactions which users engage in may be seen as fluxes among and in loose networks. These are networks where the links between the participants are provisional and divergent. “The various components of the network continually re-negotiate with one another, form variable and revisable coalitions, and assume ever-changing shapes (Callon 1992).” (Murdoch 1998, p. 362).

The networks which users participate in are networks of variation and flux, and according to Murdoch (1998), these networks create spaces which are fluid, interactional and unstable. They create ‘spaces of negotiation’.

Following actor network theory these shifting interactions may be understood as shifting spatialities. The artefact and the visitor together perform a specific spatiality. The distinct artefacts bring distinct spatialities with them.

There are simultaneously multiple spatialities at play in users’ performances of the exhibition. These multiple spatialities are made tangible when they are seen as the effects of distinct configurations of bodies, portable artefacts and material landscape (Haldrup 2006, Haldrup and Larsen 2006). The mobile phone camera and the animal costume are part of other networks than the ones which the exercise pamphlet participates in, and in this manner these two artefacts manifest other spatialities than those of the exercise pamphlets.

But why do the shifts occur? And what role do humans play in them?

Latour asserts that in order to understand social action, we have to include all participants. Latour argues that it must be quite fundamental in a social science to clarify the question of who and what participates in the action that we are trying to understand. This is an issue which must be thoroughly explored, “even though it might mean letting elements in which, for a lack of a better term, we would call non-humans.” (Latour 2005, p. 72). Latour argues, “Anything that does modify a state of affairs by making a difference is an actor.” (Latour 2005, p. 71).

The relevant question to ask about any actor is the following: “Does it make a difference in the course of some other agent’s action or not?” (Latour 2005, p. 71). The answer to the simple question of whether the exercise pamphlet makes a difference is of course, yes it does. So following Latour, the exercise pamphlets are actors; they are active partici-
pants in the course of action. But does the user not also make a difference to the actions of the exercise pamphlet? And has the participation of the user been thoroughly explored?

What is the role of human attention?

There is an aspect of the shifting interactions which I find missing in the actor network vocabulary. When Bea switches her attention from polar bear to Easter egg, to nature-base, to walrus, to exercise pamphlet, these switches may be explored as network negotiations and as spaces of negotiation – as it is done above, but these switches may also be explored as shifts in attention and as a story of how intention is a strong force in the establishment of relations of action between heterogeneous entities.

Initially in this text we meet a boy who is dressed up as a fox. At a point he walks around in the exhibition, wearing his fox costume, solving exercises (audio 0013). The animal costume is on his body, but it is not being performed. When the boy shifts his attention and intention, action is channelled into relating to the exhibition with either the exercise pamphlet or the animal costume. Human awareness and intention seems to be central in the actions of these objects.

When the boy asks his older sister for help, she is absorbed in photography. She – in that moment – shifts her attention, clicks out of her performance and enters into his. She helps him solve the question that gives him trouble, and after that resumes her own photographically mediated performance of the exhibition.

Tension between human performance and the action of things

There is a tension between talking about how humans perform an exhibition and working with the actor network theoretical principles of symmetry and heterogeneity (where it is stressed that no a priori assumptions should be made as to who or what acts – as expressed by Latour in the quote above). John Law (2004) suggests the use of the word enactment instead of performance: “the term [enactment] is possibly preferable because performance has been widely used in ways that link it (…) to human conduct.” (Law 2004, p. 159).

Crudely speaking actor network theory is not interested in paying special attention to humans. A critique of actor network theory is that in the chase for symmetry and heterogeneity the thorough examination of human actor’s participation goes lacking. This sort of critique is raised by Pickering (1993), who suggests that intentionality may be the “key distinction between human and nonhuman entities.”(Murdoch 1998, p.368). Murdoch raises the question “how far the symmetrical perspective offered by ANT can be integrated with a human centred analysis.” (Murdoch 1998, p. 368).
These comments are echoed in the reflection that perhaps attention and intention are missing in the actor network inspired analysis. Human awareness and intention may be further explored as important forces in the establishing and breaking of relations between users, portable artefacts and the exhibition.

Summing up: The influence of artefacts is negotiated

The vocabulary found within actor network theory has been useful for showing how exercise pamphlets participate in the performance of the exhibition. It has demonstrated that exercise pamphlets guide and prescribe users’ movements in the exhibition. It has shown how exercise pamphlets work through relations with other entities and thus form networks. Within an actor network analysis these networks are also spatial configurations. The spatialities which are performed with the exercise pamphlets co-exist with other spatialities.

The exercise pamphlet prescribes action, but the exercise pamphlet and the actions it prescribes are negotiated. The analysis thus shows a network where the links between the entities – human, technological, animal, etc. – are provisional and loose. They stabilize certain forms of action, but they are also ephemeral. Users do not only relate to the exhibition through the links which exercise pamphlets co-create. They also do so through links which are established to and with other mediating artefacts. Users switch between artefacts. These shifts may be understood as shifting networks and spatialities. The exhibition is performed as a series of both stabilizing and unstable, fluid and interactional networks. The exhibition is performed as several coexisting spatialities.

A theme which is not accounted for by the actor network analysis, but which may be important for understanding the negotiated manners in which artefacts participate in the performance of an exhibition, is the role of human awareness. Attention and intention are important forces in the establishing and breaking of relations between users, portable artefacts and the exhibition.

References

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