



# TRANSFORMATIONAL EXPERIENCES AT THE EXPERIMENTARIUM

## - Learning by Doing

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**By: Mette Kofoed Iversen**

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C O N F I D E N T I A L



## Executive Summary

The Transformation Economy is augured to be the economic offering of future business, and the Experimentarium in Copenhagen has for years been abreast of this tendency of transformational experiences. The aim of this thesis is to explore the experience at the Experimentarium, and to what extent the experience is transformative as well as how transformational offerings can be used to differentiate from competitors.

The theoretical foundation is primarily based on Kristensen (2009a; 2012; 2009b) and Pine & Gilmore (1999), in combination with theory on conceptual consumption, consumer motivation, pleasures of the mind, learning and co-creation.

Through different methods of qualitative research, the consumers are being investigated in order to explore their experience and whether learning leads to transformation. Since transformations are built on experiences, the research also investigates how the experience can be optimized. Learning is defined to be the precondition for transformations, and the exhaustive research has revealed that the majority of the respondents expected to learn something during their visit, and more than half also believed they had learned something new.

The recommendations of this thesis is to focus more on the guidance of the consumers and involve the already existing guides in the dialogue with the visitors, in order to help them across obstacles in the direction of transformation and secure fluency and flow in the experience. By implementing guidance through i.e. smart phones, the sense of “the individual exhibition” will be increased, and this kind of intelligent guidance can be constantly at hand and secure a positive experience.

To optimize the experience more immersive elements in terms of esthetic and escapist experiences should be offered. They will ensure elements of immersion and stimulate all senses and thus fulfil the essence of Pine & Gilmore’s “sweet spot” and the “gesamt kunstwerk” concept. The united experience must reflect the essence of the Experimentarium and provide room for activity as well as relaxation and time and space for reflection and settlement of the experience. As something new within the transformation theory, this thesis has demonstrated that the learning obtained at the Experimentarium is often not recognized until some time after the actual moment of experience in a specific situation where the learning becomes relevant. In other words, the actual transformation may not occur until weeks or months after the actual experience.

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# Info



## CHAPTER 1

### Introduction

## 1. Introduction

*“A mind that is stretched by a new experience can never go back to its old dimensions.”*  
Oliver Wendell Holmes Jr.

The Experience Economy has been focus of attention for many companies through the last decade, in the attempt to create the best experiences and hence attract and maintain the interest of the customers. The increasing need for self-realization however makes the customers wanting more than just entertainment – they want to be involved in the experience, to be transformed and to actualize themselves. The pioneers within the Experience Economy, Pine & Gilmore, claim, “...once the Experience Economy has run its course, the Transformation Economy will take over” (Pine & Gilmore, 1999:173).

I see a great economic potential within the Transformation Economy for companies in Denmark, and more specifically among cultural institutions. As a result of the increasing wealth in the Western world, fewer people have actual problems and challenges in their everyday life, the basic needs are more easily satisfied, and the new objective is self-actualization. To comply the demand for people's need to actualise themselves, the concept of transformative experiences is relevant, where the essence is an individual experience and the customer becomes the product.

Nowadays, when partaking in an experience, the individual often wants something more than a good time and a treasured memory; he wants to gain insight in something new, become different and thus realize themselves. A transformative experience is an arranged purchase situation that invites to a transformational experience and guides the customer in a certain direction. In other words, it offers the *opportunity* to be transformed. Meanwhile, the business offer is not vulgarly obvious with neon signs saying “*Realize your self, learn something new, be transformed*”, but people seek out the opportunity more or less consciously, while the business nudge and guide the people in the direction of the offered transformational experiences.

The Transformation Economy is a relatively new concept, and I see an opportunity for further research of the gaps in the theory and the empirical studies. The academic work within the field is slowly developing, but in order to further investigate and develop the field case studies are needed.

The purpose of this thesis is to theorize and explore the personal transformations taking place among average consumers, as the users of cultural institutions. These institutions are established to enable people to learn and mature individually, as well as forming a sense of community. The

Experimentarium is a science centre with the vision and purpose to increase the general public's interest in natural science through involving experiences and has for years been abreast of these developing tendencies – a more thorough presentation of the Experimentarium will be presented in Section 4.1. The Experimentarium seeks to continuously cause surprise and thereby stimulate the curiosity and eagerness to learn. The question is whether the potential is being exploited fully. From this a problem area has developed:

### **1.1. Problem Area**

The Experimentarium claims to offer a transformational experience where "*Funnily enough, you get smarter*", but if this is the case, to what extent is it a competitive advantage that creates preferences among the consumers? Why should customers choose to visit the Experimentarium before other cultural institutions?

In order to elaborate on this I will investigate how and when an experience becomes transformative, how it can be measured and how it affects the consumers.

In order to examine this problem area I have developed the following research statement:

*How can theory be used to explore transformational experiences in a cultural institution, and how can the Experimentarium differentiate from the competitors and establish preferences among the consumers by offering these kind of experiences?*

The following sub-questions are to be answered in order to elaborate on the research statement above.

1. *What measures can a cultural institution initiate to make an experience transformative?*
2. *How is the target group of the institution affected by the offered experiences?*
3. *How can involving and engaging the target groups in the experiences through co-creation intensify the transformational process?*
4. *How can a cultural institution differentiate through transformative offerings and thereby establish preferences among current and potential customers?*

I cannot approach the problem area from either a business perspective or a consumer perspective. My approach in the research statement is from a business perspective, but in order to investigate the effect of the offered experiences and the expectations among the consumers I will have to

adopt a consumer perspective. At the end of the day the consumers are the central factor for understanding of motives, changes and a successful execution of transformations.

### **1.1.1. Delimitation**

I will refer to the visitors at the Experimentarium as visitors, consumers and customers. The present thesis deals exclusively with transformational experiences in cultural institutions, with the Experimentarium as the area of focus. The thesis will not deal with other areas of the Transformation Economy including social transformations and negative originated transformations, and the economic dimension of the suggestions will not be taken into account. The focus of this thesis is the Danish market and the Danish consumers, and I will exclusively focus on constructed and arranged transformational experiences and thereby delimit from random occurrences. This thesis will not conduct a segmentation of the visitors, as the area of focus is the transformational experience and what measures will lead to a transformation, and it is not a definition of the different target groups. School projects are a large target group, but I delimit completely from this area. The focus is the ordinary family visit to the Experimentarium and the elements and fragments of a transformational experience.

This thesis will provide suggestions on how the Experimentarium should optimize their brand and marketing communications, based on the findings in the analysis and discussion, but will not look into how the current brand and marketing management is managed. Besides the suggestions I delimit from looking into and exploring how they should organize the brand management and marketing communications in practice in the future.

### **1.2. Theoretical Point of Departure**

The following section will function as a theoretical point of departure, in order to clarify the concept of transformation as the focus of this thesis. I find it necessary to initially define the notion of transformation and to standardize the perception and definition of the concept, in order for the reader and me as researcher to have a common point of departure and understanding of concepts throughout the thesis.

The present thesis theoretical approach to transformation is primarily influenced by Tore Kristensen (2009a; 2012; 2009b) and Pine & Gilmore's (1999) work within the area and their perspective on consumer transformation. Two other approaches presented by James (1902) and

Oatley & Djikic (2002) have also been included in order to provide a further perspective on the field.

The combination of Kristensen's primary consumer perspective and Pine & Gilmore's primary business perspective provide a versatile definition of the concept. This is essential in order to fully understand the concept as well as providing the necessary tools in order to be able to fully analyse and discuss the problem area. The theoretical framework will be presented in Section 3.1, where the consumer transformation and the supporting theories of the concept of transformation will be elaborated.

### 1.3. Transformation

Pine & Gilmore presented the idea of the Transformations Economy in their book "*The Experience Economy: Work Is Theatre & Every Business a Stage*" (1999). They emphasize that the Transformation Economy is a greater economic dimension, which will take over once the Experience Economy, has run its course. Kristensen (2009a) supports the argumentation, and argues that when the "event and experience-culture" becomes less attractive, various forms of transformations will become more attractive. The experiences we have and the meaning we attach to them, is what gives meaning to our lives, and the choices we make and the course of life in general are often based on the experiences we have (Boswijk, Thijssen, & Peelen, 2007).

Meanwhile, when experiencing the same thing over again, it will often be marginally less enjoyable than the previous time, until realizing that the experience is not as engaging and joyful as it was to begin with. Evidently, the offering of the experience will become less interesting for the consumer, and a need for transformation will occur (Kristensen & Horváth, 2012). In relation to a business economical perspective, companies must aim for maintaining an interest among the consumers, and a focus on transformational experiences seems right for modern times. "*It may therefore be a very good idea for the decision makers and the creators of future wealth and welfare to explore what insights into transformations can offer for a highly educated society.*" (Kristensen, 2009b:3)

The prophecy of a new Transformation Economy that will take over the experience economy seems a little overwhelming, and it can be discussed whether this new so-called economic dimension is just a fabrication aiming for selling more theoretical literature, or if it truly is a new economic dimension. Transformations have always been a "human condition", even as far back as the Stone Age, where tools such as axes and spears changed life completely. As of today, people

may experience numerous transformations throughout a lifetime, contrary to the past, where a transformation could take place over many generations (Kristensen, 2009b).

Meanwhile, the tendency is moving from transformations as only being a human condition, towards transformations as also being an economic offering, arranged, staged and guided by the companies. The following section will present different theoretical perspectives as the fundament for my definition of transformation.

### 1.3.1. What is Transformation?

Later in this chapter I will disclose my definition of transformation, but I firstly present four different theoretical approaches to the concept, which will form the foundation for my defintion. The Transformation Economy seems to be a relatively new theoretical concept, although transformations always have been a part of the human evolution as presented. Meanwhile, only a small amount of theoretical research has been conducted within this field, and my exposition of the theoretical field will primarily be based on theoretical work from Tore Kristensen (2009a; 2012; 2009b), Pine & Gilmore (1999), and to a less extent, James (1902) and Oatley & Djikic (2002).

Oatley & Djikic's work "*Emotions and Transformation: Varieties of Experience of Identity*" (2002) emphasizes transformation as an older concept in the theoretical field, taking off in the work of William James. Already in the beginning of the 1900-century, James introduced his work "*The Varieties of Religious Experience*" (1902) , where he presents transformation in a religious perspective. James' (1902) work will be included in the development of my definition, and will be considered as a preceding foundation of the Transformation Economy.

The Oxford English Dictionary (2012b) defines transformation in several contexts as for example within zoology and physiology, but relevant to my focus, the process of being transformed, the term is defined as:

- “*The action of transforming or fact of being transformed*”
- “*The action of changing in form, shape, or appearance; metamorphosis*”
- “*A changed form; a person or thing transformed. Obs. rare.*”
- “*A complete change in character, condition, etc.*”

The definition of the term appears somehow multifarious, and transformations can occur in numerous ways, levels and contexts. Since transformation is complex and subjective, it is hard to provide an ultimate definition of the term and concept.

### **1.3.2. Religious conversion – William James**

The theoretical focus of psychologist and philosopher William James (1902) was the motivating properties of emotions and how fear of evil in ourselves motivates individuals to seek self-transformation. According to James, there are two different kinds of transformations: religious experience and religious conversion. Conversion is an emotional process, implying a shift from one emotional centre to another. James perceives emotions as the content that makes life make sense, and emotions are the means by which motivational priority makes one chose something over another. He regards emotions as the initiator of what is perceived as the greatest personal project: transformations of self-hood to become happier and better individuals.

James introduces two great development phases that an individual can possibly experience in a lifetime. The first phase is described by Oatley & Djikic as “*child development*” (2002:99). The phase begins with birth, and the personality of the individual will be formed during this phase, although wisdom continuously will grow and smaller modifications may appear. If this phase develops successfully, the religion of the individual will be what James calls a “*healthy mindedness*” (2002:100). When this is the case, the individual is content and will not need to go through the second development phase – such people only need to be “*once-born*” (James, 1902). James refers to the second development phase as being for those who have not succeeded in the first phase and therefore do not have a healthy mindedness. This phase is the opportunity for identity transformation during adulthood and is referred to as the second birth or to be “*twice-born*” (James, 1902). James was very occupied with conversion experiences, where an individual repudiates his previous life and seeks to replace it by something new, in what is referred to as a conscious emotional experience.

### **1.3.3. Three Ways of Transformation - Oatley & Djikic**

Oatley & Djikic (2002) present a different view on transformation and argue that the transformation of an individuals’ character can take place in several ways. Agreeing with James (1902), Oatley & Djikic argue that transformations only occur during adulthood. Contrary to

James, they believe that transformations can happen frequently, whereas James only acknowledges one or two possible transformation phases through life.

They introduce three types of transformation, which they find relevant to modern times: personal transformation, social transformations and major social upheavals (2002:108).

Personal transformations emerge from conscious self-reflection, and according to Oatley & Djikic the self-reflection is solely based on an inner force. They present an example of a woman writing a diary, and by looking back on earlier writings she discovers how self-absorbed she appears and thereby sees herself in a new way. They argue that inner movement arises through new personal discoveries.

Social transformations occur along with new relationships, and according to Oatley & Djikic one of the greatest and most influential example is falling in love.

The third kind of transformation is major social upheavals. This kind of traumatic transformation occurs in the wake of large external adversities and leads to a feeling of meaninglessness and can furthermore lead to negotiation of relationships. Oatley & Djikic stress the fact that many transformations in modern times may arise from inner movements, but most transformations happen based on the pressure and influence of external events.

#### **1.3.4. The Business is a Stage - Pine & Gilmore**

Pine & Gilmore (1999) presents the Transformation Economy as the economy of the future in the book "*The Experience Economy: Work is a Theatre and every business is a stage*". Here they acknowledge that experiences are not the final economic offering, but that another dimension exists: The Transformation Economy. One of the main differences in Pine & Gilmore's perspective compared to James (1902) and Oatley & Djikic (2002) is the frequency with which transformations can occur in a person's life. Transformations are far more frequent and current in Pine & Gilmore's view than in the previous presented.

According to Pine & Gilmore, the essence of progression of economic value is the step from "staging experiences" to "guiding transformations". Transformations are as distinct from experiences as experiences are from services, but experiences are the precondition for transformations since transformations are built on experiences. In Section 3.1.1 I will go more thoroughly into the difference between experiences and transformations.

Pine & Gilmore (1999) argue that the transformational process consists of three phases from a business perspective: *Diagnose Aspirations*, *Stage Experiences* and *Following Through*. First the

company needs to diagnose what the consumers need, and what they want to become. Secondly the company must stage and guide the experience so that it offers the consumers what they need, in order to nudge them in the right direction and increase the possibility for a transformation. The final step in the transformational process is “following through”, that focuses on sustaining and securing the transformation after the experience, and Pine & Gilmore refer to this phase as the most difficult one. They argue that when an experience is customized, you automatically turn it into a transformation, and when an experience is customized and provides exactly what an individual needs, that specific individual will be changed. The transformation is individual, since the subject that is being guided, *is* the individual. Exactly guiding is the keyword within Pine & Gilmore’s conceptualization of transformation: the change cannot be extracted, made, delivered or staged – it can only be guided, since no one can force a change to an individual. They expressively refer to the old saying: “*You can lead a horse to water, but you can't make it drink*” (1999:177). The customer is the product, since all transformations occur within the being of the customer. They argue that a transformation affects the very being of the individual, and without a change in attitude, performance, characteristics or some other fundamental dimension, no transformation occurs.

Pine & Gilmore (1999) refer to buyers of transformation as aspirants, as they aspire to be someone or something else and seek to be guided towards a transformational aim or purpose (Pine & Gilmore, 1999:172). Corresponding with the three phases presented, it is very important that the transformation elicitor understands the customer’s aspirations and hence is able to guide them in order for the customers to realize their aspirations. Meanwhile, Pine & Gilmore emphasize that aspirants rarely know or are able to express their needs, hopes and dreams or that they might even have the “wrong” aspirations, in regards to what is best for their own well-being, and this makes it difficult for the company to target the exact needs of the consumers. Pine & Gilmore argue that it is essential for the company to try to understand what the customer “*truly needs to become*” (1999:178), and what it takes for the individual to fulfil those needs. They introduce “The Four Realms” as the elements of which an experience consists of, as they argue that all transformation is built on experiences. These four realms can thus function as a fundament for a transformation and will be elaborated in Section 3.1.8.

Pine & Gilmore argue that the change of a transformation cannot happen twice. Once an individual has been transformed, he cannot go through the same transformation once again. A

transformation changes the being of the consumer, and therefore, no individual can experience the same transformation twice, because after one time, the individual has already been changed. They furthermore emphasize that a transformation must be sustainable, in order to truly change the aspirant and if not, it is just a momentarily change and will not make any noteworthy difference.

Pine & Gilmore (1999) are widely accredited and acknowledged for their pioneer work within the field of the experience and transformation economy. A critical view according to Kristensen (2009b) is that transformative experiences have been around for a long time. Meanwhile, the credibility of the authors and their work is high, based on their academic authority as university professors, and the academic status of the book. A weakness is the fact that Pine & Gilmore's theoretical work is more than 13 years old, and the field has developed vastly since then. Their explanatory efficacy is strong, and their basis of explanation in terms of methodology and documentation is solid as well, although the "transformation economy" seems like a last minute revelation in their book and is not consistently analysed throughout the theoretical framework. Pine & Gilmore's work is mainly conducted in an American perspective, which naturally implies some differences and weaknesses compared to the Danish market and Society, but these differences are not perceived to affect the approach of this thesis. They are still highly cited as of today, and are considered to have a high reliability, based on the fact that they still to are being referred to as pioneers and experts within the field.

### **1.3.5. Consumer Transformation – Kristensen**

Tore Kristensen (2009a) introduces yet another perspective on transformation. He agrees with Pine & Gilmore (1999) in regards to the frequency with which transformations can occur and argues that individuals today may experience numerous transformations through life, while transformations in the past often have taken place over several generations. He refers to transformation as a change in the basic set of an individual's criteria's and argue that the change is based on a process of individual interaction with a cultural system of meaning.

According to Kristensen, a transformation is a designed experience for the individual "*who seeks a sensory experience, an intellectual or virtuous challenge, or intellectual or artistic insight*" (2009b:7). Transformations are one-time experiences that change the character of need-satisfaction. This means, according to Kristensen, that those customers or users who are subject to

it will be changed (Kristensen & Horváth, 2012). He argues that “*Life consists of a large number of personal changes which may be called transformations since there is no change of the person, but there is a new preference that is considered to be part of that same person*” (Kristensen, 2009a:1).

The differences in various transformations are a topic of great interest of Kristensen (2009b), and although he acknowledges that the transformational process is based on individual interaction, and it seems essential that the experience is individual, a transformation can occur although people appear in groups or even masses. He argues that when watching a theatre or playing with LEGO, the experience becomes deeper and more amusing if other people are present. The mental presence of the individual involved is also a critical factor for the intensity and strength of the experience of a transformation, which makes adequate time and mental state of mind important factors of a transformation (2009b). From this it can be argued that despite the fact that the actual transformation is individual, the experience itself is often deeper and more enjoyable when shared with others and with the adequate time and state of mind to process the experience.

According to Kristensen (2009a), the relation between the perceiver and the object is of high relevance. The perceiver adds or creates value in relation to the specific context and the specific object, and as an example he mentions beauty where the perception is dependent on both. Value is created when a scarce raw material is transformed into a new concept and materialized. In the case of transformation, the person becomes the materialization himself (Kristensen & Horváth, 2012). A transformation often releases strong feelings within the individual and activates the identity, in matter of “*what is the “I” I want to abandon and which do I seek*” (Kristensen, 2009b:7).

Kristensen (2012) refers to transformations as a personal experience where the “aspirant” temporarily accepts the authority of somebody else to stage and guide an experience. The aspirant can be a student, and a classic example of transformation according to Kristensen is education, where individuals voluntarily undergo a long and sometimes painful period of learning, but in the end graduates as a member of a new constituency, ready to take on new challenges. He argues that education most likely changes an individual’s interest and preferences for life (Kristensen, 2009a).

Overall, Kristensen defines transformations as changes in the character of need, due to consumer learning and adaptation based on staged experiences.

Kristensen further perceives the time perspective as an important factor in transformation. An effective transformation may be brief as well as prolonged, strong or weak. It can even happen “*in a stroke of a lightening*” (2009b) to use Kristensen’s metaphor. The transformation can be a strong and demanding experience, often requiring learning of new skills, and most transformations share some characteristics with education (2009b). Transformations are according to Kristensen (2012) a one-time phenomenon, which cannot be reversed and no following experience will be the same and this corresponds with Pine & Gilmore’s definition. He assumes that a transformation is completely irreversible, but questions whether it holds in reality. He argues that even fragile transformations may make value, at least on a temporary basis, and even though a transformation is relatively irreversible, it can be lost, expire, be removed by a legitimate authority or suffer from aging (Kristensen, 2009b:7). Overall, Kristensen refers to transformations as having potential for value creation for the individual as well as for society.

Kristensen’s (2009a; 2012; 2009b) theory in the field of transformations is relatively new, and ensures more simultaneity and actuality than Pine & Gilmore. His theoretical work is centred on academic articles and takes off in much of Pine & Gilmore’s theory, although he maintains to remain critical towards their theoretical approaches.

As a professor in the transformation economy his credibility and academic authority is very high as well as his imminence to the field. His explanatory efficacy is well documented, and his approach to the field of transformations is perceived to be highly objective.

### **1.3.6. Summary**

The above four different frames of theoretical work, will provide the foundation for my interpretation and definition of the term “*transformation*”.

James’ (1902) rather religious view on transformation seems slightly out dated, but his view on emotions as the initiator and motivator for transformation of self-hood is similar to Kristensen’s, who argues that transformations often imply strong feelings. Oatley and Djikic’s (2002) perspective on especially personal transformation is viewed as coherent with Kristensen’s consumer approach to transformations. I disagree that transformations only happens in adulthood and argue that for example learning how to read in the first grades of school may transform the children’s world view since it makes them understand much more of their surroundings – for

example signs. I will elaborate on learning theory and children's learning in Section 3.1.9. Oatley & Djikic further emphasize that most transformations happen under influence of external events. Kristensen's (2009a; 2012; 2009b) consumer approach to transformation as a more frequently occurring individual experience that can vary in strength is similar to my perception of transformations. Meanwhile, I disagree with Kristensen in regard to education as consequently being transformative. You can learn new things that do not interest you, and if the learning does not interest or relate to you, the probability that the new knowledge will affect you is little. I argue that interest, worldview and mental presence are important factors for a successful transformation and agree that some education can be transformational, and that education as a whole is transformational.

Contrary to Kristensen, Pine & Gilmore's (1999) approach to transformation is more of a business perspective, with focus on progression of the economic value, but the two theoretical perceptions of the term and process are relatively consistent.

A combination of primarily Kristensen's consumer approach and the business approach of Pine & Gilmore will be the transformation view of this thesis.

The following is my definition of transformation based on the presented theories by James (1902), Oatley & Djikic (2002), Pine & Gilmore (1999) and Kristensen (2009a; 2012; 2009b).

#### **1.4. Definition of Transformation**

The following section is my definition of transformation, based on the presented theoretical findings pieced together in a combination of the theory. It is important for me as the author to emphasize that I subconsciously select the parts of the theory that fits with my perception and my wished consistency of this thesis. My approach as author and the method I use will be presented and elaborated in Chapter 2. I aim for being as objective as possible, but I am aware of the fact that my subconsciousness affects my approach to the following definition of transformation:

- An experience is a precondition for a transformation
- A transformational experience will change your understanding of certain aspects of the world. It will provide insight you did not have before, and after a transformational experience you will perceive certain things differently.
- Learning or getting insight in something you did not previously know is a precondition for a transformation. A transformation can be brief as well as prolonged and may be a strong experience which requires learning of new skills.

- It is different from individual to individual what kind of experiences lead to a transformation, as it depends on each individual's interests, background, needs and worldview. If a certain experience does not appeal to the interests and needs of the individual, it will most likely not have any transformational effect.
- A transformation is individual, and the consumer becomes the product, since all transformations occur within the very being of that consumer.
- When an experience is customized and provides *exactly* what an individual needs, that specific individual will be changed, and new preferences will arise. Even though an experience necessarily must be individual, the actual experience can be joint and the experience and process may even be strengthened and more amusing by the presence of others. The opportunity to share an experience either during or after the experience will strengthen the memory and thus the transformational experience.
- The mental presence of the individual involved is a critical factor for the intensity and strength of the experience of a transformation, which makes adequate time and mental state of mind important factors in a transformation.
- A transformation is a one-time phenomenon and cannot happen twice. Once you have been transformed, it is impossible to go through the same change again.
- A transformation is irreversible to an extent, but another transformation can occur which “trumps” or builds on top of the original transformation, and thereby a transformation can in a way be reversed, and new needs and motives may occur
- People are not always aware of or able to articulate their needs, hopes and dreams, and hence the process and guidance of a transformation can be difficult to organize. A company can try to determine the needs of the consumers, and thus arrange experiences and environments that match these needs and invite to transformations.

People can experience sudden transformations anytime and anywhere, and these transformations are sometimes accidental, such as the decision to wear a bicycle helmet after seeing a traffic accident. The occurrence of transformations in the context of the Experimentarium is a deliberate choice from the business provider and I have chosen to focus exclusively on constructed and arranged situations and delimit from the unintentional and accidental occurrences. In order to understand the transformational process, I will look further into several important factors and areas. First, the methodology of the thesis will be presented and elaborated, and herafter I will present the theoretical framework followed by the theories used as the fundament for this thesis.



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## CHAPTER 2

### Methodology

## **2. Methodology**

In this chapter, I will discuss the scientific paradigm of the thesis, and how it is affecting the epistemology and ontology, which is the foundation for the research and analysis conducted. I will also present my choice of methods and illustrate how the qualitative and quantitative methods applied in my research are a result of my ontological and epistemological understandings. The aim of this chapter on methodology is to ensure transparency in the research process for the reader. It is important for me as researcher to be explicit, clear and open about the assumptions I make, the scientific paradigm I adhere to and work within, and the methods I use. It has to be transparent which paradigm I navigate within, as the credibility of my entire research lies in the transparency of the assumptions the paradigm. My choice of paradigm will be presented in the following.

### **2.1. A Discussion of Paradigms**

There is not a singular notion on what scientific knowledge is, as this is relative to the specific scientific paradigm the researcher adheres to (Darmer & Nygaard, 2008) . A paradigm describes the epistemological, ontological, and methodological principles of the research (Pernecky, 2007). Ontology and epistemology are very closely linked, but while ontology is concerned with how reality is understood, epistemology is concerned with how I understand knowledge (Goldblatt, 2004).

The research design and methods I choose are depending on the scientific paradigm I adhere to, and this specific paradigm has consequences for the ontology, epistemology, and method of the knowledge production (Darmer & Nygaard, 2008) . Paradigms have been defined as: “*...sets of assumptions, laws and methods that are accepted by fairly large scientific communities and set the standards for how the inquiry is conducted*” (Goldblatt, 2004:22). The worldview of the holder of the paradigm is defined as: “*...nature of the world, the individuals placed in it and the range of possible relationships to that world and its parts*” (E. G. Guba & Lincoln, 1998:200) . I am inclined to adopt one paradigm because it is impossible to adhere to several paradigms as this would imply several worldviews, and this would cloud the transparency. The paradigm that I chose to operate within is committing me as the researcher to follow the directions of that paradigm in terms of worldview, ontology, epistemology, and methodology. It is very important to ensure transparency within the paradigm I navigate throughout the entire thesis, in order to

enable the reader to evaluate the knowledge that is produced in the research (Darmer & Nygaard, 2008). There are four paradigms competing to be accepted as paradigms, and these are *positivism*, *post-positivism*, *critical theory* and *constructivism* (E. G. Guba & Lincoln, 1998). Positivism and constructivism are complete contrasts. A researcher adhering to the positivist paradigm believe there is “*a belief that there exists a reality “out there” driven by multiple natural laws and mechanisms*” (Pernecky, 2007:216). Contrariwise, a researcher adhering to the constructivist paradigm assumes that “*knowledge is the outcome or consequence of human activity, rather than an entity that is out there to be discovered*” (Pernecky, 2007:216). My scientific perspective in this thesis adhere to the constructivist paradigm and I have a crucial participatory role as researcher, particularly in the qualitative research conducted. This means that I as the researcher will have to apply a thorough critical self-exploration of my assumptions, presuppositions, decisions and self-interests. By doing so throughout the entire research process, I will be reflexive on my own role and relation to the research conducted, and thereby ensuring that the research is transparent. In the following section, I will elaborate the constructivist paradigm and discuss the consequences that the chosen paradigm will have on the ontology, epistemology and the methods applied in this thesis.

## **2.2. The Constructivist Paradigm**

The constructivist paradigm is also known as the naturalistic, hermeneutic or interpretive paradigm, but I will refer to it only as “the constructivist paradigm” (Guba, E.G. & Lincoln, Y.S., 1989). When I as the researcher adopt the constructivist paradigm I do not believe that it is possible to speak of “one reality”, but rather that there is a multitude of “realities” all based on individual experiences. “The real world” only exists in the mind of the constructors, and the only way to gain insight into an individual’s world is via subjective interaction where the individual’s constructions are identified and portrayed as accurately as possible and then compared and/or contrasted, cf. Section 2.5. In order to make this research transparent for the reader, I will clarify my ontological and epistemological assumptions and explain how they influence my choice of method in the following section.

### **2.2.1. Ontology and Epistemology**

As presented, ontology and epistemology are very closely linked, but ontology is concerned with how reality is understood and the categorization of reality, whereas epistemology is concerned

with, how I understand knowledge. Guba & Lincoln (2001) define the ontology: “*The basic ontological assumption of constructivism is relativism, that is, that human (semiotic) sense-making that organizes experience so as to render it into apparently comprehensible, understandable, and explainable form, is an act of construal and is independent of any foundational reality*”. They further define the epistemological assumption as: “*transactional subjectivism, that is, that assertions about “reality” and “truth” depend solely on the meaning sets (information) and degree of sophistication available to the individuals and audiences engaged in forming those assertions.*” (E. G. Guba & Lincoln, 2001:1).

My research design is based on the ontological assumption that an individual is only able to observe the world from his or her own particular standpoint. The implications of the ontological assumption is that no “objective” truth can be located, so the aim of this thesis is not to produce knowledge that is “universally true” or generalizable, but to investigate the respondents’ individual interpretations of the reality and their experiences.

Adhering to the constructivist paradigm also influence my epistemological assumption, as the knowledge produced from the research is produced in interaction between the research participant and me, the researcher. In other words it is an interaction between the research subject and the research object. In this perspective knowledge is not a universally constant entity, but it is fluent and dependent on the meaning sets and degree of sophistication available to the individuals. Consequently, when knowledge is understood as something that is intrinsically connected to the individual, it is not possible to claim any form of objectivity. It is my understanding that knowledge is produced in interaction between the subject and the object, and I will inevitably influence the research object just as the research object inevitably will influence me. I will assure the integrity of this thesis by following this paradigm throughout my research, and in the following sections I will elaborate further on the constructivist research approach and the relationship between the researcher and the research object. With this, I strive to provide some nuances to the constructivist paradigm.

### **2.3. The Constructivist Research Approach**

The position I take to my research will influence the entire research process when working within the constructivist paradigm, from choice of topic and the research framework, to choosing particular methods for the collection and analysing the data. The knowledge production is linked to me as researcher and it is important to me to be aware of my own values, opinions and political

interests and make these beliefs visible and clear to the reader (Darmer & Nygaard, 2008) . Adhering to the constructivist paradigm makes it impossible to separate the inquirer from the inquired-into (Guba, E.G. & Lincoln, Y.S., 1989) . Therefore it is essential that I disclose my person and identity, reflecting both upon myself as researcher and upon my research subjects. I aim to make it clear that I do not believe that especially a qualitative research can provide a general “objective” truth. Neither do I see the knowledge generated via the relational performance between the subject and object as being subjective knowledge. Because of the constructivist approach, I argue that the knowledge generated in the relational performance between object and subject can be defined as an objective truth or reality. This is due to the understanding within the constructivist paradigm that knowledge production is only possible in this dialectical relationship, and thus knowledge does not exist outside this relationship, but is true within the relationship. In the following Section 2.4, I will describe my relation to the research objects in order to make the research more transparent. Furthermore, I will provide a “personal narrative” to give the reader a deeper understanding of my opinions and position in the research process.

## **2.4. The Narrative Relation to the Research Objects**

I will in this appendix elaborate on how I know the Experimentarium, who my research objects are, and finally explain who I am as researcher by giving a “personal narrative”.

I have visited the Experimentarium with my family several times when I was younger and have a lot of happy childhood memories from there. The transformational theory has been very intriguing to me for quite some time, and when I was so fortunate to get Asger Høeg, the CEO of the Experimentarium, as my supervisor, the choice to concentrate my thesis around the Experimentarium came fairly easy and natural. Through my meetings with Høeg I have gained an inside perspective of the Experimentarium, the exhibits, and how they strive to promote the knowledge and interest of natural science and technology. It is impossible not to be affected by Høeg’s enthusiasm, qualified knowledge, and foresight. This may have coloured me as researcher to have a more open and positive approach to the Experimentarium. Høeg naturally has a great deal of pre-conceptions and strong opinions about the business and the daily operations. It can be argued that Høeg unconsciously has influenced me in a certain direction. All our meetings have taken place at his office located in the Experimentarium, and I have been able to experience the daily life at the Experimentarium, from the early stages of this thesis all the way to the end. I have thereby been able to observe the visitors’ interactions with the exhibits and even participate

myself. This hands-on opportunity has definitely inspired me and influenced the work and research in the thesis.

The knowledge and impressions I have obtained by having Asger Høeg as my supervisor have definitely had an impact on my thesis. However, other aspects of my academic background, work, and personal life have naturally influenced the thesis as well. I believe it is important to provide the reader with some information about me, in order for him or her to understand how knowledge is generated in this thesis, and thereby support a greater level of transparency:

I am white female student with an academic background in economy, specializing in marketing, and I have been living in Copenhagen for the last 5 years. I got my first job when I was 11, and I have been working ever since. Since I moved to Copenhagen, I have been studying at Copenhagen Business School, and I have also been studying abroad for 5 months in Hong Kong during my master. Finally and yet important, I have been leading the tutoring programme for new students at Copenhagen Business School for the last three years. That has given me a wide variety of skills. I believe this has shaped me to be person that is open-minded towards other cultures as well as able to navigate in different layers of society. My personal approach to other people is important in this thesis, as I also in my personal life strive to meet people on their level and understand other people's worldview, culture and perspectives.

There are many other aspects of my personality and history that would be relevant to introduce, but I have chosen this short presentation as I feel this perspective provides the reader with information about me as a person, and thus ensuring a greater level of transparency.

## **2.5. Research Methods**

As discussed in the previous sections, science and empirical research can never provide general objective truths in the constructivist paradigm, as it will always include subjective values and feelings because of the research objective (Darmer & Nygaard, 2008). This is particularly relevant for the qualitative research method that focuses on the individual's own interpretation of the world (Pernecky, 2007) and therefore is suitable to apply to this research. I have also conducted a quantitative research, to collect and obtain more data about the subject of this thesis and the people visiting the Experimentarium. I am using the quantitative research method to investigate and clarify tendencies and signs of transformations among the visitors at the Experimentarium. Afterwards, I have conducted my qualitative research by which I was able to dig deeper into the dynamics of transformative experiences. The purpose of the quantitative

research is to observe and explain people's attitudes and behaviour and to show causality, where as the qualitative research goal is to understand the respondents' reflections, thoughts, and feelings (Stamp, Mikkelsen, & Sandager, 2011) .

The empirical data generated in this thesis have been collected via a face-to-face survey among 53 respondents at the Experimentarium after a days visit. Furthermore, I have conducted four semi-structured interviews regarding the respondent's experience of their day at the Experimentarium, where I by using the qualitative method have tried to gain access to the respondents understanding of the topics I introduce. All data generated are a result of the performative dialectical relationship where knowledge is co-produced between the respondents and me as researcher and then interpreted by me as researcher. In addition to these studies, I have executed a study where I asked children, just after entering and just before leaving the Experimentarium, what they want to become when they grow up. I have done this study in an attempt to identify the children's preferences, and whether these have changed during their visit at the Experimentarium. Finally, I have conducted a short e-mail survey among the physics students at the University of Copenhagen to clarify if visits at the Experimentarium have affected their interest for the natural science and choice of study.

In Appendix 1, the research methods of each of the four surveys and interviews are elaborated and clarified, and the empirical overview in Section 4.2 will elaborate the validity as well as strengths and weaknesses of each research method. In general, I will take a stand towards the validity of the theories as well as the empirical data throughout the thesis when being relevant.

### **2.5.1. Empirical Data**

All the surveys, interviews and studies were executed in Danish, as it is the respondents' native language. Below is an overview the results:

- Questions and results of the face-to-face survey (Appendix 2)
- The interview guides (Appendix 3.1 and 3.2)
- Interview with Christine (Appendix 3.3)
- Interview with Christian (Appendix 3.4)
- Interview with Malene (Appendix 3.5)
- Interview with Ane (Appendix 3.6)
- Pictures and results of the study "What do you want to become when you grow up?" (Appendix 4)
- Questionnaire and results of the e-mail survey of physics students (Appendix 5)

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## CHAPTER 3

### Theory

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### **3. Theory**

#### **3.1. Theoretical Framework**

The theoretical point of departure and the definition of the concept of transformations have already been presented and the following theoretical description of consumer transformation presents several perspectives that do not directly deal with transformation. However, these perspectives are linked to the transformational process and thus perceived as relevant for transformation.

I have used Kristensen's (2009a; 2012; 2009b) focus on these perspectives as the structure of the theoretical framework, and the individual work of different theorists is presented when describing each theoretical areas. Also, the work and perspectives of Pine & Gilmore (1999) are recurrent throughout the theoretical framework. Kristensen and especially Pine & Gilmore's approach to the area of transformations is from a highly business oriented perspective. I also include theoretical areas of conceptual consumption consumer, consumer motivation, pleasures of the mind and learning theory to present a more consumer oriented perspective. All the theory is included in order to explain observations and to transform the used models and methodology in order to analyse the empirical findings. The theories have been chosen because of their close relation to the topic of this thesis, in order to be able to explain observations and discuss the research questions on a solid and reliable fundament. The fact that I have chosen the theories that I find appropriate and adequate as the theoretical starting point for the analysis and discussion naturally implies that I also deselect theory that could have provided a different perspective. Meanwhile, there is not much theory within the area of transformations, and I have aimed for being as careful as possible in my selections of theory.

I will take a critical stand towards the theorists whose theoretical approaches function as the fundamental base of the theory, analysis and discussion. The critical stand towards Pine & Gilmore (1999) and Kristensen (2009a; 2012; 2009b) has been presented in respectively Section 1.3.4 and Section 1.3.5, and in the following I will take a critical stand towards Kubovy (1999), Kahr-Højland (2006) and Adler-Nissen (2012), as these theorists also are of great importance in regards to my theoretical and analytical approach.

Kubovy (1999) is an American professor within psychology and has composed numerous academic articles as well as books. His reliability is strengthened by his imminence to the research objects, and his academic authority is high as a result of his profession. His explanatory

efficacy is thorough and explained on a solid fundament of methods and documentation. The actuality of his article is rather old, but it is argued that the work on the fundamental psychological features of the human is not easily out-dated, unless it is disproved.

Kahr-Højland's (2006) publication is composed in collaboration with the Experimentarium, as a research on educational material, and she has composed several publications on the Experimentarium since 2005. The reliability is strengthened by her comprehensive insight in and imminence to the Experimentarium, and since she is not an actual employee, the objectivity is maintained. The foundation of the work in terms of methods and documentation is solid, and the relevance is still current.

Adler-Nissen's (2012) work within the field of transformation is updated and present and is perceived as reliable insider information, as she as an employee at the Experimentarium. However, this also affects her objectivity. Her academic status is not as high as i.e. Pine & Gilmore and Kristensen, since the work referred to is a Diploma Thesis, but her explanatory efficacy and foundation are strong and well documented.

It has been established that experiences are the precondition for transformations, and I find it important to initially clarify the connection between transformations and experiences in the following section, as well as the differences between the two, based on theory of Pine & Gilmore (1999).

### **3.1.1. What Differentiates Transformations from Experiences?**

Pine & Gilmore (1999) argue that experiences generally are the precondition for transformations, which can make the line between the two a bit blurred. A transformation is build and created on top of an experience in the same way an experience is build and created on top of a service. I find it necessary to clarify the difference between the two economic offerings, in order to avoid misunderstandings and confusions throughout the thesis.

Pine & Gilmore's notion on the progression of economic value and economic distinctions describes the different levels of economic offerings in regards to differentiation, price and customer needs. The guiding of transformations is perceived to be the greatest economic offering, as it possess the most differentiated competitive position, and is the most relevant offering in regards to the needs of the customers. This significant position allows companies who offer transformational experiences to demand a premium price, since they oblige these most relevant

needs of the consumers (Pine & Gilmore, 1999). Compared to experiences, transformations are differentiated by being more relevant to the needs of the customers and by being more unique and differentiated, and thus allowing to take a premium price for the offerings.

Table 3.1 illustrates the Economic Distinctions (Pine & Gilmore, 1999:170) of the top three economic offerings: Services, Experiences and Transformations.

**Table 3.1:** Economic Distinctions

Economic Offering	Services	Experiences	Transformations
<b>Economy</b>	Service	Experience	Transformation
<b>Economic Function</b>	Deliver	Stage	Guide
<b>Nature of Offering</b>	Intangible	Memorable	Effectual
<b>Key Attribute</b>	Customized	Personal	Individual
<b>Method of Supply</b>	Delivered on demand	Revealed over a duration of time	Sustained through time
<b>Seller</b>	Provider	Stager	Elicitor
<b>Buyer</b>	Client	Guest	Elicitor
<b>Factors of Demand</b>	Benefits	Sensations	Traits

*Source: Pine & Gilmore, The Experience Economy, 1999, p. 170*

According to Pine & Gilmore, buyers of transformations are being referred to as “*aspirants*”, since they aspire for the changes a transformation can provide – to be something or someone else. Experiences provide memories, but people want something more lasting than a memory: they want to be different, to be transformed in an effectual way (1999:164). This implies guidance and nudging of the so-called aspirants, contrary to experiences where the economic function only is staged and arranged. You cannot change an individual without them wanting to change themselves, and the only way to lead them towards the change is by guidance. Pine & Gilmore argues that the best a transformation elicitor can do, is to bring about the right situation under which the changes can occur. They emphasize that transformations are customized experiences,

aiming to provide exactly what the aspirant needs right now. If the individual's need is fulfilled, you can hardly avoid but to change that individual in question.

What differentiates transformations the most is the fact that transformations are individual, whereas experiences are personal. *The customer is the product* in the transformational process and the outcome depends on the worldview, interest and mental state of the person in question, which of course is individual. An experience can be experienced over and over again, whereas a transformation only can undergo once, because it involves a change. Once you have gone through a change, you cannot undergo the exact same change once again. In extent, transformations have a consequence beyond its consumption unlike all other economic offerings including experiences (Pine & Gilmore, 1999:171) and need to be sustainable in order to be defined as an actual transformation.

Pine & Gilmore have a strong view on buyers of transformations and perceive them to actively seek towards being guided and consciously aspire to be something different. In extent they argue that "*Transformation elicitor must understand customer aspirations before hoping to affect any change in the particular traits*" (1999:173) and the basis of business success will be the understanding and guiding of the aspirations of the individual consumers, as well as making them fully realize those aspirations.

Meanwhile, Pine & Gilmore also point out the fact that aspirants do not always know what they want and what their needs, hopes and dreams are, but they argue that it is essential for transformation elicitors to understand what the customer "*truly needs to become*" (1999:178). These relatively conflicting arguments of Pine & Gilmore, where they both argue that the buyers of transformations consciously seek the transformation, but at the same time is unaware of their needs and dreams, will be discussed in Section 4.5. Overall, the close linkage between experiences and transformations will be further elaborated in Section 4.4.2 on the Experience Realms. Since transformations are built on experiences, it is important for a company that wants to offer transformational experiences to construct the experience and the environment in a way that supports and enhances the possibility of transformation.

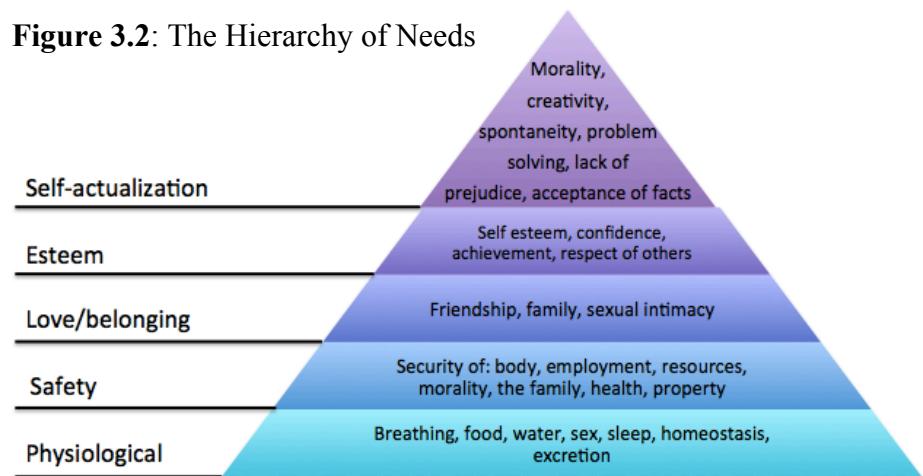
In the construction of the experience and the experiential environment the company must also take into account both human motivation in regards to engaging in a certain behavior, as well as how the content and fragments of the experience affects the consumers, in both positive and negative ways. The human motivation will be elaborated in the following section.

### 3.1.2. Transformation as a Consumer Need

I find it relevant to look at transformations as a consumer need. It is the fundamental reason why companies should have focus and interest within this field. The following section on transformation as a consumer need is based on theoretical work of the reputable American psychologist, Abraham Maslow and two American professors, Michael Norton and Dan Ariely.

Abraham Maslow (1943) argued that human motivation is based on the human seeking fulfilment and change through personal growth, and he developed a hierarchy of needs illustrating the human needs.

**Figure 3.2:** The Hierarchy of Needs



Source: Maslow, *A Theory of Human Motivation*, 1943

The hierarchy, illustrated in Figure 3.2, is commonly portrayed as a pyramid with the most fundamental levels of needs at the bottom, developing into the need for self-actualization on the top. Maslow's Hierarchy of Needs basically describes the pattern that human motivations psychologically can move through and uses the terms of Physiological-, Safety-, Love and Belongingness-, Esteem-, and Self-actualization needs.

In order to progress and reach a higher growth level in the hierarchy, an individual must satisfy the lower level of basic needs. Once these needs have been adequately satisfied, it is possible to reach the highest level of self-actualization (Maslow, 1943).

In the following, I will go into details about the need of self-actualization which is the need most relevant to the concept and process of transformation.

#### ***Self-actualization***

Self-actualization is the perceived striving to fulfil one's individual potential and thereby realizing that potential. In Maslow's own words: "*What a man can be, he must be*" (1943:91). Maslow describes the need as a desire for becoming everything that one is capable of becoming. This

description is quite broad, and when the need is current in an individual context, it is very specific. Some people might have the desire to become the world's greatest athlete, while others want to succeed as a parent. In order to reach the top level of self-actualization, it is as mentioned crucial that the lower needs have been fulfilled (1943). The hierarchy should not be perceived as something to be surpassed and outdone once you have reached the level of self-actualization. An individual can actualize himself in endless ways, and thus develop and advance personally and constantly.

Maslow's hierarchy of needs causes a lot of criticism among other psychologists, who question the evidence for the certain ranking of needs, as well as the very individualistic approach to the needs in the hierarchy (Hofstede, 1984; Wahba & Bridwell, 1976) . I do not uncritically accept Maslow's theory, but I find the essence of the hierarchy of needs as well as the need for self-actualization relevant to this thesis. In extent, Maslow's theory parallels numerous of other theories of motivation, needs and human developmental psychology, describing the stages of growth within an individual. Maslow is one of the most cited and referred psychologists, which evidently must reinforce his theoretical work. His hierarchy is eventually theoretical, and numerous practical and real life factors influence the need and process of self-actualization as well.

### **3.1.3. Conceptual Consumption**

In extension to Maslow's theory, Ariely & Norton (2009) introduce the concept of *Conceptual Consumption*. The tendency is moving from consuming food and physical needs to consuming concepts, and they believe that consideration of such "conceptual consumption" is essential for the understanding of consumer consumption (Ariely & Norton, 2009:475) .

Ariely & Norton (2008; 2009) are both professors at respectively Duke University and Harvard Business School. This substantiates both their academic authority and their explanatory efficacy. They have composed numerous academic articles, and their work is explained and analysed on a solid fundament in terms of both methods and documentation. Their work is mainly conducted in an American perspective, which naturally implies some differences and weaknesses compared to the Danish market and Society.

According to Ariely & Norton (2009), technology has simplified the human achieving and fulfilling their basic needs. Consumers today can gather food in supermarkets and prepare meals in just a few hours every week, whereas our ancestors needed a minimum of 15-20 hours per

week to accomplish the same tasks. This change in consumption, combined with the increased satisfaction of the basic needs in Maslow's Hierarchy, leaves the modern consumer with a lot of additional leisure time and a natural consumption need, and Ariely & Norton question how this time is being used. They argue, "*As basic needs are met with greater ease and celerity, humans find a wide variety of increasingly psychological avenues for quenching their consumption thirst.*" (Ariely & Norton, 2009:476). Along with the change from consuming food to consuming concepts, they outline four of the most important classes of conceptual consumption, which they argue can affect the utility of an experience: *expectancies, goals, fluency* and *regulatory fit*. Their focus is research that holds the physical consumption constant, in order to demonstrate the independent role for consuming concepts in the aim to determine the utility of an experience above the utility from the act of physical consumption (2009).

The four classes of conceptual consumption will be elaborated in the following:

### ***Expectation***

Expectation can influence consumption, which Ariely & Norton illustrate with well-known examples of blind tasting. Participants preferred Coca Cola when conscious about the selection, but suddenly changed preferences when the selection was kept hidden. Expectations can guide perception and even shape behaviour, because people tend to seek confirmation for their beliefs (2009). Ariely & Norton suggest that preconceptions about consumption can act to modify the physical consumption experience itself, and that expectancies sometimes seem to have their own life. When expecting to engage in a certain behaviour or event, the likelihood of actually participating can be increased. In other words, expectancies can be so powerful that they sometimes become "self-fulfilling prophecies" without conscious awareness.

Physical consumption of consumer brands and products is not just an attempt to satisfy basic needs, it can also be a signal to ourselves and others of our social identities, beliefs and attitudes. In other words, physical consumption can be a kind of personal branding where we consume the social status that the consumption will have as a result (Ariely & Norton, 2009:477). This has been pointed out by sociologists for many years, and Ariely & Norton emphasizes that advertising and branding can cause expectations that can influence and even supersede the consumption of both products and services (*ibid*).

### **Goals**

Ariely & Norton (2009) refer to goal setting as a strong human motivator, for which people are willing to overcome great obstacles in order to meet their goals. They further argue that sometimes the goal itself becomes the goal, and thereby serves as the concept that human wants to consume. Ariely & Norton refer to case studies of Gollwitzer who looked into how goals make people behave in ways consistent with their goals and argue that the desire to consume goals, actually leads to increased physical consumption.

### **Fluency**

Fluency is defined by Ariely & Norton (2009) as the ease with which stimuli are processed and experienced. A recent perspective is introduced, and they argue that as well as fluency may affect behaviour over and above physical consumption, disfluency can reduce physical consumption. In a study of decision making, the participants were considerably more likely to defer their choice in a disfluent situation, which implies that the negative consumption of fluency affected their physical consumption (Ariely & Norton, 2009:428).

Fluency is also an important factor in esthetic experiences in terms how of spectators process the given experience, and this I will look further into in Section 3.1.8 on The Experience Realms.

### **Regulatory fit**

The fourth and final class of conceptual consumption which Ariely & Norton (2009) finds impacting the physical consumption is regulatory fit. Regulatory fit is when a person “feels right” when engaging in a task in which his motivations align with his behaviour. Regulatory fit have proved to have impact on the amount of effort people devote to givens tasks as well their ability to engage in effective self-control (Ariely & Norton, 2009:483)

The following section will disclose the consumers’ relation to the transformational process and present possible consumer motives for seeking transformation.

#### **3.1.4. The Consumer Motivation**

Pine & Gilmore (1999) argue that consumers value transformation above all other economic offerings, since transformation address the ultimate source of all other needs. The duo is

perceived as pioneers within the area of experiences and transformations in an economic perspective, but the marketeers Rossiter & Percy (1997) claim that experiences as well as transformational experiences are not that new within the theoretical field. They argue that transformational motives are common consumer behaviour when it comes to needs as sensory gratification, intellectual stimulation and social approval (1997:147). These motives are defined as *Positive Originated (Transformational) Motives* by Rossiter & Percy, and are relevant when the consumer wants to somehow reward himself. Pine & Gilmore agree with Rossiter & Percy in regards to the intentional motivations for transformations and argue that consumers want to change, and that they purposely seek out the opportunities to become different and to transform (1999:164). Kristensen (2009b) presents three motives for the consumer's motivation of change, similar to Rossiter & Percy's (1997) positive originated motives, which can shed some light on the factors that contribute to the understanding of transformations: *Curiosity, Virtuosity and Social Gratification*.

Kubovy also identifies the motives of curiosity and virtuosity in his work "*On the Pleasure of the Mind*" (1999). He refers to these emotions as "*the unknown (giving rise to curiosity) and skill (giving rise to virtuosity)*" (1999:1). Furthermore, Rossiter & Percy present and discuss the motive of social gratification(1997), and these three motives will be presented in the following.

### **Curiosity**

The term "curiosity" is defined by the Oxford English Dictionary as "*The desire or inclination to know or learn about anything*" (2012b). Kubovy (1999) defines curiosity at getting pleasure from learning something you did not previously know and emphasizes that curiosity implies preference for an environment that can satisfy it (Kubovy, 1999:13). Kristensen (2009b) further refers to curiosity as biological in its origin, giving examples of looking for food, shelter and mating as adaptive qualities in the overall process of evolution. Exploring the unknown, and hence learning from this exploration is a fundamental motivation of curiosity. In the need for satisfaction of curiosity, people seek out environments where they can encounter the unknown, and curiosity is the reason why people are willing to leave their comfort zone and maybe even challenge existing preferences (Kubovy, 1999). Kahr-Højland (2006) also emphasizes, based on theory of Csikszentmihalyi (1999), that humans have an inner motivation in terms of an eagerness to learn, incorporated in our nervous system; the so-called intrinsic motivation. She argues that curiosity is

the only reason why humans have developed to the current significant extent, and the reason why we will keep on evolving (Kahr-Højland, 2006:90).

### **Virtuosity**

Virtuosity is defined as “*The pursuits, interests, or temperament, characteristic of a virtuoso*” by the Oxford English Dictionary, which in extent defines virtuoso as “...a learned person” (2012b). Kubovy defines virtuosity as the pleasure we have when we feel we are doing something well (1999:13). He emphasizes that virtuosity, as a source of pleasure does not require any extraordinary kind of achievement and defines the term in an evolutionary perspective as follows: “*The pleasures of virtuosity make us want to do things well, and hence we play in order to achieve this pleasure, which gives us skills we need to survive.*” (Kubovy, 1999:14). Humans are, in terms of Kubovy “antricial”, which means that we are not born fully equipped with skills needed for survival. He argues that the more learning “*the young of the species*” needs to do, the more pleasure they get from virtuosity (Kubovy, 1999:14). Kristensen (2009b) further argues that the pleasurable satisfaction of virtuosity comes when the experience is fluent, and when you succeed in a given challenge after trial and errors.

### **Social Gratification**

Social gratification can be defined as the satisfaction of belonging in a social context. Kristensen (2009b) argues that most people strive for approval and respect most of their life, and emphasizes that this feeling of acceptance in society concerns Maslow’s highest levels of need; Esteem and Self-actualization. An example of this is how people in general like to talk about their experiences over a meal, and thus share and express a belonging in the society and a social context (Kristensen, 2009b). Rossiter & Percy (1997) refer to social gratification as a *Positive Originated (Transformational) Motives*, because a positive stimulus or reward are expected, rather than an aversive stimulus – or punishment – being removed or reduced, as the case is with some other types of motivations. Social gratification functions as a motivator when the consumer wants to rise above equilibrium and somehow reward himself when purchasing a particular product.

These three motives of curiosity, virtuosity and social gratification do not necessarily all have to be present in the process of transformation, but they each represent important areas in the

understanding of transformations as well as the understanding of individual motives for the need of change and transformation.

Whereas curiosity, virtuosity and social gratification are motivational factors, Kristensen (2009b) further emphasizes four important areas in relation to the individual consumer's transformation: Pleasures of the Mind, Fluency and Flow, Simplicity vs. Complexity and Expectations. These areas regards the consumer's perception of the experience and how they process the stimuli the experience offers. Hence, they are relevant in regards to how the transformational experience best possibly can be arranged and organized and will be elaborated in the following sections:

### **3.1.5. Pleasures of the Mind**

According to Kristensen (2009b), any pleasure of the body has to turn into a pleasure of the mind before a transformation is complete and Kubovy (1999) emphasizes that pleasures of the mind differ in the object of the emotions they comprise.

In order to exemplify and describe the phenomenon of pleasure of the mind, Kubovy gives an example of a dinner experience. Imagine a delightful dinner in a cozy restaurant with the most delicious food, and in the company of good friends. Now, remove the elements that made this experience delightful, except for the food. Imagine the same dinner at home by yourself, on your everyday dishes without having anticipated the delicious wine and food. According to Kubovy, what you have lost is the pleasure of the mind, or at least a great deal of it (1999:1). With this in mind, it can be argued that the surroundings and the setup play an important role in regards to pleasure of the mind; or in other words, the content of the experience. The example illustrates that when the experience is removed, only the pleasure of the body is left. It also illustrates that pleasure of the body and mind often are closely tied. In Kubovy's own words, "*all pleasures of the mind consist of sequences of emotions (in which moods and pleasures of the body may play a role)*" (1999:2)

So, pleauries of the mind are a sequence of emotions and often combine the use of severeal senses at the same time. The expectations of the individual have to be violated in order for the pleasure of the mind to arise (Kubovy, 1999). He argues that past experiences make the individual form their experiences from their cognitive structure. This implies that expectations to a specific situation are based on previous experiences in a similar situation. These experiences are often tacit, and will be compared to the new experience in order to interpret it. When the experience surprises the individual, the expectations are violated, which can be both positive and negative.

When the violation of the expectation is positive, the individual achieves pleasure of the mind. Meanwhile, if the violation is interpreted as something negative or the individual is being disappointed, the individual achievement is displeasure of the mind.

It is important to notice that the experience has to violate the consumer's expectation and the violation must necessarily be interpreted as something positive. Kubovy however emphasizes that the experience should not violate the expectations of the consumer to extensively, as an extensive violation could be unpleasant for the individual. He argues that some kind of a flow must be present in order for the experience to be pleasant, and the concept of flow will be elaborated in the following section

### **3.1.6. Flow and Fluency**

According to Csikszentmihalyi (1999), flow is a state of mind that makes the individual immerse so deep that he forgets about time and place. Flow is described as an experience of optimal involvement in an activity, "*a psychological "high" wherein there are heightened feelings of enjoyment and a centering of concentration*" (Csikszentmihalyi, 1999:301). A highly intrinsically motivated flow state is achieved when people are engaged in an activity where the challenges match their level of skill. Being in top-form is the best way to describe the flow, according to Csikszentmihalyi (1999), and flow seems to induce the individual to grow, in terms of fulfilling one's potential and then go beyond even those limits (Csikszentmihalyi, 1992).

Experiencing flow is defined as a pleasurable experience, because it satisfies the virtuosity motive, introduced in Section 3.1.4; the pleasure of master something (Kubovy, 1999).

It is therefore highly relevant to explore how this flow state of mind can be reached and here the fluency term is introduced again.

Fluency is, as presented in Section 3.1.3, the processing ease or the ease with which the individual processes stimuli, and speed and accuracy are important stimulus processing parameters. Reber et al. (2004) argue that the "fluency" of an esthetic experience is essential for how the experience is perceived. The primary result of their research paper is that the more fluency in the individual's processing of a certain stimuli, the greater the esthetic response and pleasure will be. Moreover, Zajonc (2001) argue that repeated exposure to a certain stimulus results in more positive evaluations, also known as the "mere exposure effect". It is easier to process a familiar stimulus than something unfamiliar, namely because people enjoy recognizing familiar objects. Zajonc emphasizes, based on research, that people are more likely to positively evaluate a certain

stimulus when repeatedly exposed to that stimulus. Familiarity in stimuli seems to “*allow the organism to distinguish objects and habitats that are safe from those that are not, and they are the most primitive basis of social attachments.*” (Zajonc, 2001:227). In other words, familiarity is perceived both pleasurable and safe.

Finally, the impact of fluency is moderated by expectations. Fluency becomes more positively perceived if it is not expected, so when the individual expects the stimuli to be complex and difficult and instead finds the processing to be easy and fluent, the experience is more pleasurable. This corresponds well with Kubovy’s theory (1999), that violations of expectations are necessary in order to achieve pleasure of the mind.

Ultimately, the unexpected and unknown are what makes people curious, and the unexpected fluency may very well strengthen the feeling of virtuosity. Besides the features just mentioned, a series of other stimuli also have significant relevance in regards to the consumer’s perception of an experience. The factors of simplicity vs. complexity of the stimuli will be elaborated in the following.

### **3.1.7. Simplicity vs. Complexity**

Simple information may seem easier to process and is thereby assumed to be perceived more fluently. Meanwhile, this is not necessarily the case, as the stimuli may be perceived as boring if it is too simple (Zajonc, 2001). Zajonc argues that experts within a certain area prefer complex stimuli, even though they receive pleasure from easy processing. This indicates that the processing can be too fluent, which will make the individual lose interest and concentration towards the stimuli. Curiosity is an important motivational factor in regards to experiences and stimuli as presented in Section 3.1.4, and if the stimuli are too easy to process, the individual will quickly lose his interest and curiosity (2001).

Too complex stimuli can also be negatively perceived and thereby disfluent. If the processing of stimuli is too high and challenging, it may be overwhelming, which can make the individual simply give up and abandon the processing stimuli.

To sum up, both too simple and too complex stimuli can be unpleasant and lead to boredom or overload. An adjusted balance between the two is necessary because individuals prefer an intermediate level of complexity (Kubovy, 1999).

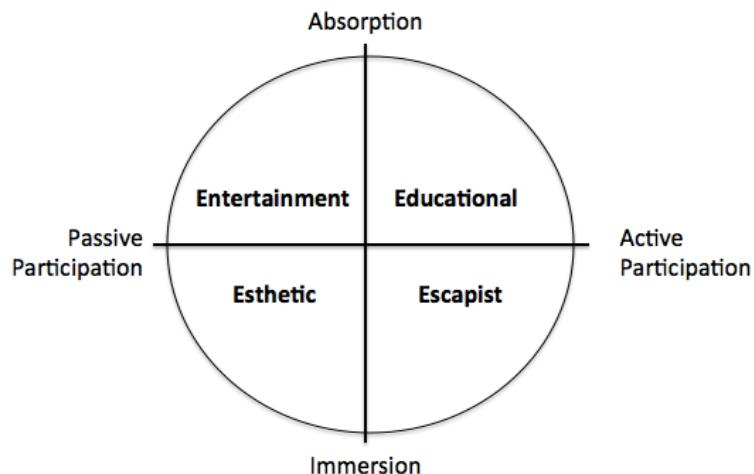
### 3.1.8. The Experience Realms

Pine & Gilmore (1999) emphasize that experiences are the precondition for transformations, based on the fact that transformations are built and created on top of experiences (Section 3.1.1). When dealing with the experience economy, the experience itself is the thing being purchased, and it is therefore important to explore what an experience is. In this section I will present the Experience Realms and elaborate on what each realm can bring to an experience, and thus function as the best possible precondition for a transformation.

Pine & Gilmore (1999) introduce the Four Realms of an experience in their book "*The Experience Economy – Work Is Theatre and Every Business a Stage*". These realms represent the four types of experience they believe a company can offer, and Pine & Gilmore look at the two most important dimensions when trying to engage guests in an experience. The model behind the four realms is illustrated in Figure 3.3 where the first dimension is the extension of guest participation or how actively the consumer participates in the experience. Passive participation is in one end of the spectrum and in the other end is active participation. The second dimension describes the environmental relationship or the connection that unites the customer with the experience. In one end of the spectrum is absorption and in the other end immersion, which implies that when the experience "goes into" the customer, the customer is absorbing the experience and if instead the customer "goes into" the experience, the customer is immersed in the experience.

These dimensions define the four realms of an experience: *Entertainment*, *Educational*, *Escapist* and *Esthetic*.

**Figure 3.3:** The Experience Realms



Source: Pine & Gilmore, *The Experience Economy*, 1999, p.30.

## **Entertainment**

The first realm is *Entertainment*, where the experience is passively absorbed through the senses. This is what most people think of when they think of experiences, such as listening to music or viewing a performance, where the experience “goes into” the consumer (Pine & Gilmore, 1999) . In an experience based on the entertainment realm the consumer sits back and enjoys elements of humour, drama, and surprise. Entertainment can enhance memories of an experience by using emotions that link back to basic human instincts or needs (Garrett & Ezzo, 1996) .

## **Educational**

The second realm is *Educational*, where the customer absorbs the experience while actively participating, and the participation can be of the mind, body or both. Educational experiences completely imply active participation, and are therefore almost impossible to reach if the consumer stays passive in the experience (Pine & Gilmore, 1999) . In an experience based on the educational realm the consumer is actively learning and participating and in some cases gaining skill acquisition.

## **Escapist**

The third realm is *Escapist*, where the customer actively participates in an immersed environment. This kind of experience is, according to Pine & Gilmore’s notion of the four realms, the polar opposite of the pure entertaining experience, and the escapist experience includes theme parks such as “LEGOLAND” and casinos (Pine & Gilmore, 1999) . In the escapist experience, the consumer is actively contributing in creating the experience, and most importantly, the consumer immerses completely in the experience and to some extent forgets time and place. This active contribution made by the consumer is rather similar to the theory of co-creation, which will be further elaborated in Section 3.1.10.

## **Esthetics**

The fourth and final realm is *Esthetics*. In the esthetic experience the consumer immerse in the experience, but remains passive leaving the surrounding environment untouched. Examples of this kind of experience can be the Grand Canyon, visiting an art exhibit or watching a movie at the Planetarium on the superior and unique screen; all experiences where you are immersed by the surroundings, and sense and feel the impact of the experience (Pine & Gilmore, 1999) . Leder et al. (2004) are mainly focusing on visual arts in their work on “*A model of aesthetic appreciation and aesthetic judgments*”, but their conclusions are also transferable to esthetic experiences. They state that an esthetic experience can have self-reinforcing qualities and self-

rewarding cognitive operations. Cognitive operations are how we understand knowledge or epistemology, and how we are perceiving, thinking, and applying knowledge (Den Store Danske, 2012). To gain these self-reinforcing qualities and self-rewarding cognitive operations it requires sufficient time to allow the consumer to fully process the experience (Leder, Belke, Oeberst, & Augustin, 2004) . An esthetic experience often recalls feelings and memories in the individual and the more time they spend the deeper they can go into the experience. Time is not the only factor that plays an important role in esthetic experiences; fluency is also relevant. Reber et al. (2004) argue that the processing experiences or “fluency” of an esthetic experience is essential for how the experience is perceived. They argue that the more fluently perceivers can process an object or experience the more positive their esthetic response will be to that object or experience. They emphasize that beauty do not rest in the objective features of an object, but instead derives from the processing experience of the individual perceiver; the fluency.

Meanwhile, it is not just when operating within the esthetic realm that fluency is relevant. Fluency applies in all the realms and experiences because it is the ease with which stimuli are processed and experienced (Ariely & Norton, 2009) . The more fluent the consumers perceive an experience, the more positive reactions, and this is caused by the degree of familiarity and ease with which the experience is being processed. Numerous studies have shown the effect that fluency has on judgments and behaviour, from response to advertising to performance in school. Ariely & Norton (2009) argues that the consumption of fluency has an affect on the consumer’s physical consumption. If a consumer perceive an experience fluently he is more likely to enjoy and like the experience. On the other hand, disfluency can make an experience bad and even in some cases cause the consumer not to purchase the offered service, good or experience and thereby reduce the physical consumption.

The four realms represent the different elements on which a company can base an experience. These four realms can be the basis for an experience on their own, be combined, or all be a part of the same experience. There is no unambiguous guideline to an optimal execution or combination of the four realms, as each realm is dependent on what kind of experience is to be offered. Nevertheless, an experience that represents all four realms are more likely to be special and transformational, since all elements and senses are stimulated and satisfied, and this is elaborated in the following section.

### **The Sweet Spot**

The Experience Economy has undergone a massive development since the term was introduced in the late 1990's and now the classic form of the entertainment realm is often supplemented with the three other realms, of education, escapist and esthetic, to make the experience not only entertaining but also transformative (Pine & Gilmore, 1999) . According to Pine & Gilmore "*...the most engaging life transforming experiences will center around the sweet spot composed of multiple elements from all four realms – no matter the ultimate aim of the transformation – for it is in the sweet spot that an experience best engages us and focuses our attention on its transforming nature.*" (1999:180)

Pine & Gilmore argue that if you design the experience in *the sweet spot* where all four realms are represented, it will further allow the consumers to experience a life transforming experience. It is important to consider what the realms each bring to the experience as well as designing the experience to fit the target group (Lowy & Hood, 2004) . It is also important to know what kind of experience the consumers want and what would encourage them to stay in order to chose what elements of the realms to incorporate.

Sometimes the boundaries between the realms merge and give the experience a new dimension. An escapist experience can for example turn out to become an esthetic experience for some individuals, because the participation changes from active to passive (Tung & Ritchie, 2011) . When the consumer is deeply immersed and actively participating in the experience a change in the activity level can happen, where the consumer suddenly sits back and passively absorbs the result they have created. An example of this is a hike in Grand Canyon where you are active and immersed in the environment and then stops at the edge, and suddenly becomes passive while absorbing the infatuated view.

### **The Combination of Education and Entertainment**

Pine & Gilmore (1999) among others, refers to the combination of entertainment and education as "edutainment" – a compilation. According to some theorists, edutainment is the active education fused with elements of entertainment such as fun and surprise, or reversed, entertainment fused with elements of learning (Garrett & Ezzo, 1996) . Both education and entertainment share a common goal: to create memorable events. Meanwhile, in the classical form the two realms have very different ways to affect the memory; where education use structure, repetition and links to

previous memories, entertainment draws on emotions that links back to the basic human instincts and needs (Garrett & Ezzo, 1996) .

Edutainment implies a fusion of the two realms and this is a devaluation of both realms. An experience can posses both the educational and entertainment realms and even all four realms as with the “sweet spot”, but no matter how many realms an experience consist of, each realm is unique and independent. The realms may support eachother succesfully, but they will always be separate realms and thus not fusion as the term “edutainment” implies. For that reason I reject the devaluating term of edutainment, but acknowledge the theoretical essence of the combination of the educational and entertainment realms.

Traditionally, the combination of education and entertainment is applied in educational material and in the software industry but is also transferable to the consumption of art and culture as the individuals are enjoying themselves and learning at the same time (Addis, 2005). Applying elements such as multimedia applications, connectivity, and interactivity can bring a sense of realism to student learning (Garrett & Ezzo, 1996) . The combination of education and entertainment containing technological applications will increase the value of the customers’ experiences, because when adding elements of learning and entertaining mixed with new technologies the consumer’s memory of the experience will be reinforced and reinvigorated. To be valid this assumption requires that the consumers have sufficient knowledge and skills to interact with the technology (Addis, 2005).

Theorists that look at the combination of education and entertainment from an educational perspective are more hesitant to embrace the combination as a good thing. Garrett and Ezzo (1996) argue that it is dangerous to mix education with entertainment because it takes the focus away from learning and highlights the fun and emotional part instead. This is also emphasized by Kahr-Højland (2006) who argues that a combination of games and entertainment is uneven, and that the act of playing will seduce the consumers and hence leave no room for the process of negotiation of new knowledge into enduring learning (Kahr-Højland, 2006:92). Another disadvantage is that the use of i.e. multimedia tools in education can cause the social interactions to be neglected. Meanwhile, the combination of education and entertainment is inevitable in the context of the Experimentarium as memory and emotion are linked together and education and entertainment have been merged in the experience.

Education and learning is an inevitable realm in regards to the Experimentarium and the process of transformations and I find it relevant and necessary to explore the theory of learning, in order to establish a solid fundament when exploring the educational realm.

### **3.1.9. Learning**

As presented in Section 1.4, learning or gaining new insight in something you did not previously know is a precondition for transformation. Since learning has a great influence on the transformational process and is represented in the realm of education I find it necessary to elaborate the theory of learning and especially experiential and active learning, which is relevant in regards the offered experiences the Experimentarium.

Kristensen (2009b) perceives education as being transformational, in which I agree to a certain point. As presented in Section 1.3.6 I argue that the education has to be relevant and interesting to the individual, in order for the learning to potentially be transformative. Meanwhile, I agree that learning and/or getting a new insight is a precondition for most transformations. The assumption is, according to Kristensen (2009b), that an experience is both demanding and part of a learning process, which often requires learning of new skills. The consumer transformation changes the character of a need, and to a great extent, this is because the consumer is learning something new and adapting due to the experience. The following will explore theories within general learning.

#### ***Basic Learning***

Learning is biologically and psychologically an adaptive process according to Hans Henrik Knopp (2006), associate professor in pedagogical psychology. Through this process, the individual changes and consolidates in regards to his understanding, thinking and actions. Knopp argues that if a child is happy and satisfied it is motivated to remain in that condition as long as possible, and a learning process are more likely to occur spontaneously then. He emphasizes that the majority of learning processes are unconscious, but the more a child learns the greater the probability that it will understand its individual learning process, and hence be able to control the process consciously. The process is applicable on both children and adult's learning development (ibid).

Learning is most efficient when the learning process in itself is pleasurable. This typically depends on a high degree of self-control, dedication, security, sensuousness, evaluation and concentration (Knopp, 2006). Knopp further argues that humans learn the most when they are

creative. Learning is an adaptive process in which the individual actively attempts to adjust to the world, and therefore it will be an advantage if you have the liberty to create your own situation within the given frames in as great extent as possible (2006).

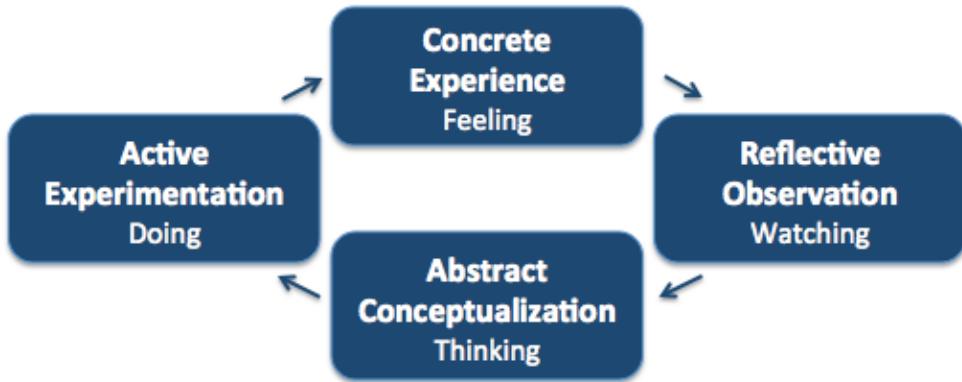
Knowles (1970) emphasizes that since adults naturally have lived longer they have accumulated a bigger volume of experiences, while children have not had the experiences of taking “real” responsibility, having children and getting married. Knowles accentuates that while adults derive their self-identity from their experiences, experiences often happens *to* children. The experience is often an external event that affects children and they often identify themselves in terms of who their parents are and where they live. Children’s self-identity is largely derived from external sources, while adults define themselves in terms of accumulation of their unique and individual set of experience. In other words, adults are likely to define themselves by describing their occupation and what they have achieved, “*Adults are what they have done*” (Knowles, 1970:50). Knowles argue that adults have had a big volume of experiences through life and are therefore not as affected by experiences as children are, since they have not experienced so much and therefore are more easily affected by external events (*ibid*).

Knowles sums up by arguing that the differences between children and adults are not so much real differences, as it is assumptions about them made by pedagogical theory (Knowles, 1970:58).

### ***Experiential Learning – Learning from an Experience***

Kolb (1984) introduced his Cycle of Experiential Learning as a method for understanding the aspects of the individual learning process, inspired by the work of great theorists such as Kurt Lewin and John Dewey. Experiential imply the process of making meaning directly from the experience; or even simpler, learning from experience. The process is classified in four phases: *Concrete Experience, Reflective Observation, Abstract Conceptualization* and *Active Experimentation* as illustrated in Figure 3.4.

**Figure 3.4:** Experiential Learning Cycle



Source: D. A. Kolb, *Experiential Learning: Experience as the Source of Learning and Development*, 1984

Learning is according to Kolb “*the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping experience and transforming it.*” (Kolb, 1984:41). He argues that learning is a continuous process grounded in experiences and that learning involves a transaction between the individual and the environment. The four phases of the Experiential Cycle of Learning can shortly be described as follows:

- *Concrete Experience (feeling)*: Learning from a specific experience while relating and being sensitive to the environment
- *Reflective Observation (watching)*: Reflection of the observations made. The individual is trying to understand what has happened and why
- *Abstract Conceptualization (thinking)*: The phase of concept formation, where the individual through logical analysis tries to evolve a theory based on the concrete experience
- *Active Experimentation (doing)*: Based on the experiences from the three previous phases, the individual is ready to try experimenting himself, leading in turn to the next concrete experience...

Although this continuum is figured as a cycle the phases can happen in practically any order. Experiential learning requires no teacher, since the learning outcome is solely based on the individuals meaning making process based on the given experience (Kolb, 1984).

An example of experiential learning can be a visit to the zoo where you will learn through experience, observation and interaction with the zoo environment, contrary to reading about the

animals in a book. Meanwhile, Kolb argues that certain abilities are required in order to gain appropriate knowledge from the experience: the individual must be willing to actively involve as well as able to reflect on the experience.

In this regard, Aristotle once said “*For the things we have to learn before we can do them, we learn by doing them*”. Many teaching methods rely on experiential learning in order to provide context and structure for learning through action and reflection. One of these teaching methods is active learning, which is relevant and current for the Experimentarium. Active learning encourages the individual to involve and actively take responsibility for the learning process, and the term will be elaborated in the following.

### **Active Learning**

Prince (2004) presents a definition of active learning as any kind of instructional method that engages the student in the learning process. The essence of active learning is student activity and engagement in the learning process, and he argues that active learning requires the students to do meaningful learning activities and reflection about what they are doing (Prince, 2004:1).

Prince further refers to research that emphasizes that students will remember more content if even brief activities are introduced to the lecture.

In extent to Prince, Bonwell & Eison (1991) argue that in order to be actively involved, students must engage in tasks such as analysis, synthesis and evaluation. They define strategies that promote active learning as instructional activities involving students in doing things and at the same time thinking about what they are doing. As examples of active learning they list discussions, debates, role-playing and simulation, and peer teaching (Bonwell & Eison, 1991:2). Further, Boswijk et al. supports the theory by emphasizing that “*One learns the quickest by experiencing the problem, by sharing possible solutions and by communicating with each other*” (Boswijk, Thijssen, & Peelen, 2007:11).

### **The Cone of Experience**

Edgar Dale (1969) was an educationist and is perceived to be one of the pioneers within the field of audio and visual instructions. Dale introduced the Cone of Experience in his work on audio-visual methods of teaching from 1969, which incorporates theories related to learning processes and instructional design – see Figure 3.5. The Cone of Experience is a visual device with the purpose to classify Dale’s system of the varied types of mediated learning experiences. Dale’s

organizational approach to the model was a progression from the most concrete experiences in the bottom to the most abstract experiences at the top (Molenda, 2003). The classifications are not to be interpreted as any kind of hierarchy of order, which Dale strongly emphasized, but the classifications are none

the less one of the most prevalent

misconceptions of the cone; that the progression from concrete to abstract learning methods represents a value judgment of abstract learning being superior to concrete methods (Molenda, 2003:2).

Contrary, Dale argued that the more

combination of the concrete and abstract learning methods the better the opportunity to have a rich, deep and broad experience and understanding (ibid).

Another common misunderstanding is based on the fact that Dale did not define whether the cone was meant as a descriptive or prescriptive theory. He intended the cone to be completely descriptive as a classification system, and far from prescriptive in the sense of a tool for lesson and learning planning (Molenda, 2003).

The cone has evolved since first introduced by Dale and it is commonly illustrated with percentage markings regarding the learning outcome of the different teaching methods.

Despite the criticism and misconceptions I have chosen to validate and use Dale's theory in this thesis. I acknowledge that the theory is rather old and that the cone has raised a lot of criticism, but I also argue that Dale is a very respected and much-cited educationist. The fact that the cone has been heavily used and cited testifies the strength and toughness of Dale's visual metaphor and numerous other theorists agrees with Dale's theory on active learning.

**Figur 3.5: The Cone of Experience**



*Source: Bloomsburg University adapted from E. Dale, Audiovisual Methods in Teaching, 1969*

The cone is basically a visual metaphor of the idea that learning activities can be broadly categorized (Molenda, 2003:6). The more actively the students participate in the learning process the more they will remember. According to Prince (2004), one of the significant problems of valuation of effectiveness in regards to active learning in general simply is that the learning outcome is difficult to measure.

Bonwell & Eison (1991) summarize the literature within the field of active learning and concludes that it improves the students' ability to think and write and generally leads to better student attitudes, which corresponds with the essence of Dale's cone of experience (Bonwell & Eison, 1991) . Dale further emphasizes that although active learning contain many qualities, a combination of both concrete and abstract learning methods will provide the student with a rich, deep and broad understanding and experience.

### ***Informal Learning***

Kahr-Højland (2006) presents the Experimentarium as a science centre that seeks to combine the act of playing and the act of learning, which she refers to as informal learning. Her examples of informal learning is conversations, the act of playing, reading for pleasure etc., contrary to formal and non-formal learning which respectively is learning in schools and learning in community groups and other kinds of organizations. Meanwhile, Kahr-Højland finds the classification of learning types irrelevant as she believes that learning is learning. The setting or context of learning is mainly relevant when it concerns the process by which learning happens which she refers to as the learning setting (2006:88) . She argues that learning all places outside school principally could be categorized as potential informal learning.

Meanwhile, Kahr-Højland categorizes the Experimentarium as being in between school, which is formal, and amusement parks, which is informal, in a category she defines as a semi-formal learning setting. She argues that the Experimentarium clearly differs from regular amusement parks, since visitors are presented with thorough and conscious information of a special kind in a special way, but also differs from school, since the learning is not curriculum based neither evaluated after the visit on the initiative of the Experimentarium; at least not for ordinary family visitors (2006).

The learning element is intentional, but as presented in Section 3.1.8 critics of the theory fear that the combination of entertainment and education will be uneven and that consumers will be seduced by the act of playing, and hence forget to reflect on what they are learning from the

experience (ibid). As a result, Kahr-Højland pleads for the necessity of room for reflection in terms of the possibility for the consumers to negotiate the new knowledge alone or with others.

In this section I have presented theory within learning in general, experiential learning, active learning and informal learning. To sum up and connect the presented theory, learning in general provides an insight in the fundamental elements of learning, while experiential learning is the process of making meaning from direct experiences. Active learning is a highly relevant area of experiential learning. Finally, informal learning is also a learning method, but is more concerned with the educational environment, and not so much the actual learning methods.

### **3.1.10. Co-creation**

Another very active form of consumer participation is the concept of *co-creation*. Co-creation basically describes experiences where the consumers become so involved and active that they actually are participating in creating the experience themselves. The following chapter on co-creation will mainly be based on work from 2004 of C. K. Prahalad and Venkat Ramaswamy who are perceived as the pioneers of co-creation, as well as Boswijk, Thijssen and Peelen and their book “*The Experience Economy – A New Perspective*” from 2007.

This chapter presents the most important elements of co-creation in line with the focus on transformation in terms of a description of the concept, why consumers demand co-creation and how it can serve as a competitive advantage.

The concept of co-creation was introduced by Prahalad & Ramaswamy in 2000 as a business strategy in order to gain competitive advantage and as a new approach to value creation in terms of “*Co-Creating Unique Value with Customers*” (2004). Prahalad & Ramaswamy define the term as a joint creation of value between the individual and the company through personalized experiences that are unique to each individual customer (2004).

The Experience Economy is outgrowing its pioneering stage and according to Boswijk et al. (2007) we are witnessing not only a dematerialisation of the economy, but also an increased need for self-direction and co-creation. The need for self-direction corresponds with the need for self-actualization, presented in Section 3.1.2 on Maslow’s hierarchy of needs, as people find their basic needs increasingly satisfied in today’s society and thus want more influence on their own life and development. In general, the “self” is increasingly in focus.

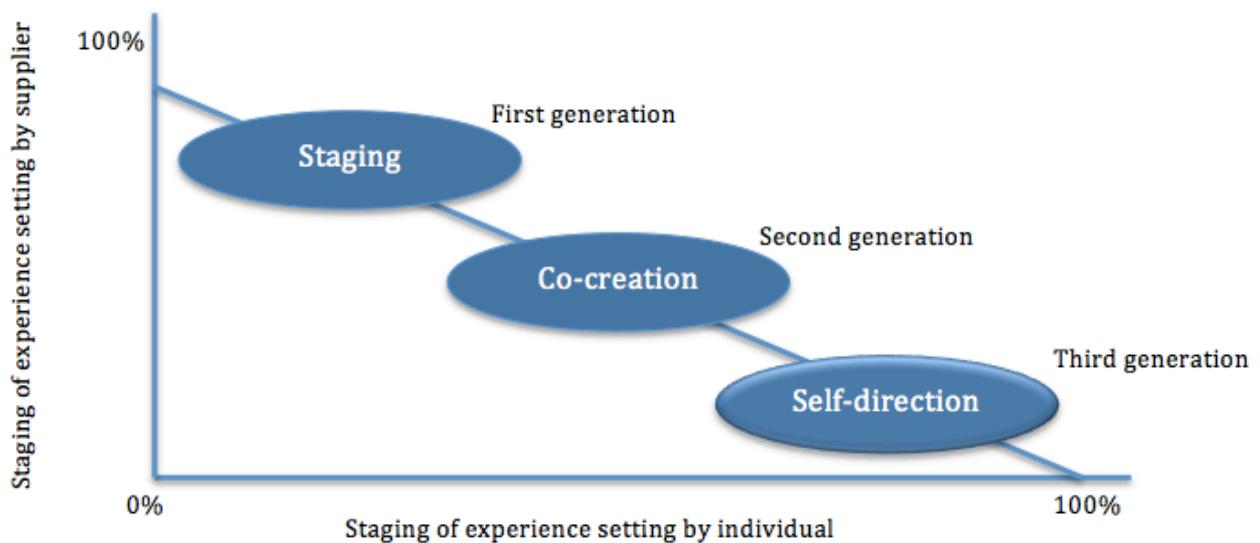
Consumers want to interact and be involved and Prahalad & Ramaswamy argue that the need for co-creation has arisen along with a basic change in the role of the consumers, who they argue are far more connected, informed, independent and active than ever before (2004:2). Boswijk et al. (2007) presents a series of fundamental trends and developments in society that affects the business of today as people want to take life into their own hands, to be more authentic and go “back-to-basic” where things are simple and unpackaged (Boswijk, Thijssen, & Peelen, 2007:44).

### **A Shift in the Value Chain**

The idea that the supplier decides what the consumer wants is long gone, and Boswijk et al. (2007) argue that there is a need for a personal interaction between the consumer and the company to create a value proposition that is meaningful to and specific for the individual consumer. *“The experience of co-creation is the basis for a unique value proposition for each individual”* (Boswijk, Thijssen, & Peelen, 2007:8)

A main characteristic of co-creation is the fundamental shift in the value chain, which is illustrated in Figure 3.6 demonstrating the combination of increasing consumer influence and the decreasing company staging.

**Figure 3.6:** Actors in the Creation of a Meaningful Experience



*Source: Boswijk et al., The Experience Economy – A New Perspective, 2007, p. 10*

The creation of value does no longer take place within the company's internal value chain, but is instead created in collaboration with the consumer, with both parties playing an active role. The company is no longer able to stage and control the process of value creation, but must to some extent accept whatever additions the consumer may have within the frame of co-creation (Boswijk, Thijssen, & Peelen, 2007) . The figure also includes the situation in which the individual fully create, stage and direct his own experience without interference from companies and Boswijk et al. bring as example a hiking trip. Meanwhile, this stage is not relevant in regards to the Experimentarium since supplier interference in the context of the Experimentarium obviously is inevitable (Boswijk, Thijssen, & Peelen, 2007:10) .

Value is a very abstract and subjective concept, since value is what each individual think of a product, service or experience and how much it is worth to them. Co-creation grants the need and demand for individualization, which allows each customer to create their own personal values in interaction with the company. The addition of value is the key output in co-creation and the consumers engage in the process of both creating and defining value. Prahalad & Ramaswamy gives the following definition of value based on an example of co-creation between a patient and a doctor: "*Value lies in the co-creation of a specific patient, at a specific point in time, at a specific location, in the context of a specific event*" (2004:10).

They further argue that the future of competition lies in the new approach to value creation based on an individual-centred co-creation of value between consumers and companies (ibid).

According to Prahalad & Ramaswamy (2004) the companies must efficiently innovate "experience environments" that facilitates a variety of co-creation experiences. The consumers must have the opportunity to co-construct and personalize their experience, which eventually will lead to a unique co-creation experience. In other words, the company must provide the frames, in which the consumer can actively participate and create.

The concept of co-creation is very similar to the escapist realm introduced by Pine & Gilmore (1999) and elaborated in Section 3.1.8, which implies that the customer is completely immersed in the experience, while actively contributing to the experience.

Prahalad & Ramaswamy identify LEGO as both an excellent example of co-creation as well as learning through fun. The combinations of LEGO bricks are endless and only limited by imagination and creativity. The consumer can use the same LEGO bricks to create a new

experience every time and different consumers can have different experiences with the exact same bricks. Consequently, “*LEGO-consumers co-create value by interacting with the LEGO company through its experience environment*” (Prahalad & Ramaswamy, 2004:52) .

This example with LEGO illustrates the essence of co-creation: the experience is different every time although the content is the same, and that reduces the need for renewal and replacement.

### ***Personalized Co-creation and Transformation***

Prahalad & Ramaswamy (2004) describes the co-creation experience as the ultimate competitive advantage and a rising consumer need. Also, transformation is consistently in this thesis argued to be the new growing consumer need, and a highly important focus point for companies. Both concepts are argued to be the new way of satisfying consumer needs, and if the two are compared a very relevant connection is found.

The essence of co-creation is to give the consumer a personalized experience in terms of a joint value creation with the company, since the experiences we have and the meaning we attach to them is what gives meaning to our lives. A transformation is an experience that affects the consumer and to some extent changes his way of thinking and/or perceiving the world, as defined in Section 1.4. Co-creation can thus be a part of the transformational process in terms of the actual experience and increase the possibility of transformation as the consumers can create their own individual value, which address their own specific needs.

When defining the different concepts and describing consumer needs it seems like the consumers know exactly what they want and what is best for them. Meanwhile, as presented in Section 1.4, consumers rarely know what they actual want and what is best for them and hence no company can identify exactly what measures will satisfy the consumers. This will be elaborated in Section 4.5. Meanwhile, consumers must have some kind of preferences, which makes them do the things they do and the theory of preferences will be looked further into in the following section.

#### **3.1.11. Preferences**

The Oxford English Dictionary (2012a) define the term “preference” as “*The action of or an act of preferring or being preferred; a greater liking for one alternative over another or others; predilection*”.

Ariely & Norton (2008) and their view on preferences have already been initially presented in Section 3.1.3. They argue that utility is the central driving force of human motivation and behaviour, but also that abundant theoretical evidence demonstrate that “*people’s preferences are frequently constructed in the moment and are susceptible to fleeting situational factors such as subtle primes, incidental emotions or even the weather*” (Ariely & Norton, 2009:489) . They emphasize that behaviour partly is based on observations on one’s past actions, which may have been influenced by situational factors such as the weather and maybe even by factors that are unrelated to the actual activity. People tend to interpret their own previous behaviour as reflective of their genuine preferences. In other words, people are partly driven by their hedonic utility, but also by their – potentially biased – memories of past behaviour, which can shape their future utility and actions. According to Ariely & Norton, actions reveal the underlying utility of the consumers’ behaviour and actions can indeed create preferences, as well as the contrary situation where preferences creates actions and action reflecting preferences.

Psychologists’ argue that people seldom have well-formulated preferences and instead often construct their utility in the moment, which is the reason why preferences caused by situational factors can result in people inferring their underlying and actual preferences (Ariely & Norton, 2008) .

In extent to Ariely & Norton’s view on preferences as sometimes being fleeting and situational, Kahr-Højland (2006) suggest that museums must aim for getting their audience hooked and afterwards hold on to them by establishing advantageous flow conditions that provides intrinsic awards. Ariely & Norton (2009) finally argues in their work on conceptual consumption that the concepts such as fluency and goals actually serve to shape the preferences of the consumers without their awareness.

As presented in Section 3.1.4, Kristensen (2009b) further accentuate curiosity as a motive for the need for change among the consumers, and thus the need for transformations. Kubovy (1999) further argues that curiosity implies the preference for an environment that can satisfy it.

The influence of preferences and how a company can attempt to establish preferences in order to attract and maintain customers will be elaborated in Section 4.7.



## CHAPTER 4

### Analysis & Discussion

## **4. Analysis and Discussion**

This chapter will analyse and discuss the empirical research questions of the thesis in the light of the theoretical framework and will hence function as the basis for the final conclusion, suggestions and future implications.

Initially I will introduce the Experimentarium as a science centre and their purpose and vision, and afterwards I shortly present an empirical overview of my findings in the empirical research. Then follows the analysis and discussion of the research questions.

### **4.1. The Experimentarium**

The first step towards the Experimentarium, as we know it today, started in 1988. On the 9<sup>th</sup> of January 1991 the Experimentarium opened to the public as an independent non-profit Science Centre for science, technology, environment and health ([www.experimentarium.dk](http://www.experimentarium.dk)) .

Aiming to promote the public interest and awareness within natural science and technology especially among children the Experimentarium consists of different areas each of which have a certain scientific theme and consists of many interactive exhibits demonstrating scientific and technical topics. The distinctive feature of the Experimentarium is their ability to facilitate scientific knowledge in a way all people can understand and learn from, through involvement, participation and guidance of the educated guides on the floor.

The overall vision of the Experimentarium is to increase the general public's interest for natural science and science and health in general, as well as to make sure that natural science and health play an important role in the future knowledge society and finally, to be the national power centre of education within these fields ([www.experimentarium.dk](http://www.experimentarium.dk)) .

The Experimentarium has since the beginning been at the forefront of creating original experiences and challenges, and they promote the areas of natural science, technology, environment and health using spectacular methods and media. The Experimentarium aims to surprise and amaze visitors of all ages by stimulating their curiosity and their desire to learn. The visitor is in focus, as the Experimentarium strive to create individualized, entertaining and educational experiences that also have social relevance ([www.experimentarium.dk](http://www.experimentarium.dk)) . The slogan of the Experimentarium "*Funnily enough you get smarter*" emphasizes the aim to provide entertaining, but also educational experiences.

Every year the Experimentarium set up one or two new temporary exhibitions and hence strives to keep on being innovative in both the offerings and in the creation of their exhibitions.

The Experimentarium has recently developed a Strategic Plan for 2013-15 which contains five overall goals, one of which is to create transformations by focusing on all four dimensions of the Experience Economy: entertainment, education, esthetics and escapism (*Fra succesful til betydningsfuld - Experimentariums strategiplan 2013-15*. 2012).

They wish to push the existing worldview among the visitors and nudge, guide and even provoke them towards transformations.

A further step in the Strategic Plan 2013-15 is the “Future Project” which involves a large extension and rebuilding of the existing frames, and the creation of a roof top terrace with several interesting initiatives such as a botanical garden, an exercise area as well as space for sustainable energy sources (*Fra succesful til betydningsfuld - Experimentariums Strategiplan 2013-15*. 2012).

I delimit from involving future strategies, as it has no affect on the current condition at the Experimentarium.

Approximately 350.000 people visit the Experimentarium every year, divided into 34% school visits, 23% children, 43% adults. Furthermore 80% of the visits are revisits (Adler-Nissen, 2012).

## 4.2. Empirical Overview

In this section I will shortly describe the empirical findings in the four studies, I have conducted, and present strengths and weaknesses for each research method as well as provide a brief overview of the findings. These findings will be used and further elaborated in the following chapter where I will analyse and discuss the research questions. The description of each research method is to be found in Appendix 1.

### Face-to-face Survey

I have executed 53 individual face-to-face surveys at the Experimentarium among a random selection of visitors. The strength of this survey is that there is a high response rate, and because of this I have been able to collect some useful and generalizable data. Even though this survey is quantitative it share qualities with a qualitative research method because of the many open-ended questions, which is elaborated in Appendix 1.1. It can be argued that it is a weakness that I only have 53 respondents, since more responses would have ensured a higher reliability. Meanwhile, I argue that I can use this survey as an indicator for the reality, because the z-test is significant, and it is a statistical test that have determined that the difference between the average of my sample

and the average of the population is adequately small to be statistically significant. Another possible weakness is the fact that I might have unconsciously influenced the validity of the survey, as I chose which visitors to approach and thereby the sample of the population, which may not be 100% representative. Despite this fact the collected demographic answers showed a wide variety of people, and I hardly experienced any rejections from the visitors I approached. The demographic data indicated that the average age was 47 and an average of 2.25 children accompanied the respondents. The overall experience was rated as 4.1 in average, with 5 being the best possible. See Appendix 2 for all the data.

### ***Semi-structured Interview***

I have executed a total of four interviews; two interviews immediately after the visit while the interviewees still were at the Experimentarium, and two interviews four days after the interviewees' visit to the Experimentarium. The strengths of the semi-structured interviews is that I was able to obtain more profound answers about the interviewees' experiences and also get an elaboration on the learning elements of the experience that the face-to-face survey did not provide. Especially the two interviews conducted four days after the visit were much more informative because the experience and impressions had had time to settle in the consciousness of the interviewees. In Appendix 1.2 I have composed an elaboration on the differences between the interviewees and the circumstances under which the interviews were conducted.

It can be argued that it is a weakness that I only have conducted four interviews, but I argue that four interviews is enough to show a tendency and produce knowledge, and I accept the respondents' worldviews as the truth adhering to the constructivist paradigm. This is also the reason why I have not explored the interviewees' background. Furthermore, when combined with the results of the other empirical research data and approaches, the interviews become more significant.

### ***The Study: "What do you want to become when you grow up?"***

In this survey I asked 260 children over two days the question "What do you want to become when you grow up?". 130 children were asked one day just as they were entering the Experimentarium, and 130 other children another day just as they were leaving. The high number of respondents helps ensure validity to this survey, and again, the statistical z-test is significant. I do not believe that there are any obvious weaknesses with this survey, but there is a small chance

that other children or family members could have influenced the questioned children in their choice, or they might have been influenced by the way I explained the different jobs. Meanwhile, I did not detect any obvious signs that the children were influenced in their choice. Most often the parents stepped aside and let the children point and talk, and I rarely experienced siblings and groups of children choosing the same “monkey”. Furthermore, I made a great effort in explaining the different jobs with the same enthusiasm each time to eliminate any bias affecting the outcome. The study shows a clear shift in the children’s preferences when they were leaving compared to the preferences they had as they were entering. As the most significant example, 8.5 % of the children wanted to become an archaeologist when they entered the Experimentarium compared to 22.3 % as they were leaving. This is a percentage increase of 163.6%, and this tendency is equivalent for the jobs scientist and teacher, although not as striking. See Appendix 4 for the data.

### ***E-mail Survey among Physics Students***

The survey was E-mailed to approximately 400 physics students at the University of Copenhagen, and has a return rate on 58% or 232 answers. I wanted to keep the questionnaire to a minimum of precise questions to secure a high response rate and this helped ensure a low defection of only 9.9%. The high response rate and small defection secures validity and make the survey more transferable to reality. It can be discussed whether a weakness of this survey is the fact that the questions were relatively simple to fully elaborate on this very complex subject. Nevertheless, the students’ comments reflect that they fully understood the questions and have reflected on the answers. Out of the 232 answers, 92 % of the students replied that they had visited the Experimentarium and 43 % had visited the Experimentarium five or more times. Furthermore, the survey showed a clear tendency that a visit to the Experimentarium has increased the interest in natural science among some respondents; the Experimentarium had even had a direct or indirect effect on the respondent’s choice of education. See Appendix 4 for all the data.

Later in this section I will look further into the time perspective of transformations. In regards to the time perspective, it is important to mention that the responses I received in the face-to-face survey while people were still visiting the Experimentarium, as well as the interviews conducted at the Experimentarium, possibly would have changed if I asked the respondents the same questions some time after their visit, when the outcome of their experience would have had more time to settle and digest.

### **4.3. Presentation of Analysis and Discussion**

I have chosen to construct the analysis and discussion in the way that I process one research question at the time, and thereby combine the analysis and discussion in the answering process of each research question. Each section will be analysing and discussing the relevant topics within the problem area separately, and in the end of the section a partial conclusion will sum up the analysis and discussion of the particular research question.

The focus is the context of the Experimentarium in the analysis and discussion, but the findings and conclusions will be transferrable to a general context, which will be elaborated in Section 5.2 on the Future Implications.

Transformation is the focus area of this thesis and I find it necessary to initially present my overall findings and conclusions on transformation, in order to have a unified fundament for the following analysis and discussion.

The reason for companies to offer transformations is to differentiate from competitors and offer the consumers a chance to actualize themselves. The need for transformation and self-actualization is nowadays greatly pursued and the fulfilment of lower needs in the hierarchy of needs is achieved with greater ease than ever before, as presented in Section 3.1.2. People seek uniqueness and the opportunity to stand out and develop personally.

The challenge has been to measure and define the transformational effect among the consumers and to investigate whether transformation even is measurable. I did not expect that somebody would respond to me that they had been transformed, but I have attempted to trace the different fragments a transformation consists of, and based on that tried to combine the fragments to determine whether transformations occur among the consumers.

The definition of transformation is based on theory of primarily Pine & Gilmore (1999) and Kristensen (2009a; 2012; 2009b), and the theories share similarities as well as disagreements, which also illustrates the versatility of the concept. Other theories that support the transformational process are presented as well, such as learning and motivational theory, with the purpose to deepen the understanding of the transformational process.

Based on the theoretical framework and the empirical research I have found it difficult to exactly define the process and concept of transformation in a practical context. I have not been able to track any direct and clear signs of transformations among the respondents, but several fragments

such as learning outcome and time perspective are significant indicators and will serve as the fundament for following conclusions. The process is exceedingly subjective, and it is individual what measures will lead to a transformation, based on the evolutionary and human fact that people have different needs and motivations. A transformation implies some kind of learning or new insight, but learning is not necessarily transformative. The experience and the learning that follow generally have to be relevant or interesting to the individual in order for a transformation to happen.

Transformation is complicated to measure, because the respondents in the empirical studies often had difficulties expressing the effect of their experience. This may very well be coherent with the fact that a transformation is based on some kind of learning, and learning often happens tacitly, which means that you are not directly aware (Kubovy, 1999). Also Knopp (2006) emphasizes that learning mostly happens unconsciously. Because of the learning element of an experience, a transformation can be tacit and unconscious as well. The research have indicated that the transformation among the visitors at the Experimentarium do not necessarily happen during or immediately after their visit, but actually need longer time in order to settle in the mind of the consumers and reach a level of consciousness. The theoretical framework combined with the empirical research determines that time for absorption, reflection and the opportunity to digest the experience is important factors in the transformational process. People often need the time to think about what they just experienced, and maybe even discuss it with others, both in the middle of and after the transformational process.

Transformations can differ in size, and people may experience both minor and big transformations. I consider all sizes of transformation as being valid and consider i.e. a change as an individual who suddenly starts thinking “Oh, I must remember to turn off the light when I leave the room” as a transformation, because something has had an effect on the individual’s approach to life.

Based on this initial description of my findings on transformation, I will now elaborate the analysis and discussion one research question at the time:

## **4.4. RQ1: What measures can a cultural institution initiate to make an experience transformative?**

Transformation is a very theoretical term that basically reflects a change within an individual. It is the overall measure the Experimentarium should offer their customers in order to gain their attention and establish preferences. In the process of transformation, the consumer does not only buy the product, but also *experiences* the product, which is characteristic for the Experimentarium. Since arranged transformations is something to be purchased, it has to be considered valuable in order for the consumers to willing and deliberately pay money to get an experience that provides the opportunity for a transformation.

This section will present measures that most likely will enhance the possibility of transformations, in terms of guidance, optimizing the experience realms, the united experience and engagement of the customer. Adler-Nissen (2012) emphasizes in her diploma thesis, based on an investigation made by “Bygningskultur Danmark”, that the modern consumer lacks *free* spare time and is able to choose among many different experiences. In order to gain the attention of the consumers and make them choose the Experimentarium above alternatives, it is important to offer transformative experiences that will lead to self-actualization, stimulate the consumers’ curiosity and offer time for reflection. Beside that, experiences that give the opportunity for community can contribute to affecting the consumers and their choices and thus preferences (Adler-Nissen, 2012:6).

### **4.4.1. Guidance**

One of the most significant characteristics of an arranged transformational experience is the guidance of the consumer. As presented in Section 1.3.4, guiding is the keyword within Pine & Gilmore’s (1999) conceptualization of transformation, and is also the essence of the second stage of the three phases of guiding transformation: *Stage the Experience*. It is argued that a change can only be guided and nudged, since no one can force a sustainable change to an individual. This implies that the consumers are being guided in the direction of the change they want and need, which presupposes some kind of interest or relevance. Meanwhile, it is important to emphasize that guidance will not necessarily lead to transformation, but will lead the consumers in the right direction and help them across obstacles.

There are already guides at the Experimentarium with the purpose to help and make the visitor’s experiences even better and these are publicly referred to as pilots. They are said to be crazy talking about experiments and funny phenomenon’s, and are all, according to the

Experimentarium's website, either students within natural science, pedagogy or student teachers' ([www.experimentarium.dk](http://www.experimentarium.dk)). Meanwhile, 64% of the respondents in the face-to-face survey did not know what the purpose of these pilots was, and 26% had not even noticed them (Appendix 2.2, Q21+22). Furthermore, two of the interviewees, Christian and Malene neither had noticed them or knew their purpose, the interviewee Christine was aware of their purpose but had never used them, and the interviewee Ane had noticed a few, but did not think of them as being proactive or outreaching (Appendix 3).

### **The Respondents' Relation to Guidance**

The experiential process at the Experimentarium is not always obvious, which makes guidance an important facilitator. All exhibits are presented with written instructions, but these instructions can be long and complicated, which may result in the consumer loosing his patience in the exciting and hectic environment. Guidance is important in this type of situations, to maintain the fluency, flow and virtuosity of the experience and secure "the individual exhibition".

I presented the respondents in both the face-to-face survey and the interviewees with the purpose of the guides and explained how they could give advise to the different exhibits as well as instructions, and be available for questions and overall guidance. The response was entirely positive, and the respondents welcomed the opportunity for counselling and guidance, and several respondents requested that they should be more visible and proactive. Some respondents expressed that some of the exhibits were difficult to see through, and that they would have appreciated some guidance. One respondent answered in regard to the guides: "*We couldn't find them, but it's a good idea and it would be great with extra elaboration*", and another customer advised in regards to the visibility of the guides "*Give them a new uniform in a loud colour, so they will be more visible*" (Appendix 2.2, Q23). The respondents who did use the guides were very satisfied with the help and guidance they provided (ibid). Meanwhile, the interviewee, Ane, had a bad experience with a guide: "*One of the guides was dissecting a lung, and that was the most helpless thing I have seen at the Experimentarium for a long time. She didn't manage to show the things to the children, and in the end there was only five or six curious adults, all the children had left*" (Appendix 3.6)

I asked the respondents whether they thought they would have learned more with the right guidance, and the majority answered "yes". One respondent answered, "*Yes, I'm not that*

*technically skilled or familiar with all the modern technique*" and another replied "Yes, many of the exhibits are difficult to see through" (*ibid*).

The overall picture based on the face-to-face survey was a small existing knowledge about the purpose of the guides, but a positive attitude towards their presence and purpose, based on the opportunity for explanation, guidance, elaboration and increased learning.

Some respondents expressed an actual need for guidance, while a few declined the purpose of the guides: "*We don't need them, we will rather just keep to ourselves*" (Appendix 2.2, Q23).

The positive attitude among the respondents towards guidance makes it necessary for the Experimentarium to focus more on the guides, in terms of their proactivity and visibility.

According to a report from 2009 about the guides at the Experimentarium and the visitors' perception of these, some of the qualities that the guides can contribute with are to create security about the technical elements of the exhibits, maintain the children's attention, contribute to the learning elements, bring about intimacy, create room for reflection, cause enthusiasm and finally answer practical questions (Søndergaard, Christiansen, & Goyle, 2009, Appendix 6.1). This internal report from the Experimentarium defines exactly what qualities the guides should contribute with, not only to optimize the united experience, but also in order to promote the likeability for a transformational experience. The problem is that the intention of the above-mentioned qualities is good, but the guides do not seem to actually reach the customers.

It is very important that the guides appear to be professional, pedagogical and manage to catch the interest of the visitors, which the quote above illustrated that a guide who dissected a lung did not manage to do. The guides represent the Experimentarium publicly, and are perceived as experts (Søndergaard, Christiansen, & Goyle, 2009, Appendix 6.1). If they fail to fulfil the expert role, they will disappoint the expectations of the consumers, neglect their curiosity and maybe even create disfluency. The guides can be a welcomed narrative alternative to the parents, which Ane commented in the interview: "*It would be different if it was your mum or dad. If you imagine the guides doing something, it would catch the children's interest and curiosity that something was happening, and they would go and join in*" (Appendix 3.6).

Curiosity is, as presented in Section 3.1.4, the human motivation for exploring the unknown and learning from exploration, and the guides must be able to stimulate this motivation. The customer will gain pleasure when his curiosity is stimulated and he is learning something new, and that will have a positive effect on the experience and increase the chance for a transformation. Both

curiosity and fluency and how these concepts affect the consumers will be elaborated further in Section 4.5.

In situations where the guides fail to fulfil their expert role, disfluency may occur. Disfluency can make the experience bad and as presented in Section 3.1.3, maybe even reduce physical consumption. Guidance can just as well help securing processing fluency as presented in Section 3.1.3. The easier and more fluently the individual can process the stimuli, the more positive the experience will be perceived. Hence, the guides can increase the processing fluency by their help and guidance, and thereby increase the satisfaction of the experience.

Meanwhile, there is a chance that some people will find the guides intrusive, annoying and with a know-it-all attitude, and that can have a negative effect on the experience. It is therefore very important for the guides to feel and notice which customers would appreciate and grant their guidance, and who would find it intrusive.

Visitors seem to mostly perceive the Experimentarium as an adventurous playground especially for the children, and in this regard the guides are less needed. The visitors in general do not seem to have given much thought into the function of the guides, and how they can contribute to a better visit. The visitors' perceived function of the guides seems to be based on a general idea of a guide's function, and not what the extraordinary guides at the Experimentarium can contribute with. A reason for this may very well be the fact that the visitors do not know much about the guides, which indicates that the Experimentarium does not manage to communicate the purpose of their guides adequately. The Experimentarium should optimize the functions of the guides and educate them to understand and comprehend not just their role as a guide, but as a guide who should manage to take care of the consumers and guide and nudge them in the needed direction. The guides cannot assure a transformation, but they can increase the possibility significantly. In general, it is highly important that all employees at the Experimentarium share a common understanding of the offering of transformational experiences and a unique united experience, and the meaning and effect it has on both the consumers as well as for the Experimentarium. Through a common understanding, all members of the business will cooperate towards the shared goal and thus utilize the potential of the Experimentarium.

Supplemental to guidance is the notion of "the Individual Exhibition" which can be secured through a combination of IT technology and smart phones. Instead of written instructions or human guidance, a possible way to increase the feeling of an individual exhibition is through

electronic guidance that can guide the visitors via videos and suggest exhibits that align with each individual's interests and needs in return for personal data on the individual. Such an electronic device would also be able to store the data and secure individuality. As an increasing percentage of the Danish population has a smart phone, an obvious opportunity is to use the smart phone as the electronic device through i.e. an application, and thus fusion the physical and the virtual world of experiences, which Kahr-Højland refers to as "Augmented Reality" (2006). A research conducted by Gallup in 2012 revealed that 2,1 million Danes have a smart phone and the number is increasing. 71% of the 25-29 years old have a smart phone and the most rapid growth is among the 15-19 years old, where 70% has a smart phone (2012). The electronic guidance is not suggested as a replacement of the guides and the written instructions, but as a supplement that can guide in an intelligent way through dialogue and increase the sense of an individual exhibition and thus reduce the need for the human guides. Kahr-Højland refers to this type of individual exhibition with the smart phone as a digital showcase as a combination of the interactive exhibits, an organizing narrative and virtuality (2006:95). This type of electronic guidance can also be expanded to the prolonging of the experience and provide the consumers their individual data after the visit – more on this in Section 4.7.4.

An important reservation in regards to electronic smart phone guidance is in relation to the older part of the population who might not be familiar and safe with the opportunities of a smart phone, or who might not even have a smart phone. The use of an individual electronic device can also compromise the social element of the experience and neglect the social interactions, but Kahr-Højland emphasizes that the smart phone has become a tool we use without reflection because we have become so familiar with it (2006).

Finally, while the Experimentarium refers to their guides as "pilots", I consequently refer to them as "guides". The term "pilot" is an English translation of the Danish word "lods", which refers to the action of leading a ship through the waters, or in other words guiding the ship. I argue that the common understanding of a pilot is in the context of airplanes, which also was emphasized by some of the respondents, while people who helps customers, as for example on vacations, are referred to as guides. The term "pilot" confused me to begin with, and I have deliberately chosen to refer to them as guides in the surveys and interviews, as I argue this makes more common sense. Thus, I recommend that the Experimentarium reconsider the reference to the "pilots" and maybe chose another classification that makes more common sense.

#### **4.4.2. The Four Realms**

It has been consistently argued throughout this thesis that most transformations are built on experiences, and that experiences are a precondition for a possible transformation.

The following will analyse and discuss the four realms presented in Section 3.1.8, in regards to measures that the Experimentarium can initiate to make the experience unique and diversified, and thus increase the possibility for a transformation. There is no unambiguous guideline to an optimal execution or combination of the four realms, but it would seem somehow logic that the more realms represented in an experience, the more senses will be stimulated and the more special the experience will be.

The Experimentarium's key offering is the combination of entertainment and education in terms of learning, which Kahr-Højland (2006) refers to as informal learning in Section 3.1.9. This combination is the characteristic feature of the Experimentarium, and it can be adjusted and optimized in order to become more transformative and differentiated.

#### ***Education and Entertainment***

Since learning or gaining new insight is a precondition for most transformations, the educational realm should be assigned a high priority. Meanwhile, I have found that people do not visit the Experimentarium with the main intention to learn, but the learning element is perceived as more of a bonus or side effect. This was expressed by several respondents in the face-to-face-survey as well as among the interviewees, illustrated i.e. by the following quote from the interview with Ane: "*Q: Is it your perception that the Experimentarium is primarily about experiences and the learning part is a bonus? A: Yes, that is my opinion*" (Appendix 3.6). Another respondent in the face-to-face survey replied as follows in regards to his expectations: "*It is exiting and the grandchildren are very curious and information seeking. The fact that you learn is more like a bonus*" (Appendix 2.2, Q18).

The main intention among the visitors, based on the common responses in the empirical research, is the excitement and to have a cheerful and fun time in a sense of community. In other words, people are willing and excited to learn, but their main motive is to have fun and spend time with their families, which 41 out of 53 respondents replied (*ibid*). This is based on the answers regarding expectations to the visit, given to both the face-to-face survey respondents and the interviewees, where the expectation of the majority was to have a good time, as the following

quote illustrates: "*Our expectations was really just to have a good and fun time, with the children and the adults, and that is what is offered here in my opinion*"(Appendix 2.2, Q18).

I also found that some of the respondents' expectations were both an entertaining and learning outcome, illustrated by the following quotes in regards to the consumers' expectations: "*To learn something new in a fun way*" and "*A good combination of entertainment and learning*" (ibid).

Although the main motivation seems to be a fun and cheerful day with the family, the educational element played a role as well. 57% of the respondents in the face-to-face survey replied that they chose to visit the Experimentarium in order for their children to learn something, while 30% replied that they both wanted themselves and the children to learn something new (Appendix 2.2, Q20). These numbers are perceived as valid when compared with Kristine Adler-Nissen's diploma thesis from august 2012, where an empirical study showed that 63% of the respondents replied that their motivation for visiting the Experimentarium was for their children to learn something (Adler-Nissen, 2012: Appendix 6.3: 28)

### ***The Balance of Education and Entertainment***

The balance between the element of learning and entertainment is a difficult balance because the entertainment is more likely to seduce the consumers and dominate the experience as presented in Section 3.1.8). Here, Kahr-Højland (2006) emphasizes that a combination of entertainment and learning is uneven, because the fun part most likely will dominate and leave no room for reflection and settlement of the knowledge, since the learning element is disguised by the entertainment. The entertainment is the element that immediately is being digested and the learning element is often not consciously registered and perceived until some time after the actual experience has had time to settle.

According to Maslow's hierarchy of needs presented in Section 3.1.2 people seek to realize themselves, which may be achieved by learning, problem solving and personal development. Meanwhile, if the learning elements in the experience become too obvious, it is likely to deter many visitors, as the learning element is not a dominating area in their expectations and motives; they just want to have fun. The element of "learning" may trigger some people, because it associates with school and education, and is usually not associated with "a fun day". Yet, learning is critical as the precondition for transformation, and the obvious entertainment and fun combined with the more disguised learning element seems to be a successful balance.

Visitors perceive the Experimentarium as a fun and cheerful place which their expectations reflects, but they also expect to learn something as a bonus and are positive towards the learning element (Appendix 2 + 3).

A respondent from the survey among students of physical science at Copenhagen University perceives the combination of education and entertainment as follows: “*The Experimentarium opens up for the desire to understand the world surrounding us. The Experimentarium manages to create curiosity for the world of natural science and inspires to understand natural phenomenons. It gives children (and young people) the opportunity to experiment and explore, while focusing on the knowledge hidden in the act of playing. An example is the soap bubble show – a world of physics is hidden in the explanation on why the guide never succeeds in making the soap bubbles square shaped*” (Appendix 5.2).

This quote emphasizes the exact key offering of the Experimentarium: all exhibits are facilitating natural science in a unique, understandable and entertaining way – learning by doing - and you will not find anything entertaining, escapistic or esthetic at the Experimentarium, without an element of learning. And why do people want to learn? To change, to become smarter, to realize their individual potential and to be transformed.

### ***Escapist***

The escapist combination of consumer activity and immersion in the environment is very similar to the concept of co-creation, where the consumer creates personal value in collaboration with the company. The Experimentarium lack experiences that is purely escapistic where the customers are completely immersed in the environment. Yet, there are some and I argue that examples of escapistic experiences at the Experimentarium are the sluices in the VAND exhibit where the children actively can regulate the water level and follow the changes. Another example is the dinosaur exhibit where the children in the best palaeontologist way can excavate fossils by investigating and demolishing the provided limestones. Also at the dinosaur exhibit the children can draw and colour pictures of dinosaurs, which is an experience where they actively participate with the opportunity to fully immerse.

It is individual who will find which exhibits escapistic. Some people may like to immerse in colouring the dinosaurs, while others are caught by the endless opportunities of the sluices.

Regardless of the subjectivity the Experimentarium should offer far more escapistic experiences where the consumers can immerse in the exhibit and actively participate in the experience. This type of experiences are very similar to the concept of co-creation, and will be looked further into in Section 4.6.2.

It is important for the Experimentarium to allow the consumer to immerse in the experience in regards to both time and space availability, because it provides the opportunity to reflect on and evaluate the experience. The guides could help to make the visitors pause for a minute and take time and find space for reflection on the current exhibit or experience.

### ***Esthetic***

The Experimentarium lacks elements of the esthetic realm, that implies an immersed experience and passive participation. Esthetic experiences imply some kind of beauty and processing fluency and examples are the spectacular screen with movies at the Planetarium and art in general.

Existing esthetic experiences at the Experimentarium is the movie on the meteor strike in the dinosaur exhibit, where the screen is big and unique and immerses the passively watching spectator in the movie. Also the exhibit “Colour Fields” in the art project PaNIK seems to immerse the consumer in the beauty of the different colours and lightening.

The lack of esthetic experiences gives room for new initiatives in this area, where the visitors passively can immerse in the experience in a space with for reflection. An extensive strategic initiative for the Experimentarium has already been launched in the Strategic Plan 2013-15 (*Fra succesful til betydningsfuld - Experimentariums Strategiplan 2013-15*, 2012). The “Future Project” involves a great extension and rebuilding of the existing frames with the creation of a roof top terrace and a botanical garden. This project seems to contribute with esthetic experiences where visitors can relax and enjoy the beautiful garden or the breath-taking view from the rooftop. Despite the prospect of this project, more esthetic experiences are still needed among the current exhibits and frames in order to more widely stimulate the senses.

The remaining question is whether all the four realms are equally relevant and important. I argue that education and entertainment are the essence of the Experimentarium, and what the centre already consists of, and these realms can be further optimized and adjusted. The escapistic realm of experience should be represented more and let the customer actively participate and immerse in the experience, but also the esthetic experience is highly needed in order to let the consumer

passively immerse in the experience. Overall, the experience at the Experimentarium currently lacks elements of immersion and this can be brought in through escapist and esthetic experiences. The realms are categorized in theory, but in practice they are very often combined and supportive of each other, and the more realms represented, the more stimulation of the different senses and the greater chance for a possible transformation. Representing all four realms, the sweet spot will necessarily appeal to different areas of the human perception, and thus stimulate as many senses as possible. Consumers value impressions and exhibits differently, and by designing the experience in the sweet spot they cannot help but to stimulate the consumers as broadly as possible, satisfy them more broad-spectred and thus enrich their experience. The Experimentarium encourage to primarily active participation, which in the long run can be exhausting, and several respondents commented on the noise level as a negative element. Passive stimulation, less activity and noise can be provided by implementing esthetic experiences that can stimulate other senses and give the consumers the opportunity to immerse in the experience and allow time for reflection. Time for reflection is needed at the Experimentarium, because exactly reflection is an important element in the process of transformation.

In extension of the sweet spot and stimulation of all senses is the “Gesamt Kunstwert” concept (Høeg, 2012) , which is inspired by the German composer Richard Wagner, to whom the gesamt kunstwerk was the combination of music, text, acoustic and architecture in a united experience. Its notion is to combine elements and exhibits from all kinds of cultural institutions, in order to strengthen the experience and the effect it will have on the consumer. This implies the combination of elements of living animals from the zoo, art from art museums, amusement elements from amusement parks, artefacts from natural and technical museums. The Experimentarium already manage to combine several of these elements, but can successfully include more, as for example living animals and more esthetic experiences in terms of art as just presented. By including more of these elements, the Experimentarium will grant more needs of the visitors, and ensuring an environment that provides the opportunity for reflection and immersion, and thus increase the possibility for transformations.

Meanwhile, even if the experience is designed in *the sweet spot* or incorporate or combine different elements of the “gesamt kunstwerk” concept, it does not automatically mean that the offered experience will have a transformational effect. The Experimentarium can stage, guide and

nudge the experience and thus increase the possibility for a transformation, but whether the transformation will occur is individual.

#### **4.4.3. The United Experience**

It has been difficult to define whether it is selected exhibits at the Experimentarium that are possibly transformative, or if it is the united experience as a whole or simply a combination of both. Customers appreciate very different things at the Experimentarium, which is reflected in the interviews. Christine and her family were very fond of the dinosaur and VAND exhibit, while Ane and her children found those exhibits a bit boring and out-dated, and instead they were fond of the solar collector (Appendix 3.5 and 3.6). Since the customers perceive the exhibits so differently and value the experience highly individually, the Experimentarium should aim for the united experience to be a unique experience in itself in all elements from the entrance to the toilets and the café.

Several initiatives already exist, as for example the wardrobe cabinets where each one is unique with numbers from 1 and up, illustrated in different colours in both normal numbers as well as binary numbers and calculations. Another initiative is the part of the PaNIK exhibition called “The Secret of the Magnetic Stripe”, where the information of the credit card is displayed by light when you run your credit card through a card reader in the café counter.

There are opportunities for much more initiatives in order to strengthen the united experience, especially within the toilets and the café. Both areas appear dull and drab, and many of the respondents in the face-to-face-survey expressed negative response in regards to the toilets and especially the café. *“The toilet facilities are lousy”* and *“The cafeteria was far from inviting, and we did not want to eat there”* was some of the comments I received (Appendix 2.2).

By adding some funny and different colours, pictures, wallpaper, sound and lightening in the spirit of Experimentarium in the more neutral and dull areas as the toilets and café, a more unique, exiting, integrated and inviting environment would be current. It could even cause curiosity and excitement among the customers and thereby contribute as a fragment of transformation.

An example of a consistent and unique environment that excites and causes curiosity is the American chain “Rainforest Café™”, where the cafes are furnished as a rainforest with plants, animals, waterfalls and a star ceiling. Both the food and waiters are consistent with the rainforest theme as well ([Www.rainforestcafe.com](http://www.rainforestcafe.com)). .

Kahr-Højland (2006) pleads for the necessity of room for reflection, in terms of the possibility for the consumers to negotiate the new knowledge alone or with others. A cosy and inviting café environment will most likely attract more of the visitors to sit down and have a break, and provide the opportunity to talk about and negotiate the new knowledge as Kahr-Højland pleads. A break and maybe a discussion of the experience with the family may catalyse the transformational process, as the outcome of the experience becomes more conscious and reflected when being verbally expressed and talked about. By letting the unique, entertaining and joyful essence of the Experimentarium be common throughout all aspects and physical spaces, the value of the united experience will most likely increase, and hence the possibility that a transformation will occur.

#### **4.4.4. Partial Conclusion**

Guidance is an important part of the transformational experience and the Experimentarium should focus more on how the guides appear among the visitors and train them to be more conscious and aware of their responsibility as guides in the transformational process. The guides must facilitate the possibility of a transformation by helping, nudging and guiding the visitors in the right direction. The use of smart phones as electronic guidance can also help to secure “the individual exhibition”, and function as an educational aim as well as guide the consumers through fluency and flow in the direction of learning, insight and transformations.

The Experimentarium should also aim for stimulating the consumers more widely in the sweet spot, and thus focus more on offering escapist and esthetic experiences, without compromising the existing essence of entertainment and education. By optimizing the united experience and letting the unique sense of the Experimentarium be common through all aspects, the consumers may be inspired to evaluate and discuss the experience in the process, and the environment will not only be more inspiring, but the awareness and memory of the experience may likely be increased.

#### **4.5. RQ2: How is the target group affected by the offered experiences?**

The aim of this section is to analyse and discuss how the target group of the Experimentarium is affected by the offered experiences. First, I will define the overall target group in regards to the transformational focus, starting from the potential motives for transformation described in the theory combined with the findings in the empirical research. As the discussion will reveal, I have

not been able to track and define unambiguous evidence of transformations, but the research have revealed a vast amount of evidence that expose signs and fragments of transformation within the respondents, consciously as well as unconsciously.

Finally I will analyse and discuss the findings from the empirical studies of “What do you want to become when you grow up?” as well as the E-mail survey conducted among physics students at the University of Copenhagen.

#### **4.5.1. The Target Group**

The overall target group is defined as families with children, and delimits from school visits. I am fully aware of the fact that schools are a big target group, but my choice is based on the fact that school visits are not optional, but a part of an educational programme. I define “families with children” as a mother and/or a father with their child or children, single parents with children, grandparents accompanied by their grandchildren and relatives with children in general.

This target group could easily be split up in smaller segments, depending on motives for the visit, frequency of visits, income, education level, and other factors. I am aware that the target group “families with children” is large and consists of different types of visitors with different needs, values and motives for the visit. Although it would be interesting to go into further details with the segmentation, I do not see it as critical in regards to the focus of this thesis. Instead of defining the different segments and the motives behind their visit, I am focusing on the individual and the transformational process. The focus of this thesis is transformation in its entirety and the effect of transformations on an individual level and not the segment the visitors belong to.

The diploma thesis conducted by Kristine Adler-Nissen (2012) reveals an already disclosed knowledge and insight in regards to the demographic distribution of the visitors and the different segments. The Experimentarium seems to attract a wide range of people, who necessarily must share some kind of motivational similarities. I find Adler-Nissen’s diploma thesis very inspiring and my definition of the target group is to an extent based on her findings, but the focus in this thesis is transformations and the effect of the experience and not the different type of visitors.

#### **4.5.2. Conceptual Consumption**

The respondents in the empirical studies did not express any kind of deliberate search for change or transformation. Nevertheless, a larger part of the respondents replied that they were visiting the Experimentarium because of the learning element of the experience. 57% of the respondents in

the face-to-face survey intended that their children should learn something new, and 30% intended both for themselves and the children to learn something from the visit (Appendix, 2.2, Q20). Since gaining knowledge is an important part of the transformational process it can be argued that the consumers unconsciously seek for their children, themselves, and maybe even both, to be transformed through the gaining of new knowledge and an extended understanding of the world, which is the offering of the Experimentarium in a scientific context. The question remains whether the motive for learning implies a motive for transformation.

The change in consumption during the last century, combined with the increased satisfaction of the basic needs in Maslow's Hierarchy, leaves the modern consumer with a lot of additional leisure time and a natural consumption need, and this opens up for "conceptual consumption" (Ariely & Norton, 2009) . Today, people have "everything" and we live in an affluent society, where people actually have a hard time providing wishes for birthdays and Christmas. In the wake of this affluence a new trend of giving experiences as presents has emerged. An example of these experience presents is SmartBox and BellevueBox that contain a gift certificate to a certain experience, as for example a hotel stay or a skydiving experience. People who are more or less completely materially satisfied have naturally reached a higher level in Maslow's (1943) hierarchy of needs. They only remain to realize themselves and widen their intellectual horizon, and experience presents are able to stimulate these needs.

I present this tendency, because it reflects people's needs for excitement, challenges, and experiences in an affluent society, and that is exactly what the Experimentarium offers.

As presented in Section 3.1.3, Ariely & Norton (2009) have outlined four different classes of conceptual consumption, which they suggest demonstrates people's desire to consume concepts: *expectancies*, *goals*, *fluency*, and *regulatory fit*. These four classes will each be further elaborated in the following section in the context of the Experimentarium.

## **Expectations**

In the face-to-face survey conducted at the Experimentarium, I asked the respondents what expectations they had to their visit, and the majority had the expectation to have a fun, entertaining, and cosy day with their families, but also expected an element of learning included in the experience (Appendix 2.2, Q28). When the respondents were asked if the visit met their expectations, nearly everyone answered "yes". The only respondents who did not think that the

experience met their expectations complained that the dinosaur exhibition was too small and childish (Appendix 2.2, Q29).

Ariely & Norton (2009) emphasize that expectations can turn into self-fulfilling prophecies, if they are powerful enough. The vast majority of the respondents felt the visit lived up to their expectations, and the united experience scored 4.1 in average on a 5-point scale (Appendix 2.2, Q30), so the satisfaction level is very high. People in general seemed to have high expectations and looked forward to spend a day with the family, and it is likely that these expectations to a certain point is self-fulfilling, since the general attitude of the respondents was very positive from the beginning. 89% of the respondents in the face-to-face survey in total answered that they expected that their children and/or themselves would learn something from the visit (Appendix 2.2, Q20), and the same tendency were also the case in the interviews. "*Q: Had you expected that you would learn something before you came here today or was it mainly for the fun and entertainment? Malene: No, I always expect to gain knowledge here*" (Appendix 3.5).

## Goals

After conducting the interviews I became aware that some of the interviewees had goals on behalf of their children and themselves as parents, and that makes the conceptual consumption of goals relevant. The interviewee Ane expressed that she uses the Experimentarium to spend quality time with her children because she has to be present as a parent: "*I have primarily used the Experimentarium on days when I have been alone with one of the children and wanted to do something special with them - because of the interaction, and the fact that the environment is very direct, present and attentive*" (Appendix 3.6). Ane strives to be a good parent and uses the visits to the Experimentarium to create a strong and present experience with her sons. It is also a goal for Ane that her children gain interest in the same field that she is interested in, and she had also ambitions for her children to learn something. "*For me, the Experimentarium is a place you visit because there is the opportunity to be active and because it is possible to look at things that you have an interest in and that you wish your children will gain an interest in as well.*" (ibid). When talking about the different exhibits at the Experimentarium she expressed a goal that her children would learn something from the visit and not just plays around in the "sea of balls".

It is an ingrained part of the human nature to have goals in life and the goals that lead to conceptual consumption in the target group is mainly the goals to be a good, present parent and for the children to learn and gain knowledge.

The majority of the respondents seek to stimulate the curiosity of their children, which the following answer to the question on why the respondent chose to visit the Experimentarium illustrates: "*Because of the experience, and so then the grandchildren can learn something and understand more of the world we live in*" (Appendix 2.2, Q18).

### **Fluency**

The exhibits at the Experimentarium are characterized by little instruction, and more intuitive "do what you feel like". According to the theory presented in Section 3.1.5 a small amount of information makes the exhibit both more pleasing as well as easier to process. This seems to be the case for many of the visitors, who appreciate the hands-on approach, but on the contrary some respondents expressed a need for more information: "*We needed more detailed information some places*" (Appendix 2.2, Q31).

Even though simple information and instruction may be easier to process and thus perceived more fluently, too simple stimuli can also be perceived as boring as presented in Section 3.1.5. Here Zajonc (2001) argues that the line between too simple and too complex exhibits is difficult and very individual as with all aspects of experiences and transformations since it can lead to either boredom or overload. The interviewee Ane expressed the following in regards to processing ease: "*If there are no logic or clear functions in the exhibits, you will lose the interest*" (Appendix 3.6). When the balance between simple and complex is right the consumers will gain regulatory fit, which implies an increased utility when succeeding in whatever they are doing, and this has a positive impact on their effort invested in the given task.

The fact that the exhibits are highly intuitive naturally implies that they can be both simple and complex, depending on the effort and concentration you invest in the specific exhibit, as well as the level of intelligence. This is also the reason why the exhibits attract both adults and children, but the general response in the empirical research reveals a need for more guidance and instruction, either in terms of more accurate written instructions or in personal instruction from the guides, which the following quotes illustrates: "*Some of the exhibits were difficult to see through and get to work*", and "*I actually missed some instruction or someone who could help me with some of the exhibits*" (Appendix 2.2, Q24). If the exhibits are not intuitive enough, the lack of instruction can lead to disfluency, which may reduce the physical consumption pointing forward and even make the experience negative (Ariely & Norton, 2009).

Another very important aspect of fluency and complexity is the fact that all exhibits are close to each other, and if an exhibits fails to entertain, challenge, and maintain the curiosity of the consumers, they will move on to the next one, and especially the children who naturally have a lower level of concentration: “*The distraction level among the children is important as well, because there is always 10 thing right next to them that they also can see, and it takes something to maintain their focus*” (Appendix 3.6). The customers in general value the freedom at the Experimentarium where you can go wherever you want, whenever you want, without actually having to queue, and all the respondents in the interviews emphasized that they thought positively of the liberty of choice. Meanwhile, the freedom of queuing can also be an issue, when visitors and especially smaller children do not understand that they by “jumping out” in an exhibit actually are disturbing others and creating disfluency, and a few respondents in the face-to-face survey emphasized this.

It is very important for the exhibits to catch and maintain the curiosity of the consumers and stimulate their need for entertainment and intellectual challenges. It is just as important to keep up the interaction among the visitors and a feeling of community, which is highly valued as they perceive the visit as a family day. The interviewee, Christine, expressed this: “*Here you have to actively participate together with each other*” (Appendix 3.3).

The overall reason why fluency is important in the exhibits and the experience at the Experimentarium is the fact that the easier you can process an experience, the more you will like and appreciate it, and the more you like something, the greater possibility that it will affect your experience and your preferences in the future.

#### **4.5.3. Consumer Motivation**

Based on work of Kristensen (2009b), three coherent factors in consumer motivation, *Curiosity*, *Virtuosity* and *Social Gratification*, are introduced in Section 3.1.4. The effect of an experience is related to the initial motivation and driving power of the consumer and what made the individual engage in the experience to begin with. The three presented needs will be analysed and discussed in the following, and thus exploring the possible motivation among the visitors at the Experimentarium, and how the motivation align with the offered experience.

## **Curiosity**

Curiosity is viewed as the primary motivation and the driving power behind consumer motivation and implies preference for an environment that can satisfy it (Kubovy, 1999) . Consequently, people seek out environments where they can encounter the unknown and learn something new to satisfy the need of curiosity.

This notion of curiosity as the driving power is supported by the comments from the E-mail survey among students of physics where many indicated that the visit to the Experimentarium had indeed been driven by a natural curiosity, and this curiosity have increased their interest in science after their visit. “*The Experimentarium opens up for the desire to understand the world around us. The Experimentarium is perfect to arouse curiosity in the scientific world and gives inspiration to seek understanding of natural phenomenons. It gives children (and young people) the opportunity to experiment and discover with a focus on the fact that there can be knowledge hidden in the fun...*” (Appendix 5.2).

When people in the face-to-face survey were asked why they was visiting the Experimentarium, many responded that the learning element of the experience were a factor, but also more situational factors as the weather, the autumn break and the opening of the Dinosaur exhibition played a role (Appendix 2.2, Q18). In this case, it is the learning element I find interesting, because the curiosity of the visitors is being satisfied by the pleasure of learning something new. 89% of the respondents expected a learning outcome for either the children and/or themselves and this notion is also expressed in the comments: “*There is more to the experience (at the Experimentarium, edited) than just visiting a water park, there is also some alternative learning involved in the entertainment.*” (Appendix 2.2, Q18). The interviewee Ane expressed that she expected that her children would get their curiosity stimulated and learn something at the same time: ”*Q: Had you expected that you would learn something from the visit? A: I had expected, maybe not so much that Jacob (her husband, edited) and I would learn something, but rather that the boys could get their curiosity stimulated.*” (Appendix 3.6). Ane’s response is coherent with some of the replies from the adults in the face-to-face survey, who argued that they knew much of everything already “*I knew most of it already, it is only some specific facts that are new to me*” (Appendix 2.2, Q14). Ane had the ambition of gaining knowledge on behalf of her children, and stimulation of the children’s curiosity was one of the primary motivations for visiting the Experimentarium. Compared to Ane, the interviewee Christian stated that he would have liked to have more time for

himself to explore the Experimentarium: “*...but, we (Christian and his wife, edited) would have liked to have more time. When you enter and try the exhibits, adults also want to take part in the fun and play around, so I am hooked on more*” (Appendix 3.4). His curiosity has been awakened by the visit at the Experimentarium, and this curiosity is motivating him to revisit the Experimentarium so that he can learn more.

Curiosity is motivating consumers to expand their knowledge and is according to Kubovy (1999) establishing preferences for environments that can satisfy this need, of which it can be deduced that people should prefer the Experimentarium, at least when they are fully aware of the dimensions of the offerings. However, the research on the relation between the consumers and the guides in Section 4.4 has already illustrated that there is a gap between the consumers’ perception of the guides and the actual purpose of these, that indicates that more accurate communication from the Experimentarium is needed in regards to the multiple dimensions of the experience. The communication element will be further elaborated in Section 4.7.

Overall, curiosity is a comprehensive motive for why the target group chose to visit the Experimentarium, and the empirical research illustrates that the curiosity of the respondents is towards the learning and educational elements of the Experimentarium. Based on this, it can be argued that since the consumers are curious to expand their knowledge and insight in the scientific world, they more or less consciously seek to be mentally developed, changed and transformed.

### **Virtuosity**

Virtuosity and the utility and pleasure people will have when they succeed in a given task are very important reasons why guidance, flow, fluency and a proper balance between simplicity and complexity at the Experimentarium are crucial.

The pleasure that virtuosity provides is what makes us want to do well, and in order to do well, the challenges and exhibits at the Experimentarium have to be feasible. In other words, if the exhibits are too difficult, the consumers will fail to succeed and the pleasure of utility not take place. The guides must be better to guide people towards success in the exhibits and the processing fluency has to be practicable, by i.e. guidance and instructions as presented in Section 4.4.1, whether it is human or electronic guidance. The more flow in the experience, the more virtuosity, since the flow condition occurs when there is a balance between the learner’s skills and the challenge (Kahr-Højland, 2006). At this condition, the individual will feel a great pleasure of success in the given task.

The visitors at the Experimentarium can feel virtuosity in many ways, both by succeeding in the different exhibits but also by succeeding as an individual, as for example when you feel like a good parent/grandparent/relative spending quality time with your children. By giving the children a fun experience and taking part in their education and stimulate their curiosity, the parents have the opportunity to succeed as a parent and actively take part in the life of their children. The interviewee, Ane, expressed her feeling of virtuosity: *"So, it (the Experimentarium, edited) also differs in the way that you, as a parent, are more orientated to educate your children, you are "ON" and you are explaining. You try to create amazement, try to create an interest, a curiosity, which is also current in the ZOO where you look at the animals and how they live. An institution like Tivoli does not encourage this type of quality time."* (Appendix 3.6). Ane emphasized that it is important for her that her children will have these success experiences where they feel they can accomplish something on their own: *"For example, when they turn the solar panel to get the water and the bubble to rise. That is something they think is a great success, the higher you can get it up, right."* (ibid). This quote exemplifies the essence of virtuosity: the flow in the exhibit is right and the children are getting a feeling of success and accomplishment.

Conclusively, the motive of virtuosity is highly relevant in regards to the visitors' self-esteem, as it provides pleasure and utility when they succeed and learn something new after trial and errors. The consumers are positively affected when they feel virtuosity, and the empirical research indicates that the level of flow and fluency at the Experimentarium is fairly adequate, but as presented, more instruction and guidance are needed.

### **Social Gratification**

Social gratification describes the human need for belonging in a social context, which Kristensen (2009b) emphasizes concerns Maslow's (1943) highest levels of need; Esteem and Self-actualization. A visit to the Experimentarium is very much driven by the social factor of the visit, as the respondents refer to the Experimentarium as a place to visit when you want to have a nice time with your family or friends. 96 % of the respondents in the face-to-face survey answered that they were there with their families (Appendix 2.2, Q1), and it is argued that the social element of a visit to the Experimentarium in company with the family fulfil the human need for belonging in a social context.

The interviewee Malene expressed that her family had gained a "*united frame of reference*" through the shared experience (Appendix 3.5). Another important part of social gratification is the

fact that people often share and talk about their experiences, and the interviewee Christian commented that an effect of the visit is that they now have a new conversation subject within the family: “*... I think we will talk a lot about the dinosaurs with Silas (his son, edited). And Mille (his girlfriend, edited) and I tried some machines, and this is probably the sort of things we will talk about*” (Appendix 3.4). Christian emphasizes that the visit has given conversations subjects for his son, but also for him and his girlfriend, and the interviewee Malene expressed that the experience at the Experimentarium is a more interesting conversation subject when it has an element of learning: “*I think they (her children, edited) have learned something, and that is definitely a part of what makes it fun to talk about on the way home. Instead of just "it was a fun ride in the carousel", it is "think of what happened there"*” (Appendix 3.5). The interviewee Ane also expressed that she enjoyed the new found point of reference with her children: ”*(...) for me, such an experience is a point of reference we have together, and the next time we experience something like "So, now we have turned on the radiator because it is getting cold", we can recall on the use of solar-power to get hot water. In that way it creates some reference points in our everyday life*” (Appendix 3.6). These examples illustrate the social context of the experience and how the experience will be a conversation subject and a new point of reference within the family. A visit to the Experimentarium seems to fulfil the motivation of belonging in a social context and provides the opportunity to rise above social equilibrium.

#### **4.5.4. The Learning Element**

The massive learning elements in the experience at the Experimentarium will necessarily have an affect on the consumers, and this section will analyse and discuss how the consumers are affected by the learning element.

There is a considerable difference on how adults and children perceive the experiences offered at the Experimentarium, which is partly because they conceive knowledge and new information differently, as presented in Section 3.1.9. The great openness of the children based on their small amount of experiences through their relatively short life, and the aim of the Experimentarium to exactly affect the target group where these children belong, matches perfectly. The interviewee Christine emphasized the difference in the perception, but did not think of it as something negative: “*Maybe we (the children and the adults, edited) see the same things, but I believe that the adults get something different out of it than the children, but not in a bad way*” (Appendix 3.3).

As defined earlier in Section 1.4, gaining new knowledge or insight is the precondition of a transformation, and even though the respondents have expressed the need and desire to gain new knowledge, it has been very difficult to measure the effect of the learning occurred at the Experimentarium. In the face-to-face survey the respondents were asked directly if they had learned something during their visit. 60 % answered “yes” (Appendix 2.2, Q11), but in all cases the respondents had a hard time expressing exactly what they had learned from the exhibits. The interviewee Ane expressed in regards to learning: “*...I think it is difficult to specifically express what you have learned*” (Appendix 3.6), and when asked if she thought that her family had gained some knowledge at the Experimentarium but had a hard time expressing it, Ane answered: “*I definitely think so. There are many different learning-steps and things that you not are able to express and the meaning is not always explicit*” (ibid). The interviewee Malene described when asked the same question, that it was difficult to express on the spot what they had learned, but that the learning outcome probably would come up to the surface of their minds in a given situation when relevant: “*I think it could easily be the case, that I suddenly find myself in a situation and think "God yes, it was exactly this way it worked at the Experimentarium" or as they showed us out there, it was really well explained and now it all makes sense.*” (Appendix 3.5). Because the learning has occurred through fun and entertainment, the visitors do not seem to have realized what they have learned, and as Malene expressed, they probably will not realize until it becomes relevant in their everyday life. As presented in Section 4.4, the learning is disguised by the entertainment at the Experimentarium, and seems to happen and being absorbed unconsciously. In the face-to-face survey the respondents were asked to rate on a 5-point Likert-scale how interested they were in the field of natural science before and after their visit at the Experimentarium. The respondents were in general relatively interested in the field of natural science before their visit and the average interest were rated as 3.2 (Appendix 2.2, Q17). The survey showed that this interest had increased during the visit and the respondents rated their interest after the visit as 3.9 in average (Appendix 2.2, Q18). An internal Experimentarium visitor survey from 2012 among 10.000 respondents, asked the visitors to what extent their interest in natural science had increased during their visit. The average response was 4.6 on a 7-point scale (reported by Asger Høeg), and these numbers support the results from the face-to-face survey. Obviously, the consumers and their interest are affected in a positive way and their preferences seem to have changed in favour of natural science. It is difficult to track specific evidence of learning outcome and transformation but there has been an increase in the interest of the

respondents. Since the respondents were rather interested in science already before their visit, the increase can only be relatively small. This illustrates that the average visitor has a remarkable interest within natural science to begin with, which is the foundation of their curiosity and pointed out by the interviewee, Ane: “*I think it is more obvious to visit the Experimentarium if you have an interest and a horizon within the scientific field than if you don’t...*” (Appendix 3.6).

### **The Time Perspective of Learning**

The time perspective of transformations is important as it seems that transformations often takes time to settle and reach a level of consciousness within the individual. There was a clear difference in the answers from the respondents interviewed at the end of their visit at the Experimentarium, and the answers of the respondents interviewed four days after their visit.

Christine and Christian, who were interviewed at the end of their visit, had a hard time expressing the outcome of their visit and they had no idea whether the experiences and learning from their visit would have an effect on their everyday life pointing forward. They had not had the time to actually take a position towards their visit and reflect on their experiences yet. When asked whether she thought the visit and experiences would have an effect on their everyday life pointing forward, Christine replied: “*That is hard to say, I don’t know*” (Appendix 3.3).

Contrarily, the interviews with Ane and Malene four days after their visit were far more substantial, and they had had the time to think about their experience as well as time for the experience to settle. Their replies were more serene and reflected, and they seemed to have taken a more conscious stand towards their visit and the outcome of their experiences, and how it most likely would affect their everyday life pointing forward. When asked whether she believed that you learn something at the Experimentarium, Ane replied: “*I most definitely think so, but there are many learning steps and stuff you can’t attach words to, but which still possess a great deal of understanding that is not that explicit*” (Appendix 3.6). Malene replied to the question whether the things they had learned during their visit at the Experimentarium were likely to affect their everyday life pointing forward: “*It will indeed be something that will come up again*” (Appendix 3.5). Malene gave an example of a situation where the learning from the Experimentarium could be relevant in their everyday life: the wasted use of energy when you leave the light on compared to the how hard it was to produce energy when the children tried the wheelchair. Ane had furthermore reflected on the general effect of the experience: “*I believe it provides a*

*consciousness of different opportunities, but I don't think it necessarily will make us change our lives. It is not a life changing experience to visit the Experimentarium*" (Appendix 3.6).

This overall difference between the interviews conducted respectively during and after the respondents' visit to the Experimentarium indicates that a transformation needs time to settle in the minds of the consumer, and sometimes they are not even aware of their own transformational process until it becomes relevant in their everyday life. The interviewee Malene expressed: "*We hadn't even reached Tuborgvej before Villads (her son, edited) slept on the back seat*" (Appendix 3.5). This quote emphasizes the fact that people are often tired and exhausted when they leave the Experimentarium after a day of fun and lots of activity, and they have not had the time and capacity to evaluate and reflect on the experience yet. This example further supports the argument that the experience and possible transformation need time to settle in the minds of the consumers, before it reaches a level of consciousness, relevance and awareness.

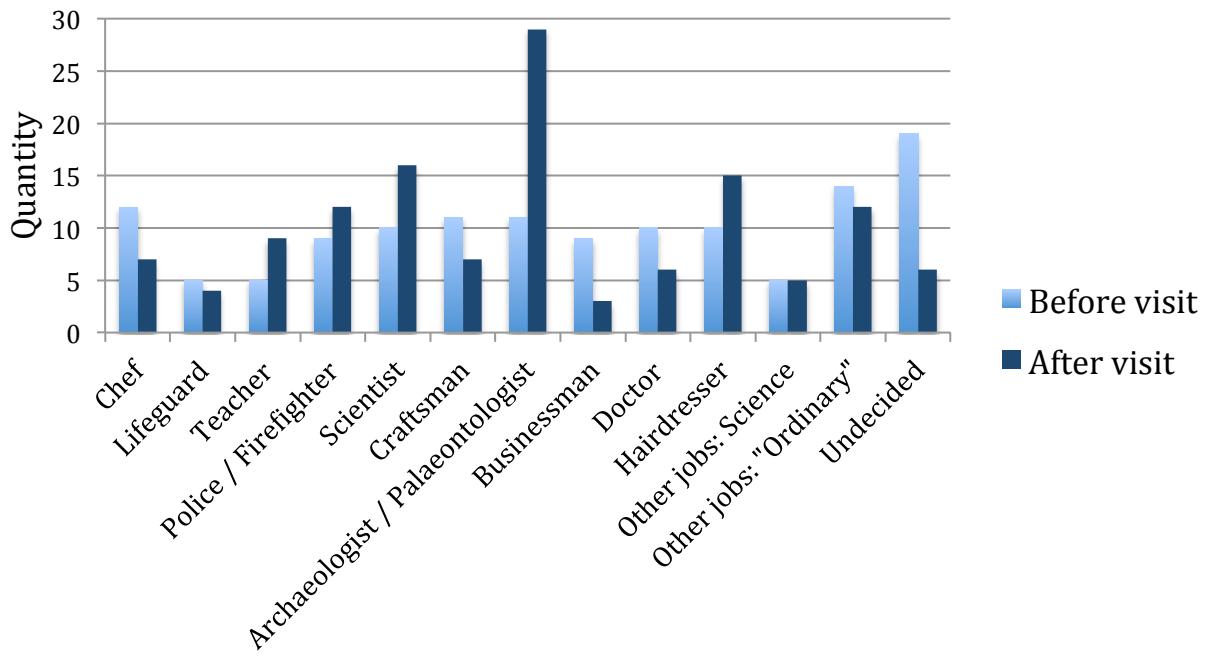
Meanwhile, the survey where children were asked "What do you want to become when grow up?" revealed a rather instant change in preferences which indicates an instant transformation, and this will be elaborated in the following section.

#### **4.5.5. Findings in the Study: "What do you want to become when you grow up?"**

Children are more susceptible to external influences due to their little amount of experiences in life, and Knowles (1970) argues that children's self-identity is largely derived from external sources. Hence, I estimated that a study among the children visiting the Experimentarium would be interesting. Since transformations are a concept that even adults have troubles to comprehend and verbalize I needed to make the research simple for the children to understand. 260 children in total were showed pictures of ten different professions, one day just as they were entering the Experimentarium and another day just as they were leaving and asked to chose what they wanted to become when they grow up (Appendix 4).

This study revealed a significant change in the children's preferences within the profession of Archaeologist/Palaeontologist before and after a visit, which is illustrated in Figure 4.1.

**Figure 4.1:** What do you want to become when you grow up?



*Source: Appendix 4: “What do you want to be when you grow up?”*

The change in preferences is a natural deviation when you investigate different populations, but the change within Archaeologist/Palaeontologist (from here referred to as Archaeologist) is 163.6% (Appendix 4.2). The three professions with the most significant percentage increase were Archaeologist, Scientist and Teacher, which are all professions that to some extent are related to the content of the Experimentarium. The profession “teacher” has the weakest connection to the Experimentarium, but since the learning element is an essential part of the experience at the Experimentarium I argue that it can inspire young children to wanting to teach others. The professions “Scientist” and “Archaeologist” both have strong and direct connections to the offered experiences and reminiscence to professions introduced at the Experimentarium. The “Scientist” is quite similar to the guides in the shows “In to the physics” and “Kitchen chemicals” and the “Archaeologist” are in direct line with the exhibition “Dinosaurs – Follow the trail”. An exhibit in the dinosaur exhibition is an area where children can be palaeontologists and excavate fossils from limestone, and this seemed to be a great success among many respondents in the face-to-face survey. The change within the preferences of children wanting to become an Archaeologist is the only significant change, and indicates that a transformation may have occurred within the children. The most significant shifts have occurred in favour of the professions relating to the experience at the Experimentarium and I argue that some kind of transformation have happened

among these children, since the new knowledge provided has given them insight and knowledge that have affected their preferences.

The size, validity, and long-term effect of this transformation can be discussed. Knowles (1970) argues in Section 3.1.9 that children are easier affected by experiences than adults are.

Nevertheless, a striking change has in fact occurred within the children, whether it is a permanent transformation or a perception of something being “cool in the moment”, and I classify this shift in preferences as a transformation.

It can be further discussed if the transformation is valid – do children really know what they want to become when they grow up? I am aware that the majority of the children will not end up to be archaeologists or scientists because they have much education and insight yet to come. However, this does not undermine the transformation that has occurred within the children and I argue that: “You do not stop being something, you just become something more”. Even though the children may change preferences on what they want to become when they grow up, it does not make the transformation from the Experimentarium less valid, but instead it builds new transformations and preferences on top of the already existing transformation.

#### **4.5.6. Findings in the E-mail Survey among Students of Physics**

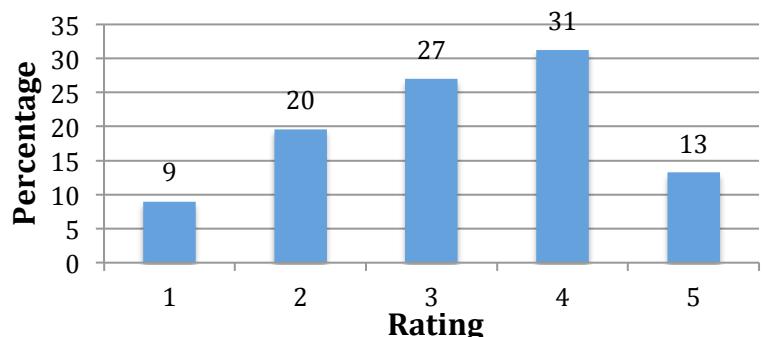
The mission and purpose of the Experimentarium are to increase the population’s interest in natural science as well as the number of people who will follow a career within science.

Kristensen (2009b) argues that this purpose is testable by asking students and candidates who have such scientific careers whether they made the particular insights at the Experimentarium. If the Experimentarium has a transformational effect on the visitors, it would be possible to test this by asking students within a field of natural science whether they actually gained interest in this field after a visit to the Experimentarium as a child and if the visit in some way has influenced them in their choice of education. The survey was E-mailed to the entire physics department at the University of Copenhagen and 92% of the 232 respondents had visited the Experimentarium and 43% had been there five or more times - see Appendix 5 for details. The survey revealed that the Experimentarium had had a positive influence on the respondents’ interest in the field of natural science and a small but yet existing impact on their choice of education.

## Influence on Interest

The respondents were asked to rate to which extent the Experimentarium had increased their interest in the field of natural science, where the rating 1 was to a very small extent and 5 was to a very great extent. 83% of the total number of respondents indicated that the visits to the Experimentarium had increased their interest within the field of natural science in some extent. Figure 4.2 illustrates the distribution of the ratings, excluding the 11% of the total population who either answered "No", "Do not know" or "I haven't been there". The respondents rated the extent that the Experimentarium had increased their interest in the field of natural science at 3.2 in average, and 71 % of the positive replies rated the effect medium (three) or

**Figure 4.2:** To what extent have the Experimentarium increased your interest in natural science?



Source: Appendix 5.2 – E-mail survey

higher. Many of the respondents stated that the visits had established and confirmed a natural curiosity to the world surrounding them, and that their interest in science was increased through the fun of their visit at the Experimentarium: "*It visualized a lot of physics and made it more tangible and fun to play with. Not that I had a big prior knowledge as a child, but it awakened a clear interest for me to see and play with things and get an actual explanation of what was going on*" and "*There are a lot of awesome experiments that you can touch and play with. It is like a giant playground where you simultaneously learn a little bit about everything. It is hard to distinguish physics as a child, but through play and experiments it has led me to learn more about how the world works and why*" (Appendix 5.2).

Visiting the Experimentarium seems to have affected and change the perception of science among many of the respondents and thus increased their interest in the world surrounding them at a young age through fun and play. The respondents also accentuate that the visit to the Experimentarium has managed to show them that science and physic are not just tedious subjects that you learn about in school by facilitating theory into reality through entertainment. This is supported by further comments: "*The Experimentarium affected my interest in science as a child*

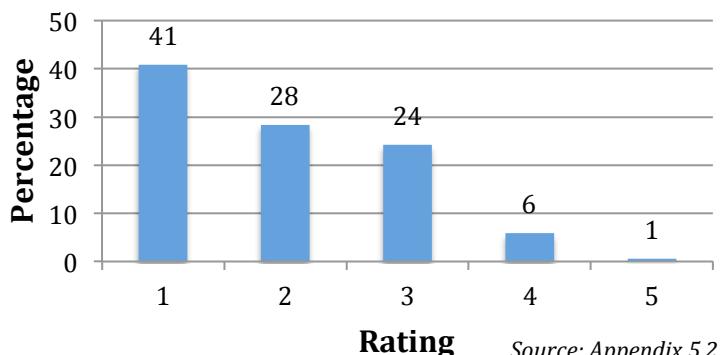
(7-14 years) by presenting scientific phenomena in an exciting and "play-like" manner that showed me that science is not just dry and long books, but actually is exciting, mysterious, and full of surprises" and "It is an inspiring, interesting and alternative way they manage to communicate natural science and they have something for all ages. You get an idea of how all the theoretical physics you cram on in the education can be used/applied in the real world" (ibid). It is clear that visits to the Experimentarium have had a significant and positive effect on the respondents' interest in the field of natural science based on Figure 4.2 and the comments.

### **Influence on Choice of Education**

It was further investigated whether visits in the past had had an influence on the respondents' choice of education, and it was clear that the impact was small compared to the effects on the respondents' interest within the field. When the students were asked whether visits at the Experimentarium had influenced their choice of education, 17% of the total population answered "No", 3% answered "Do not know" and 6% answered "I haven't been there". The remaining 73% indicated that visits at the Experimentarium had influenced their education choice in some extent. Figure 4.3 illustrates the distribution of the ratings, excluding the 26% equivalent to the above-mentioned.

The results are more modest than the previous results regarding the affects on the interest. The Experimentarium has to some extent influenced 73% of the total number of respondents in their choice of education, and the average rating is 1.97, which is remarkably lower than the 3.2 average rating above in regards

**Figure 4.3:** Have the Experimentarium affected your choice of education?



Source: Appendix 5.2  
- E-mail survey

to the effect on interest. 31% of the positive replies rated the effect the Experimentarium had on their choice of education as medium (three) or higher, and one respondent answered that the visit at the Experimentarium had influenced his choice of education to a very large extent.

The effect on the respondents' choice of education is little or indirectly and many other factors seem to have played a much bigger role in their choice of education. The following quote from

Appendix 5.2 support this: “*The Experimentarium may have influenced me to become more interested in physics/chemistry in elementary school. Indirectly, this could have been a part of the reason why I chose physics at A-level in high school (if I had a choice). I believe, however, that the teaching in high school by far has had the biggest influence on my choice of education*”. This comment illustrate that the visit at the Experimentarium has increased his interest in natural science, but other factors have influenced and played a much bigger role in the decision to study physics, which the following comment illustrates as well: “*It has made physics (and other science) interactive and playable, and at the same time my curiosity towards science was satisfied, and physics appealed to me extensively as a child. At the same time it was a thing I did with my family, which made the experience even more positive (play and science was something we did to have fun). It has primarily inspired a curiosity within me as a child, but I do not know how much it actually influenced me, because I think that i.e. my teachers and my parents' attitude towards science have had a much greater influence*”. 7% of the positive replies rated the influence of the Experimentarium as 4 or higher, which implies that the visit had had a great or very great influence on their education choice. The following comment emphasizes this: “*A visit to the Experimentarium in elementary school increased my interest in geology and palaeontology. Later this affected my choice of elective courses in high school, where I finally decided to study physics at the university*” (Appendix 5.2). The increased interest in science among the respondents is deriving from a natural curiosity that a visit manages to awake and stimulate, and this curiosity seems to be a drive for many of the respondents: “*The Experimentarium is a fantastic facilitator to communicate science to children and adults, and for me it was mainly the curiosity that the visits awakened that may have influenced my choice of education. It is still the same childish curiosity, wonder, and joy that keep me to my choice of education*” (ibid).

Although the overall response indicates that the visit to the Experimentarium have in some extent influenced the respondents’ choice of education, the effect is not as significant as the increase in their interest in the field of natural science in general. This is not peculiar as there naturally are many other factors that have influenced the respondents in their choice to study physics, which seems to be mainly parents and teachers. In general, it is impossible to measure and determine a direct connection between experiences in the childhood and decisions in the adult life, since many transformations and influences have occurred in the meantime and thus “disturbed” the potential connection. However, it is important to emphasize that it is not just a “success” if young children

are inspired to choose an education within the field of science. It is just as great a success if the Experimentarium manages to increase children and adults' overall interest in science.

The survey reveals that the Experimentarium has managed to form the foundation for 89 % of the respondent's interest in the field of natural science. This is a great accomplishment and indicates that some kind of transformation has happened within the respondents based on their experience at the Experimentarium. The fact that one of the respondents even believes there is a very strong connection between childhood visits and his choice of education is an unambiguous sign of a transformation.

This study indicates that visits to the Experimentarium have been inspiring and maybe even a transformational experience for many of the respondents, especially those who indicated that it had had an influence on their choice of education. Finally, it is argued that although the majority of the respondents do not believe that visiting the Experimentarium has had an effect on their choice of education, their interest has been significantly affected as illustrated in Figure 4.2. This implies that the Experimentarium has nudged them in the direction of natural science. It is impossible to measure any unambiguous connection between visits at the Experimentarium and choice of education, since numerous other insights and external influences has had an affect as well, but the survey reveals a positive connection.

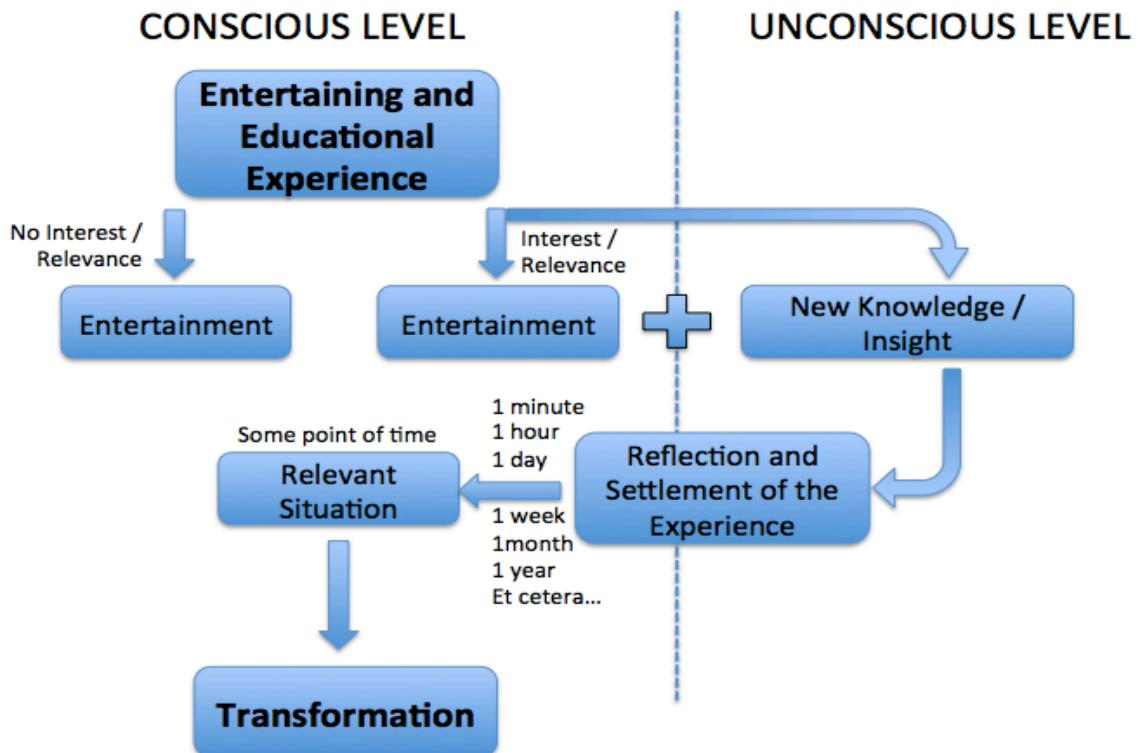
I chose to conduct the survey among physics students, but I could just as well have chosen or included other professions of science that are related to the Experimentarium. Meanwhile, I had to delimit the extent of the research.

#### **4.5.7. Introducing the Model of Transformation**

Based on the theoretical framework and the findings in the empirical research on how the consumers are affected by the offered experiences at the Experimentarium, I have developed Figure 4.4 as an illustration of my findings.

Overall, the figure illustrates that learning in terms of new knowledge and/or insight becomes transformational when the individual in some point in time realizes the essence of the learning. The awareness and consciousness of the outcome of an entertaining and educational experience will not necessarily occur instantly, but can take days or months before it reaches a level of consciousness, often combined with a relevant situation which will lead to a transformation.

**Figure 4.4:** The Transformational Process



An individual can engage in an entertaining and educational experience at the Experimentarium or any other cultural institution, and if the experience does not have any interest or relevance, it will at the best just be purely entertaining at a conscious level.

If the experience is interesting and/or relevant to the individual, he will still have the consciously entertaining experience, but he will also gain some new knowledge or insight in an unconscious level because of the education element. As argued in Section 4.4.2, the entertaining part of the experience will often seduce the consumer and dominate the experience, and hence leave less room for processing and reflection on the new knowledge gained. In other words, the obvious offering is entertainment, and the educational offering is disguised in the act of playing and entertainment. A respondent from the face-to-face survey explained how he believed the new knowledge gained during the visit had affected him: *"It may not have sunked in and registered in my mind yet, but I guess you always become affected when you learn something"* (Appendix 2.2, Q13).

The new knowledge or insight will remain in the subconscious, until there is time to reflect on the experience and letting it settle. This will make the experience more conscious, without reaching a level of complete consciousness though. Finally, after minutes, weeks or even years, a situation can occur where the initial experience and the knowledge and insight it has provided becomes relevant. This implies a match between knowledge and relevance and will lead to a transformation in a conscious level. So, the initial experience is transformational, but the actual transformation may not occur at the same time as the experience. There is furthermore no guarantee that the relevant situation leading to a transformation will occur.

The model illustrates that the relevance and consciousness of a transformational experience do not always emerge instantly, and this is supported by the findings in the empirical research. Relevant learning is very likely transforming, but the transformation will not occur until the need and relevance occur. In other words, what you have learned is often not realized until it is required and relevant.

#### **4.5.8. Partial Conclusion**

Based on the extensive empirical research on the learning and transformation outcome and the equivocal indicators of transformations, I have developed Figure 4.4 on the process of transformation. The figure illustrates the unconscious learning element of the experience disguised by the conscious entertainment. The learning outcome has to settle in the mind of the consumer and a relevant situation usually has to occur before the experience and learning outcome reach a level of consciousness and a transformation happens. This may take hours, months or even years.

The only sign of unambiguous transformation is in the survey on “What do you want to become when you grow up?” but several other signs and fragments of transformations have indicated that transformations have or will occur among the visitors. The survey conducted among physics students revealed that visits at the Experimentarium in the respondents’ childhood have had a significant effect on their preferences and interest in natural science, and even an effect on some students’ choice of education, and hence that a transformation has happened.

The empirical research in general have revealed that a kind of transformation does happen within many of the visitors at some point, and that the experience at the Experimentarium affects the consumers’ interest within the field of natural science in a very positive way. The consumers seek more or less consciously an element of learning and new insight when visiting the

Experimentarium, although their primary motive is entertainment and fun with their families. Since learning and new insight is one of the most important and dominating elements of transformations the consumers more or less indirectly seek transformation.

#### **4.6. RQ 3: How can involving and engaging the target groups in the experience through co-creation intensify the transformational process?**

The aim of this section is to analyse and discuss how the Experimentarium can intensify the transformative process by involving and engaging the target group. In this section I present measures that will further involve and engage the target group in the experience at the Experimentarium and thus intensify the transformative process, in terms of active learning, immersion and reflection, and co-creation.

##### **4.6.1. Active Learning**

The learning element is one of the most important parts of the experience at the Experimentarium, and the precondition for arranged transformations. Kahr-Højland (2006) categorizes the learning experience at the Experimentarium as being in between school and amusement parks, in a category she defines as a semi-formal learning setting. This semi-formal environment implies that consumers can relax more in the learning process and chose themselves what they what to learn, contrary to the very formal education in schools and contrary to the absence of learning in amusement parks.

Transformations presuppose that the individual in question understands and remembers the presented new knowledge or insight. Active learning is a proper tool to intensify the transformational process as the consumers are engaged and involved which increases the learning outcome. The essence of active learning is for the individual to do meaningful learning activities and reflection about what they are doing (Prince, 2004:1) and an old Chinese saying emphasizes the benefits of learning by doing: "*I hear and I forget, I see and I remember, I do and I understand*". This Chinese saying is supported by Dale's "Cone of Experience" (1969) that emphasizes that the more actively the consumers can engage in the learning process, the more they generally remember and the more they are able to analyse and evaluate the learning outcome as the learning outcome increases. Boswijk et al. (2007) explains the essence of active learning

very tellingly in Section 3.1.9: “*One learn the quickest by experiencing the problem*”, and this is exactly the case at the Experimentarium: you experience the phenomenons of natural science and learn through these experiences. An important notion is Dale’s (1969) argument, that the greater a combination of the concrete and abstract learning methods the better the opportunity to have a rich, deep and broad experience and understanding. So, although active learning commonly increases the learning outcome, it should be combined with more passive learning methods, such as watching a video or a demonstration, or hearing about a field of science, in order to stimulate the individual in different ways and to broaden the experience.

The interviewee Malene took a positive stand towards the increased learning outcome of active learning when she was asked if she thought that her children learned more by the hands-on experience at the Experimentarium than if they had read the same in a book: “*Yes. I cannot imagine how they would get through the same amount of knowledge by reading a book without losing interest*” (Appendix 3.5). Both Malene and Ane stated that they believed the knowledge their children had gained would pop-up again in a situation where it becomes relevant, and they both highlighted experiences where their children were very actively participating i.e. the solar panel. These statements correspond with the model on the transformational process presented in Figure 4.4 that the gained knowledge likely will revive in a relevant situation and lead to a conscious transformation.

### **Active Participation and Learning Outcome**

Many respondents expressed appreciation towards the fact that they had to be active together with their families. When the interviewee Ane was asked why she took her children to visit the Experimentarium instead of other cultural institutions she answered: “*It is definitely because of the opportunity to play with science and to be active with them (her children, edited.), compared to more traditional museum environments which are much more passive*” (Appendix 3.6). Kolb (1984) refers to this type of learning as experiential learning in Section 3.1.9, which is the process of making direct meaning of and learning from an experience, by involving the individual. You learn through experience, observation and interaction with the environment at the Experimentarium.

Table 4.5 illustrates the coherence between active participation and learning outcome based on the arguments that the more actively you participate, the more you will learn and remember. In the face-to-face survey the 53 respondents were asked to rate on a 5-point Likert-scale how actively

they had participated in the experience and to what extent they believed they had learned something new. The rating 1 is in a very small extent and the rating 5 is in a very great extent.

**Table 4.5:** Learning Outcome vs. Active Participation

To what extend to you believe that you have learned something new today?	How actively have you participated today?				
	Rating	1	2	3	4
1	1 1,9%	1 1,9%	1 1,9%	3 5,7%	1 1,9%
2	1 1,9%	5 9,4%	3 5,7%	3 5,7%	3 5,7%
3	0 0,0%	4 7,5%	6 11,3%	6 11,3%	4 7,5%
4	0 0,0%	2 3,8%	1 1,9%	3 5,7%	4 7,5%
5	0 0,0%	0 0,0%	0 0,0%	0 0,0%	1 1,9%

*Source: Appendix 2.2: Face-to-face survey, Q15+16.*

The table illustrates the connection between the two questions regarding participant activity and learning outcome. The two numbers in each field are respectively the number of respondents answering that specific combination and the percentage share of that combination of the total population of respondents. The fields marked with dark blue are the fields with the highest percentage share, decreasing with the colour “decrease”. Active participation rated 3.5 in average, and the extent the respondents felt they had learned something new rated 2.7 in average (Appendix 2.2, Q15+16).

There seems to be a vague connection between the two questions, as the learning outcome increases along with the activity increase. 47.1% of the 53 respondents in the face-to-face survey rated both their activity level and learning outcome as three or higher, and 20.8% believed to a higher extent that they had learned something new (Rating 4 or higher). 52.9% stated that they had been active or very active in the experience (Rating 4 or higher), but nevertheless 13.3% of the respondents indicated that they had learned very little (Rating 1) from the visit at the Experimentarium. This is not consistent with the theory on active learning, but an explanation to this, in addition to the fact that the experience had not had time to settle at the point of the survey, could be that the face-to-face survey only included adults. As already presented in Section 4.5.4,

many of the adults in the survey believed they already knew most of the learning offered at the Experimentarium, and adults naturally possess a greater knowledge than children. Others were more enthusiastic towards the learning outcome, which the following quote from the interviewee Malene illustrates: *"To me it is certainly fun to gain new knowledge, and I think that it is fun for the oldest boys to gain a basic knowledge of things and why they work as they do"* (Appendix 3.5). The adults may know much of the things presented already, but at the Experimentarium the learning is facilitated and presented in a fun and understandable way which is tangible and explicable and appreciated by many including Malene.

These indications support to some extent the theory on active learning and Dale's (1969) cone of experience, but I am not able to say anything in general based on the survey, as the validity is questionable and not significant. An important notion in regards to learning is Knopp (2006) who emphasizes that the majority of learning processes are unconscious (Section 3.1.9), and Prince (2004) who points out that one of the significant problems of valuation of effectiveness in regards to active learning in general simply is that the learning outcome is difficult to measure, and this supports the difficulty of measuring and defining transformations. The empirical research indicates that the gained knowledge and the transformation it possibly will lead to, will not be conscious until the respondents find themselves in a situation where this knowledge becomes relevant and useful, which my Figure 4.4 exactly illustrates. This situation may occur after a minute or after several years or it may not occur at all, and exactly that makes the learning outcome extremely difficult to measure.

The Experimentarium offers many elements of active learning and this type of learning is an excellent way to involve and engage the consumers in the experience. When the environment is semi-formal and the consumers are free to do whatever they feel like, active learning methods will intensify the transformative process as the consumers will remember more of the elements taught, although the learning initially often will be unconscious.

The following section will analyse and discuss the concept of co-creation, which is another very active form of customer participation that, combined with the elements of active learning, could intensify the transformative process.

#### 4.6.2. Co-creation

The concept of co-creation is open-ended experiences where the consumers are participating in creating the experience themselves, and the experience is therefore different every time although the content is exactly the same. I have already introduced LEGO as a perfect example of co-creation, where the same simple bricks can lead to different outcomes and experiences every time. In regards to the Experimentarium, co-creational experiences will reduce the need for renewal and replacement since the individual can approach the same thing from many different perspectives, and thus will not be bored or able to see through the purpose. According to Prahalad & Ramaswamy (2004) the consumers must have the opportunity to personalize and co-construct their own experience, and the Experimentarium should efficiently develop experience environments that can facilitate a variety of co-creational experiences. In other words, the Experimentarium must provide the frames, in which the consumers can do what they want and need. This will secure that each individual gets the “perfect” experience every time where the challenge align the individual set of skills, and this will intensify the transformational process and reduce the expressed need for renewal in the exhibitions.

The concept of co-creation is very similar to the escapist realm introduced by Pine & Gilmore (1999), which is characterized by complete immersion and active participation. The Experimentarium already offers some escapist experiences as presented in Section 4.4.2, and implementing more co-creational elements will further develop the escapist experience and take it to the next level of joint creation and immersion. Co-creation experiences is valuable to the consumers and since transformations are build on experiences, a transformation is more likely to happen when build on a co-creational experience, since this respectively implies a greater learning outcome, and a more exact fulfilment of the individual needs. The more consumer activity and the more learning by doing the more the individual will understand.

Some of the respondents expressed a specific request to be more involved and engaged in the experience and this need for self-direction and influence corresponds with the need for self-actualization, presented in Section 3.1.2 on Maslow’s hierarchy of needs. Offering more co-creational experiences can fulfil people’s need for influence, individuality and the satisfaction of actualizing one’s potential.

One respondent directly expressed a demand for creating his own experience when asked what could have made the experience better: *“It lacked some co-creation, something that you could create yourself and instead of just pressing a button and see a reaction”* (Appendix 2.2, Q31).

The interviewee Ane also expressed a demand to create something new: “*I would like some “Ole Opfinder”-type of experiences, something you are able to tamper with and some anatomical things to look at where you are able to do something that would create a different output. This way you will get the satisfaction of having been a part of the creation of the experience*” (Appendix 3.6). Ane further expressed that many exhibits at the Experimentarium are one-dimensional and that they only have *one* function. Instead, she would like if the Experimentarium implemented the LEGO way of thoughts to enrich the experience: “*More like Storm P, where you are able to add something new so the dimension of the experience becomes “I have created something” instead of “I have done what I was supposed to do*” (Appendix 3.6). Adding more elements of co-creation at the Experimentarium could intensify the transformative process and oblige some of the consumers’ request of being more involved and engaged in the experience. When the consumers can decide themselves the extent and degree of difficulty in the experience, the flow will be optimal, since the individual can construct an activity where the challenges match their level of skill. The virtuosity feeling will be positively affected as well. Implementing co-creation in the experience will furthermore create additional value for the customer as they will get a new experience each time, and this will minimize the need for renewal as the experience in the same exhibit will be different every time. More co-creational elements can help to make the customers return more frequently, as the exhibits will appear less boring and transparent although the respondents might have seen them before. The consumer need for renewal will be further elaborated in Section 4.7.3.

Kolb’s (1984) Cycle of Learning presented in Section 3.1.9, describes the process of individual learning, and especially the two phases following the first phase of the “Concrete Experience” are relevant in regards to immersion and reflection. After learning from a specific experience, the individual undergo “Reflective Observation” where he reflects on what has happened and tries to understand why. This phase demands time and space, which according to some respondents currently lacks at the Experimentarium: “*We would have liked more time to immerse in the experience*” (Appendix 2.2, Q31). Kolb’s third phase of “Abstract Conceptualization” is the thinking phase where the individual logically analyses the experience and tries to evolve a theoretical framework based on the learning experience. This phase also demands time and space, and supports the argument that time and free space is needed at the Experimentarium in order to intensify the transformational process.

### **4.6.3. Partial Conclusion**

The motive and desire to visit the Experimentarium are smaller when everything appears unchanged, which is why co-creation is needed. The united experience can be intensified by optimizing the elements of active learning and by offering co-creational experiences. The transformational process can be intensified by implementing co-creation and the consumers can construct the experience to match their individual level of skills, and thus increase the flow and feeling of virtuosity positively. The experience will be different every time within the given frames of creation, and the expressed need for renewal in the exhibitions will most likely be reduced.

Although active learning and co-creation will involve the consumers more and thus increase the possibility of a transformative experience, it is important to design and implement the right mix of co-creation, learning, entertaining and passive activity. Referring to the four realms, all senses should be stimulated during a visit to the Experimentarium, from passive to active participation and from immersion to absorption. It is crucial that the Experimentarium also focuses on offering passive participation where the consumers can relax and quietly reflect on their experience.

## **4.7. RQ4: How can a cultural institution differentiate through transformative offerings, and thereby establish preferences among current and potential customers?**

People of today find their basic and material needs fulfilled with greater ease than ever before, and that makes them seek more and more consumption of concepts and especially consumption of experiences (Ariely & Norton, 2009) . The selection of experiences on the market is wide and differentiated, and what I will explore in this section is how transformational offerings can function as a point of differentiation and establish preferences among the consumers.

The Experimentarium is unique in its content as well as in its offerings of transformational experiences, and I argue that the science centre has established a Blue Ocean, which will be elaborated in the following section.

#### **4.7.1. The Experimentarium in a Blue Ocean**

The Experimentarium as a science centre has for years been the only actor on the Danish market and I argue it has created a Blue Ocean, in terms of the creation of a new demand in an uncontested market area. The essence of a Blue Ocean strategy is when a demand has been created rather than struggled over, and a value innovation is created for both the customer and the company (Kim & Mauborgne, 2005). The Experimentarium crosses the conventional market segmentations and span aspects of amusement parks, museums and education which also characterizes the gesamt kunstwerk concept presented in Section 4.4.2. Science centres are not a new concept worldwide, but the Experimentarium was the first to open in Denmark, and the geographical focus of the thesis is Denmark.

The Experimentarium's only direct competitor is Danfoss Universe which, according to their website, is an experience park with living natural phenomenons, exiting technique and activities in relation to physical laws ([www.danfossuniverse.com](http://www.danfossuniverse.com)). Danfoss Universe opened in 2005 and is resident in Als in Jutland, which is more than 220 kilometres from Copenhagen. It is therefore not perceived as a nearby and obvious competitor.

Most experiences at the Experimentarium are unique and not to be found in other places, partly because they invent and design many of the exhibits themselves. The aim of the Experimentarium is procurement of natural science, in an entertaining and educational way, and the fact that they have created a Blue Ocean in Denmark is a considerable competitive advantage: they have the first mover advantage and were monopolistic until Danfoss Universe's opening in 2005, and their offerings and educational experiences can only be found in one place: at the Experimentarium! The key offering at the Experimentarium is *learning by doing*, which potentially will lead to transformational experiences.

I will not look further into the Experimentarium's creation of a Blue Ocean, as it could be master's thesis in itself, but the presentation of the Experimentarium in a Blue Ocean should clarify their market position and uniqueness.

#### **4.7.2. Differentiation and Clarification of the Brand**

In order for a cultural institution to differentiate regardless of the type of offering, it is crucial to make sure that the consumers understand the brand and the offering, and especially how the

company differentiates from the competitors in terms of what makes the offering unique and valuable. I will not look into the current branding and marketing strategy of the Experimentarium, but present suggestions on how the strategy can be optimized and adjusted, based on the findings in this thesis.

Although I argue that the Experimentarium has created a Blue Ocean and offers the consumers a unique opportunity for valuable transformations, the following section indicates that the consumers do not completely understand the brand and the unique offerings.

The slogan “Funnily enough, you get smarter” already illustrates the essence of the experience. In order to establish preferences among both current and potential consumers, it is important that the branding and communication of the Experimentarium clarify the unique and differentiated offer and convince the consumers that what they need in order to realize themselves and satisfy their natural and instinctive curiosity, is a visit to the Experimentarium.

### **Pricing**

Guiding of transformations is the ultimate offering according to Pine & Gilmore (1999) and is as differentiated and relevant to the customers as possible, which allows suppliers of transformations to demand premium prices. Meanwhile, three out of four of the respondents in the interviews perceived the entrance prices at the Experimentarium as way to high, and emphasized the prices as the reason why they did not visit the Experimentarium more than they did. According to Christine “*The children prices are insane*” and she emphasized that the adult prices also should be reduced (Appendix 3.3). Malene referred to the prices as insanely expensive compared to i.e. ZOO, and she further argued: “*When you are alone with four children it is not an expense you want to have again and again and I think that's a shame. I believe that many families with children are being cut off because of the prices*” (Appendix 3.5). The respondents’ opinion of the prices indicates that they do not share the perception of the Experimentarium as being as differentiated and relevant as possible, since they are not particularly willing to pay the premium prices demanded. When asked whether the entrance prices are a negative competitive parameter, Malene decidedly answered, “*Yes, it is*” (ibid).

The interviewees Christine, Ane and Malene commonly argue that the entrance prices were the main reason why they do not visit the Experimentarium more often, and the three of them also compared the prices at the Experimentarium with prices at ZOO and Tivoli.

I do not perceive the Experimentarium as direct competitors with ZOO and Tivoli as the experience they offer are quite different, but I argue they compete in regards to prices and when families face the choice of “What should we do next Saturday as a family?”. I argue that the Experimentarium to all intents and purposes has created a Blue Ocean, which is characterized by no direct competition. The closest direct competition to the Experimentarium is i.e. the Planetarium and the National Museum and of course Danfoss Universe if I look apart from the geographical limitation. Meanwhile, it seems like the interviewees perceive the Experimentarium, Tivoli and ZOO as direct competitors since they make strong comparisons. Of course they are aware of the many differences, but the price comparison indicates that they do not perceive the Experimentarium as being especially differentiated when facing the choice “What should we do next Saturday as a family”. This indicates that they do not understand how the Experimentarium clearly differs from its competitors, in regards to their unique and potentially transformative offerings.

#### **4.7.3. Transformed or Not?**

As defined in Section 1.4, once you have been transformed you cannot go through the same change again. In extent of this definition, I asked both the respondents in the face-to-face survey as well as the interviewees whether they would come again if everything at the Experimentarium were unchanged at their next visit. 72% of the respondents in the face-to-face survey replied “yes”, and so did the interviewees Christine and Malene, with the argument that “*You can come back another time and have a new experience by seeing the things you didn't see the last time you were here*” (Appendix 3.3) and “*It's a big and cool playground where we can just hang out and enjoy ourselves*” (Appendix 3.5). Meanwhile, 26% of the respondents would not come again if nothing had changed at their next visit, including the interviewees Christian and Ane. Christian argued: “*...if you know the purpose of the different exhibits, then the news value is gone after a few times*” (Appendix 3.4) and Ane explained “*As a parent I would get bored if my children ran towards the same exhibits again and again*” (Appendix 3.6). 86% of the visitors who responded “no” gave as a reason that they would like renewal and new exhibits, and one respondent explained: “*Something new must happen because now we have tried the things that are currently here*” (Appendix 2.2, Q27). So, the empirical research reveals a division of visitors who perceive the Experimentarium as a fun and educational playground where they would like to return to even if everything remain unchanged, and a smaller part of the visitors who will only come back if the

exhibits change from time to time. The three interviewees, Malene, Ane and Christine all said that if they lived closer to the Experimentarium they would most likely have season tickets and come more often to play around, and one of the respondents in the face-to-face survey explained as the reason why they were at the Experimentarium "*We live in Hellerup and have season tickets so we use the Experimentarium as a playground*" (Appendix 2.2, Q18).

This difference in perception of the offered experiences is very interesting, and the question is whether you care to experience the same experience again if it already has transformed you. There is the possibility that an individual who have been transformed either will find it boring to experience the same experience once again, or alternatively that the individual just will perceive the experience in a new perspective and dimension, and thus still find the experience interesting. It can be argued that those who want to come back to the Experimentarium without requesting renewal have not been transformed since transformation implies irrevocable change, new knowledge or insight within the given task, and if you already know the outcome of the experience it will not appeal to you in the same degree anymore. Since the unchanged exhibits still appeal the majority of the consumers there is a possibility that they have not been transformed but just entertained, and they might perceive the Experimentarium as primarily a playground. Alternatively, those people who want to revisit regardless of renewal may have been transformed, but they fancy the Experimentarium and its offering so much that they do not mind experiencing the same thing over again - next time they will experience some of the exhibits in a new perspective and dimension as a result of their transformation. The interviewee Christine explains her wish to revisit the Experimentarium even though nothing has changed very reasonable: "*You can come back another time and have a new experience*" (Appendix 3.3). This response implies that even if you have been transformed you will just perceive the exhibits in a new light at your next visit and thus have a new kind of experience.

It can also be argued that those who do request renewal have been transformed because now they recognize and see through the experience, and thus their needs has changed towards something new and unknown. The interviewee Ane argues in regards to her request on renewal: "*Q: Why do you want new things at the Experimentarium? In Tivoli there are rarely new things at all. A: That is exactly the point, that there is a learning perspective at the Experimentarium, because Tivoli concerns something totally different*" (Appendix 3.6). Malene explained in regards to renewal: "*If there was a constant renewal I think it would lead to us visiting again and again within the*

*same season*" (Appendix 3.5). Alternatively, the visitors at the Experimentarium might just feel they have seen what there is to see, but I argue that the learning and transformation perspective is an important element in regards to why some of the visitors request renewals.

### **Why Renewal?**

Since I have not been able to define unambiguous signs of transformations, I cannot determine why some people wants renewal and some people do not. People happily visit Tivoli over and over again although the content rarely changes. People also visit ZOO over again, but I argue that ZOO has some kind of learning element and a natural renewal in terms of the animals growing and the seasons changing. A reason can possibly be that where especially Tivoli and to an extent also ZOO only offers entertainment, which rarely will have a sustainable effect on your worldview and insight, the Experimentarium offers not only entertainment but also knowledge and insight that can affect your worldview. This is emphasized in the just presented quote of the interviewee, Ane: "*...there is a learning perspective at the Experimentarium*".

The question remains whether transformations and the lasting effect is actually good for business if consumers decline the experience that has transformed them until something new happens when what the company really want is establishment of preferences and revisits. Pine & Gilmore (1999) argues in regards to transformations: "*By staging a series of experiences, companies are better able to achieve a lasting effect on the buyer than through an isolated event*" (Pine & Gilmore, 1999: 165) . But if the lasting effect implies "rejecting" some of the customers since they will not come back until some kind of renewal has happened, then the offering of transformations seems questionable for business. All this is pushing it to the extreme, but I believe that the essence of this question is relevant and the argumentation strengthen the recommendation that constant renewal or co-creation is needed in order to continuously attract the customers and stimulate their curiosity.

When asked what it would take in order for the entrance prices at the Experimentarium to be worth it, the interviewee Ane replied: "*There should be more renewal, and there should be more exhibits that inspires to spend more time each place.... I think it lacks the possibility for immersion*" (Appendix 3.6). Ane requested more innovative and creative challenges and wish for more exhibits where the children can create something or chemical assignments with the opportunity to mix your own physical experiment. "*Exhibits where you can do something your self and affect something and get something out of it where you have the experience of being an*

*important part of the outcome. I wish for more of those kind of things*" (ibid). A respondent in the face-to-face survey also requested more co-creation, when asked why the united experience was not rated five: "*We needed some more co-creation, something where we can be a part of creating something ourselves and not just push a button and see something happen*" (Appendix 2.2, Q31). The concept of co-creation seems to be exactly what the respondents wish for. I argue that renewal and co-creation is important future focus areas for the Experimentarium in order to constantly attract the customers and offer them a new experience every time. Especially co-creational experiences are needed because it will offer the consumers a different experience every time, without the Experimentarium having to constantly replace exhibits and developing new ones. Most importantly, the Experimentarium must ensure that their brand and marketing communication display the opportunity for co-creating your own experience and how much they actually implement renewals. By doing this the customers will be aware of the possibility for new experiences and challenges every time, and the chance that they will revisit more frequently and establish preferences towards the Experimentarium will most likely increase.

What the branding and communication shall display is the educational offerings that can provide new insight and knowledge, as well as the unique environment that can stimulate and satisfy the natural curiosity and need for self-actualization. When the offering of fun, education and transformation is clear and the consumers truly understand the unique offering, they will most likely accept and understand the prices more than they currently do. The differentiated offering will potentially also establish preferences among the consumers towards the Experimentarium as not just an entertaining opportunity like Tivoli and ZOO, but as an educational experience that demands your involvement and active participation where you create your own experience!

According to Adler-Nissen (2012), 80% of the visitors at the Experimentarium are revisitors, but I have not been able to find any information on how frequently these revisits occur and how many of them have season tickets. The fact that people revisit is obviously a positive thing, but the frequency is just as important. I argue that by offering more co-creational experiences and making sure to clearly communicate the renewal of experiences in terms of co-creation, the frequency of revisits will most likely increase.

#### **4.7.4. Prolonging the Experience**

In order to further differentiate and create preferences among the consumers, the Experimentarium can prolong the experience and continuously activate the consumers even after

they have left the centre. The final and most challenging phase in Pine & Gilmore's (1999) suggested phases of the transformational process is *Following Through*. This phase concerns the experience *after* the consumers has purchased and consumed the experience and regards sustaining of the change the transformation has provided. By following through and prolonging the experience the Experimentarium can both attempt to sustain and support the transformational process which in Figure 4.4 is determined to last longer than the actual experience, but also potentially establish preferences and thus leave the centre "top of mind" within the consumers. When asked what she thought of the idea of the experience at the Experimentarium continuing after the actual experience, the interviewee Malene's response was very positive. She referred to an experience at "Ebeltoft Glaspusteri", where her children interactively blew and shaped their own glass vases and when they got home they received a mail with their work, which made a big impression. "*Technologically, it seems relatively easy to type in your E-mail and then receive the data from your visit, and they (her children, edited) would definitely think it is cool to have those data instead of having to remember it all and save it in their minds*" (Appendix 3.5).

By offering especially the children a follow up on the experience when they come home, the Experimentarium can both prolong the experience in a positive way and sustain the outcome of the experience, so that the children do not have to contain all the new found knowledge in their minds, as Malene emphasizes. The visitors, and especially the children, are often exhausted when they leave the Experimentarium after a day full of new impressions and unaccustomed and exiting experiences. Malene emphasized that her children instantly fell asleep on the backseat of the car the second they drove out of the parking lot, which indicates that the children were far to tired to reflect on the experience. By following up on the experience, extent the learning process and evaluate the learning of the visit, the Experimentarium can help making the experience settle and remind the visitors of what they have learned and experienced, and thus facilitate and catalyse the potential transformations. The consumers might have a hard time containing the massive experience and will most likely appreciate the backup and reminders of the day.

An opportunity for following through is a device that keeps track of the data collected during the visit as for example time and speed data from the wheel chair exhibit, and pictures from the infrared camera. As already suggested in Section 4.4.1, a smartphone is an obvious opportunity for an intelligent device that can help track data and secure the individual exhibition both during and after the experience. When the children are back home in front of the computer, they can recall and compare their data and maybe even further develop and explore it in new and relevant

interactive exhibits. By prolonging the experience and letting virtual consumption meet conceptual consumption i.e. online, the Experimentarium can offer even more interactive educational experiences and sustain the experience and support the transformational process. The prolonging of the experience can possibly be not just post-experiential, but also pre-experiential. It can involve the children in their next visit in terms of what they can do and learn, how they can approach the exhibits the next time and maybe even beat a previous high score. By prolonging the existing experience and maybe even focusing on future experiences, the following through-phase can help creating preferences for the Experimentarium in regards to the next “day out with the family”.

I will not look into the functions and elements of consumer behaviour, but I find it worth mentioning that when answering the question on who decided to visit the Experimentarium, only 21% of the respondents in the face-to-face survey replied that the children decided, 26% replied it was a united decision and 57% replied that the adults decided. So, the adults are the primary decision makers, but the children also seem to have a saying in the decision making which makes their opinion important as well. By creating preferences among especially the children through following up on their visit online, I argue that the opportunity for the children influencing the adults' decision making and thus their preferences will be affected positively.

#### **4.7.5. Preferences**

As presented in Section 3.1.11, utility is one of the primary driving forces when it comes to human motivation and behaviour. It is therefore crucial that the Experimentarium as a brand reflects the great utility, value and need-fulfilment it offers in terms of transformational experiences. The fact that situational factors such as the weather and even factors that are not related to the actual activity can influence the preferences of the consumers is impossible to control. However, Ariely & Norton (2008) emphasizes that people rarely have well-formulated preferences, but if the Experimentarium manage to establish a solid preference in the mind of the consumers, these preferences can potentially defeat the occasional fleeting situational factors. Ariely & Norton argue that people are often biased by memories of past behaviour, which makes good memories of the Experimentarium crucial. As Kahr-Højland (2006) argues in Section 3.1.11 the Experimentarium initially must get the visitors hooked, and afterwards hold on to them by establishing advantageous flow conditions that provides intrinsic awards.

In order to provide intrinsic awards the Experimentarium should aim for stimulating all senses and offer a mix of experiences in the sweet spot. To excite the consumers and to differentiate distinctively, the Experimentarium must also aim for provoking the consumers and their regular mind-set by i.e. introducing revolutionary exhibits, push the boundaries, be innovative and most importantly, cause surprise. By offering different and untraditional exhibits that are far from nice, polished and correct, the Experimentarium can further differentiate from the competitors and stimulate the curiosity of the consumers.

Curiosity is, as stated in Section 3.1.4, the driving power behind consumer motivation, and Kubovy (1999) argues that curiosity implies the preference for an environment that can satisfy it. Stimulating and satisfying the human curiosity is exactly what the Experimentarium offers through the combination of entertainment and education. If the consumers are fully aware of the Experimentarium as a place that can stimulate and satisfy their curiosity they will likely prefer the environment at the Experimentarium in front of alternatives more than they already do.

The brand must more effectively reflect the unique opportunity to widely stimulate and satisfy the natural curiosity of the consumers, as well as reflecting how the consumers can realize themselves as both good and educational parents, and at the same time extent their knowledge and insight on behalf of both themselves and especially the children.

Consumer preferences will be even more important in the future as we face a future where competition from other scientific centres will be far more intense than it has been until now. “The Blue Planet” is the new Danish Aquarium and will open in Kastrup in 2013, and the new Museum of Natural History in Copenhagen is scheduled to open in 2017. Also Carlsberg have plans of establishing a centre of experiences on the large Carlsberg soil (Adler-Nissen, 2012) .

Although I will not take the Experimentarium’s Strategic Plan 2013-15 into considerable account, the time is very appropriate for the Experimentarium to proactively prepare for the future competition, and expand the current offerings in an innovative and creative way aiming towards new dimensions, the sweet spot and the gesamt kunstwerk concept. By improving and innovating proactively, the Experimentarium can make sure not to be “the old place” when the new museums and centres opens, and instead hold on to their strong position as the first mover on the market with more than 20 years of experience.

#### **4.7.6. Children vs. Adults**

The respondents in the face-to-face survey were accompanied by an average of 2.25 children and the exhibits and environment at the Experimentarium is very child friendly. The official purpose is to focus on the younger part of the population and the brand and marketing communication of the Experimentarium is childish as well.

My empirical research is focused on adults except for the survey on “What do you want to become when you grow up?” and the reason for the adult-focus, contrary to the Experimentarium’s rather child focus, is based on the assumption that adults much more clearly can express their expectations, experiences and outcome of the visit. The Experimentarium is focused on children, but the children are accompanied by adults who usually also are the final decision makers which makes their meaning just as important. The adults in the face-to-face survey and interviews exuded a caring and focused attention towards their children and their experience and outcome, and seemed able to see things from the children’s perspective.

Small children will most likely perceive the Experimentarium as an amazing playground and as older they get, the more the actual learning outcome will increase. Children and adults perceive and learn in different ways, partly because of their different amount of experiences through their lifetime and their difference in faith and ingenuousness. Despite this difference, the exhibits at the Experimentarium seem to be appropriate for all ages because the outcome and understanding depends on the individual involvement in the experience. Adults may perceive an exhibit in one perspective, while children see other values and perspective in the exact same exhibit.

The branding of the Experimentarium could potentially focus more on the adults and the fact that they can learn something as well and have an experience of their own, instead of only be company of their children. 59% of the respondents in the face-to-face survey believed they had learned something new in an extent of three or more on the 5-point scale, which indicates that the Experimentarium also is interesting and challenging for adults. Based on this I argue that the branding and marketing should focus more on adults as well, and not just create an image and a brand towards children.

The Experimentarium is already child-friendly and many of the exhibits are interesting and challenging for adults as well. The Experimentarium should aim for being even more adult-friendly in terms of a selection of adult exhibits and adult space besides the already existing

exhibits. The Strategic Plan 2013-15 already seems to accomplish some adult selection, and it is important for the branding to reflect the value and challenging experiences for adults as well.

#### **4.7.7. Partial Conclusion**

The competition is increasing and in order to differentiate and establish preferences among the consumers it is important that the Experimentarium communicate their brand and offerings accurately, and most importantly that the consumers understand and value the unique offering. Prolonging of the experience can relieve the consumers from containing the massive experience in their minds by following through on the experience i.e. online. The awareness of both the experience and the outcome will then be extended and kept conscious which is both differentiated compared to many competitors, and will potentially have a positive effect on consumer preferences as well as the possibility for a transformation. Adequate satisfaction of curiosity in general will stimulate the natural human instinct and the more surprise and innovation within the exhibits and experience, the more differentiated the Experimentarium will be while simultaneously address the highest needs of self-actualization. Overall, the consumers seems to be content with the experience as it is, but in order to differentiate further and create preferences the Experimentarium must strengthen and adjust the united experience and optimize the branding and marketing so the consumers understand the unique and valuable offering in a greater extent.



## CHAPTER 5

### Conclusion & Future Implications

## **5.1. Conclusion**

The purpose of this thesis has been to explore the transformational experiences at the Experimentarium and how this type of transformational offering can be used to differentiate from competitors and establish preferences among the consumers. The aim has not been to find an objective truth or to cover every topic within the transformational theory, but to accept, analyse and discuss the respondents' individual interpretations and experiences based on their visit at the Experimentarium.

A transformation is an individual process build on experiences and in order to strengthen the experience as well as differentiate and establish preferences among the consumers, a number of initiatives and priority areas have been presented in order to increase the possibility of a transformation.

Guidance is one of the most important elements in the transformational process, and the Experimentarium must put more effort into this area. The guides must be trained to be more outreaching and aware of their responsibility as guides in the transformational experience, and since many of the respondents did not even notice the guides, more conspicuous clothing and appearance can optimize their visibility. The purpose of the guides must be clarified and explained to the consumers both before and during their visit, so they are aware of the opportunity of help and guidance in more areas than just where to find the toilet. The guides can improve the level of fluency as well as the feeling of flow and virtuosity by guiding the consumers in the direction of a transformation, provide instructions in the exhibits and help them overcome obstacles. An important supplement to the human guides is the guidance through i.e. smart phones, which can secure "the individual exhibition". In return for some personal data on the individual, the individual exhibition can via dialogue instruct the visitors through video instructions, provide intelligent suggestions and finally give feedback on the exhibit tasks.

In order to stimulate the consumers and their different needs as widely as possible, the variety of exhibits should vary more and aim for the essence of the sweet spot and the gesamt kunstwerk concept. The Experimentarium should offer more exhibits and experiences with opportunity for immersion, both actively and passively in terms of escapist and esthetic experiences. The escapist experience is possible in terms of i.e. co-creation, where the consumer actively creates his own experience in a joint process within the given frames, and thus increases the flow and virtuosity of

the experience himself. Co-creation can also decrease the consumers' expressed need for renewal as the experience will be different every time. By also offering more escapist experiences, the consumer will have the opportunity to passively immerse in the experience and relax, and the overall experience will have more time to settle and digest in the hectic environment. The existing physical frames can be adjusted and optimized in order to contribute to a more complete whole and experience and letting the adventurous spirit and essence of the Experimentarium be current throughout all aspects and thus strengthen the united experience. Prolonging of the experience through post-online experiences and reminders of the content and outcome of the visit can possibly sustain the learning outcome and preserve the consciousness of the experience at the Experimentarium as being top of mind. Also, the consumers and especially the children do not have to keep the massive experience in their mind, but can relieve the memory and maybe even learn more online. The prolonging of the experience can also encourage the visitors to evaluate and talk about the experience afterwards, which will ensure a higher level of consciousness and thus strengthen the transformational process.

Children and adults naturally interpret the experience and the learning elements differently. The results from the study among children on their future career dreams revealed that children are more susceptible towards new impressions and less saturated than adults, and therefore more easily affected and transformed. The transformation may not last forever - not because it is not valid, but because many new transformations are yet to come and affect their knowledge and career dreams, and thereby trump the transformation I have traced. Both the children and the adults learn at the Experimentarium, but on different levels, and although the adults believe they know much of everything already, the knowledge is presented in a fun and tangible way at the Experimentarium through the interactive exhibits. For most visitors the visit is for the children and on the premises of the children, but the adults can immerse in the experience as well and adjust the learning to their level while being an educating role model to their children. The Experimentarium is consequently interesting and challenging for adults as well.

Transformation is something to strive for, because it will develop the knowledge and insight of the individual, which is the foundation for personal evolution and the progress in general of the human being a "homo sapiens" – the thinking man. A transformation is a change in preferences and/or approach to the world based on new knowledge or insight, and the research has revealed

that a transformation can occur in many levels and extents. The transformation can first of all regard the individual's specific approach to the world and every day life, in terms of how a single exhibit can provide insight in how smoking affects your expected lifetime and function as an eye opener that will make you quit smoking. The transformation can also regard a change in preferences, leading to a generally increased interest in the field of natural science. This implies that both single exhibits and the experience in general can be transforming, dependent on the interest of and relevance to the individual. If the interest towards natural science among visitors at the Experimentarium has increased after a visit, then a change in preferences has occurred, and I can thus conclude that a change in interest implies a transformation. The study among physics students supports the fact that the Experimentarium seeds the grain that can germinate and start the curiosity and inclination to know more about the field of natural science, based on the transformational experience.

The empirical research conducted among respondents in the immediate nearness of their visit has revealed a primary motive among the consumers of fun and entertainment, as well as an awareness and minor expectation to the learning element, which they perceive as a bonus. 60% of the 53 face-to-face respondents believed they had learned something during their visit but common for the respondents was the difficulty in expressing *what* they had learned, because they had learned while playing, and playing has been their main motive and entertainment the obvious outcome. However, the study among physics students, conducted years after their childhood visits, revealed a much more clarified relation and awareness of the learning element, which the respondents perceived as beneficial and affecting their general interest in natural science, and even their choice of education in a small extent. These empirical findings support the figure I have developed (Figure 4.4, Section 4.5.7), concluding that the arranged type of transformations offered at the Experimentarium will rarely occur immediately, but takes time in order to settle in the minds of the consumers. The memory of the fun day will fade, but the learning will remain in the unconsciousness and turn into a transformation when combined with a relevant situation where the initial experience and it's learning outcome becomes conscious and reminded. This implies a match between knowledge and relevance, and leads to a transformation.

My initial perception of transformations was a comprehensive and demanding process, implying a radical and obvious change within the individual. It is now clear that transformation can be both

comprehensive and demanding, but also small and almost unconscious changes in the individual's preferences and approach to life. The theory and academic work refers to the concept as "transformation", which is a polysyllabic foreign word and hard for the ordinary individual to understand and comprehend and with numerous definitions and provisos. My definition and perception of transformations have changed and expanded through the research process and examination of the concept. The Transformation Economy is not so much an economic movement, as it is the simplicity of business arranged human development, and transformation is somehow equivalent with the personal development and progress.

I can conclude that transformation is "simply" new knowledge or insight that lead to a change in either preferences and/or approach to the world, as well as mental development. In other words, transformation in its simplicity happens every day in terms of the individual developing through learning and insight. In the context of the Experimentarium, the individual is transformed when the knowledge gained at some point in time will be conscious and relevant. Based on this I can conclude that learning is transformational when being relevant to the individual, and when the consumers have as a motive to learn and gain knowledge, they have an implicit motive for being transformed. Specifically, the 89% of the respondents in the face-to-face survey who chose to visit the Experimentarium to learn on behalf of their children, themselves or a combination, were expecting to be transformed in some extent. The 60% of the face-to-face respondents, who believed they had learned something during the visit but had a hard time expressing the exact learning outcome, will most likely be transformed when (or if) the learning is combined with a relevant situation and thereby reaches a level of complete consciousness.

The question remains whether transformational experiences are good for business and why companies should even offer transformations. The Experimentarium should offer transformations because they can seek to affect the preferences and worldview of the visitors positively towards natural science, and make them evolve as individuals and stimulate their curiosity and make them wanting more. This type of offering is unique and differentiated, and people of today seek challenges, self-actualization and life content, which the experience at the Experimentarium provides.

I can conclude that transformations do happen at the Experimentarium, but also that the transformational experience can be optimized and strengthened. Curiosity is the keyword of the Experimentarium and what must be continuously stimulated among the consumers, since it is a

basic human instinct and implies a preference for an environment that can satisfy it. The curiosity can be stimulated through extraordinary and maybe even provoking exhibits that will push the boundaries of the visitors and introduce them to fields of natural science that is not common knowledge. The Experimentarium must find the right interactive mix of transformations, ordinary experiences, esthetics and relaxation, and especially co-creation experiences, where the consumers can immerse and have influence on their own experience. By offering a balanced mix, the Experimentarium can ensure that the visitors will not be overloaded by too much information and the demand of skills and involvement.

I can also conclude that a definitive definition of the concept of transformations is impossible. A transformation is not a static process, but something immaterial being expressed in the meeting between the individual and the object in the transformational experience. It is the customer who defines the value and effect of an experience and whether it even is transformational, and it is highly individual whether it is expectations, the unity, a single exhibit or prolonging of the experience that secures the transformational experience. No matter how many initiatives the Experimentarium initiates, it can never be guaranteed that people will be transformed since the process is as individual as can be, and depends on interests, background and needs.

The branding and marketing communication must communicate the uniqueness of the Experimentarium as well at the presented initiatives as i.e. the opportunity for guidance by educated guides, and the opportunity for a versatile experience with valuable knowledge hidden in the fun. The marketing communication must trigger the curiosity of the consumers, create expectations and make sure the consumers are fully aware of the unique and valuable offering: knowledge and insight through active play and fun as well as the possibility for self-determination and self-actualization – for both children and adults. As long as the Experimentarium manage to stimulate the curiosity of the consumers through branding and marketing and most importantly through the actual experience, the consumers will very likely develop stronger preferences towards the unique environment.

The learning and transformational outcome has proved to be bigger and more extensive than I expected and more than I believe the Experimentarium is given credit for. The experience must be optimized and the unique outcome must be communicated more direct and unambiguously:  
The Value of Individual Development and Transformations!

## **5.2. Future Implications**

My research, analysis and discussion have discovered several interesting aspects of the transformational process, but this thesis naturally has limitations and there is much more research to do. The exhaustive research of the field of transformational experiences, have resulted in some further perspective thoughts in regards to future initiatives:

- I have called attention to the fact that the learning outcome may take more time than expected to occur. In extension to this, it would be interesting to look up the visitors of the Experimentarium some time after their visit and investigate how things have developed since the visit, and whether the learning outcome has had the time to settle and become more conscious, and a transformation has happened. By looking up the visitors i.e. 3 months after their visit, they can contribute to the investigation of the transformational process, and how the experience have affected them in a longer run.
- It has been concluded that the learning at the Experimentarium is disguised by the fun and entertainment of the experience, and the learning happens relatively unconscious. In order to ensure and maintain the learning outcome, I plead for more initiatives that will keep the consumers talk about their experiences after their visit, and thus secure the awareness and memory of the experience and the outcome. This can be secured by i.e. “follow up e-mails” with reminders of the previous visit and content combined with special offers for the next visit. Co-creation can also involve the consumers pointing forward in regards to ideas for implementations in the future. Although the consumers might not always know what they want and need, who would be better to suggest future exhibits and projects than the users of the centre? An opportunity is a competition where people can suggest a future exhibition, theme or subject online at the Experimentarium’s website, in return for the “winner” being a part of the developmental process.
- The overall notion of “the Individual Exhibition” is the dialogue between the individual and the exhibition via an electronic device as i.e. the smartphone, presented in Section 4.4.1 based on data provided by the individual in terms of i.e. age, fields of interest and gender. The notion of the individual exhibition is transferrable to all types of cultural institutions and implies an interaction between the individual and the device that will function as guidance in instruction. This interaction can possibly provide additional information on the specific piece of art or

exhibition and suggest relating exhibits or pieces of art that corresponds with the interest of the specific individual.

Individuality is very important in the process of transformation as the needs, background and interests of the consumers are distinct. The individual exhibition can take the individuality and needs into consideration and provide the individual with valuable information and personal suggestions, which will ensure a high level of relevance and interest, and thus secure a positive experience as the point of departure for a possible transformation.

It would be interesting to conduct the same type of research in other cultural institutions in order to investigate the extent of transformations, and to determine how the experience at the specific institution affects the consumers as well as how it can be optimized. However, the conclusions based on the empirical findings in the context of the Experimentarium are to some extent transferrable to all cultural institutions that offer arranged transformational experiences.

A photograph of a woman and a young girl laughing and playing on a red boat deck. The woman, wearing a green sweatshirt, is leaning forward, and the girl, wearing a white dress, is hanging onto a rope. A large red flag is visible in the background.

## CHAPTER 6

### Reference List

## 6. Reference List

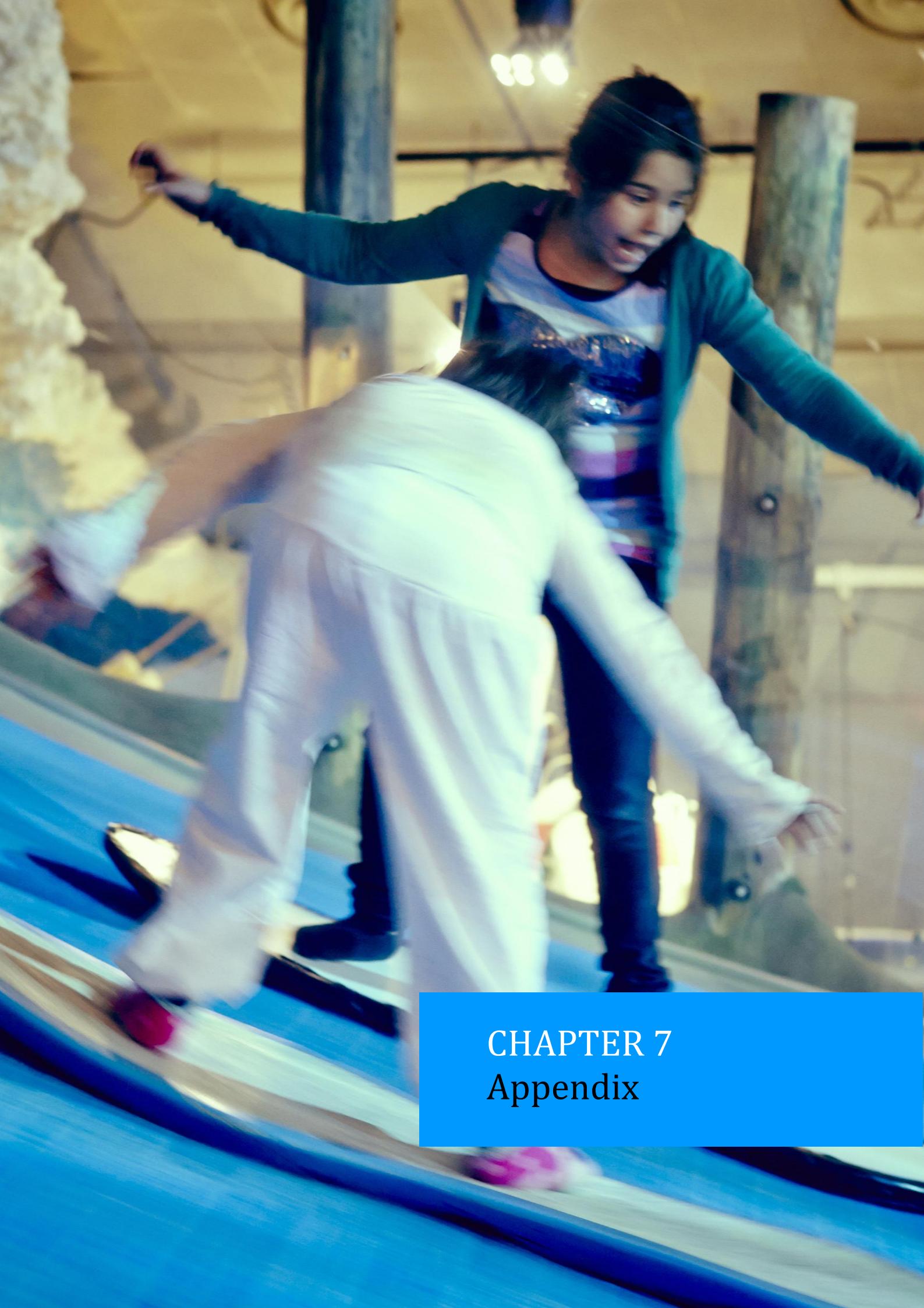
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## CHAPTER 7

### Appendix

## **7. Appendix**

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## **Appendix 1. Research Methods**

### **Appendix 1.1. The Face-to-Face Survey**

I have chosen to use a questionnaire survey to gather information about the visitors at the Experimentarium. This quantitative method is a useful way to investigate and clarify tendencies and signs of transformations, and gather information about the visitors and their expectancies and experiences. Furthermore the answers from this survey will give my interview responses an extra dimension when the answers are linked together.

The face-to-face surveys were conducted at the Experimentarium, and included many reflections on how to best possibly execute the surveys and which approach would be best. I finally decided on a face-to-face survey, as this kind of survey in many ways is superior and the data quality is increased compared to other forms of surveys (Czaja & Blair, 2005). A face-to-face survey also makes the response rate higher than any other survey form, basically because it is harder to decline a person face-to-face than just hanging up the phone or declining an e-mail. This type of survey is also consistent with us adhering to the constructivist paradigm, as well as consistent with my choice of ontology and epistemology, as the data are created through a personal dialogue.

The survey was designed with 31 questions focusing on the two temporary exhibitions; Dinosaurs and VAND, and also learning outcome, interest, expectations, purchase motive, and the guides (see Appendix 2.1 for the questionnaire). 16 of the questions are open-ended, five are answered on a five-point Likert-type scale, and one question is a ranking. The Likert-scale were chosen, because it is useful to show a comparable tendency in the answers, and a five-point scale were chosen, because it will be adequate enough to answer the research questions, without the confusion of too many possible answers. Finally, the survey includes four demographic questions regarding age, sex, residence, and employment. The survey is composed in a way that I believe will provide insight in the consumer perspective, and reveal their thoughts and experience. The fact that over half of the questions are open-ended, have supported the choice to execute a face-to-face survey, as this is the best survey method for open-ended questions. The face-to-face survey allows a more relaxed atmosphere, and the respondents are not as uncomfortable with long pauses between answers because they can know that the researcher is writing (Czaja & Blair, 2005). Furthermore, I have the opportunity to explain the questions and ensure the right

interpretation (Stamp, Mikkelsen, & Sandager, 2011). Thereby I was able to ensure that all the questions were answered and the meaning of the questions was understood.

A series of tests were executed before the final questionnaire survey was conducted. First, the survey was tested on two persons, where the respondents afterwards were asked to give feedback on the questionnaire. This simple test showed which questions that did not work the way they were intended, and I was able to minimize errors in the understanding of the questions. After adjustment of the errors, the test survey was executed at the Experimentarium on a Saturday in the beginning of October, and I collected responses from 15 visitors that day. Afterwards, the survey was edited to the final version.

The survey was conducted over a three-day period in the autumn break. This has of course influenced the reliability, as the consistency of the sample would not give exactly the same answers if the survey were conducted in a normal weekend. It is mainly the high number of visitors that have made a difference and many of the answers reflected that the high number of visitors had a negative effect on the respondents' experience.

The surveys were conducted in the hall of the Experimentarium among 53 respondents, just before they were leaving. I was wearing my Experimentarium nametag to legitimize the survey, and this made the respondents cooperation easier and only 11 refused to participate. The survey was limited towards adults and young adults, as the questions were too hard for younger children to comprehend. It was made clear to the respondents that they were only to answer the questions for themselves and not answer on behalf of their children, in order to minimize misinterpretations of experiences and transformations. I influenced the validity of the survey, as I "chose" which visitors to approach. I primarily chose people who were not occupied with their families or conversations, or with screaming children or impatient partners by their side. Those who seemed like they could spare the time for a five-minute questionnaire were chosen. Meanwhile, the results show an equal mix of gender, age, and employment, and thus it is argued that the validity of this survey is satisfying.

This quantitative method was applied to gather information about the visitors' experiences, needs and to investigate and clarify tendencies and signs of transformations. The survey provided valuable knowledge, but no convincing evidence of transformation.

## **Appendix 1.2. The Semi-structured Interview**

In order to achieve the best knowledge possible from the interviewees, two interview guides was developed (see Appendix 3.1 and 3.2 for the interview guides) based on the research questions, the theoretical perspectives and the answers from the questionnaire.

The interview guides was developed by following Kvale's (1997) description, in the attempt to create questions that would be both thematic and dynamic. According to Kvale (1997), a good interview question has to have both a thematic and dynamic dimension, meaning that it thematically has to contribute with new information and knowledge, and dynamically contribute in creating a good interaction between the interviewer and the respondent.

After conducting the face-to-face survey, I realized that people had trouble explaining what they had learned and how the experience had affected them immediately after their visit at the Experimentarium. Hence, I decided to conduct two interviews immediately after the visit while the interviewees still were at the Experimentarium, and two other interviews four days after the interviewees' visit. The purpose with this was to see if the respondent's more easily could describe their experience after some time, where the experience had had the time to settle in their conscious. A total of four interviews was conducted on the following premises:

<b>Respondents:</b>	<i>Ane &amp; Malene</i>	<i>Christian &amp; Christine</i>
<b>Offer:</b>	Free entrance for the family in return of an interview	Free entrance for the family in return of an interview
<b>Circumstances for participation:</b>	Volunteered via post on Facebook	Volunteered at the entrance at the Experimentarium
<b>Time and date for visit:</b>	Could decide themselves when they wanted to visit the Experimentarium	Was not "found"/approached until they were at the Experimentarium, and the interview had to be conducted that same day
<b>Time and date for interview:</b>	Could decide time and date for the interview to some extent	The interview had to be at the end of their visit on that same day
<b>Place:</b>	Could decide where the interview should take place	The interview had to take place in the planned conference room at the Experimentarium
<b>Experience settle time:</b>	The experience had had four days to settle in the mind of the respondent	The respondent were somehow still in the middle of the experience

I have chosen to conduct a series of semi-structured interviews because I wanted to let the conversation flow ‘naturally’, implying that the respondents were able to introduce categories, themes, and topics themselves. I did not stick rigorously to my prepared questions, but instead let the interview evolve naturally, yet I made sure at some point to ask all questions in the interview guide. In addition, if the respondents introduced topics and categories that were not a part of my overall disposition, I would follow up one these to allow an open conversation where my respondents felt comfortable. This was done in order to allow answers that were more detailed on an elusive topic and it allowed the respondents to bring up things I had not considered. I believe this enabled me to learn more about the subject from the respondents’ perspectives, and also helped me escape some of the pre-understandings that I might have had of the subject.

The interview guides have been divided into five overall themes relating to the topics I would like to gain knowledge about and a better understanding of. This division functioned as a sort of rough disposition for the interview. Under each theme, there were 4 – 6 questions, and finally some follow up question. The two interview guides are very similar, but the one for the interview done four days after the visit, was more extensive, especially on the topic of learning. As mentioned, the reason for this was that I realized during the face-to-face survey that the respondents at the Experimentarium had difficulties expressing what they had learned and how it affected them, and I expected the respondents who were interviewed four days after their visit to be more mellowed with their experience, and hence being better able to express it.

The first two interviews were conducted in a conference room at the Experimentarium. I approached people when they were entering and offered them free-entrance if one of the adults in the group would participate in an interview at the end of the visit. The other two interviews were respectfully conducted in a vacation house in Nødebohuset and at the home of the respondent; it was arranged that the interviewees would visit the Experimentarium four days prior to the interview and they were also given free-entrance.

Each interview was started by offering the interviewees something to drink, followed by a presentation of myself and what I am studying, and finally the research topic. Then I went on explaining the respondents the disposition for the interview, in order to give them an insight in the structure and what type of questions I would be asking. In addition, I explained that my empirical findings and the actual thesis only would be available to people inside the Experimentarium and naturally to Copenhagen Business School. I explained that I would use a

Dictaphone app on an iPhone to record the interview, which I afterwards would transcribe. The interviews lasted between 15 and 58 minutes.

After the interviews, I gave a short debriefing, summarising what we had discussed and asked if the respondent had anything to add or anything they wished to comment on (Kvale, 1997).

There are several factors that differentiate the two interviews made at the Experimentarium and the two interviews made four days after. The first two interviews are relatively short, first of all because the respondents had a hard time expressing what they had learned and how the visit had affected them. It might also have been an unconscious stress factor for both the respondent and me as researcher, that the families of the respondent were waiting somewhere outside. Lastly, the fact that they were offered free admission in return for approximately 30 minutes of their time, have probably made them consider the utility of both the opportunity of saying yes and no. That they agreed to participate in the interview may primarily have been based on the fact that they would save money in admission, and the interview and eagerness to help have been secondary. The other two interviews consisted of respondents who voluntarily “signed up” via a post on Facebook, and they could completely decide when they wanted to visit the Experimentarium, as well as when and where the interview should take place. Since both the participation, visit and the interview were more or less completely on their choice and premises; there is a great probability that these respondents have felt more comfortable and cooperative. That said, all four interviewees were very helpful and cooperative.

The qualitative method and semi-structured interview was applied as an objective to gain deeper knowledge and information on transformations and to give me an understanding of the visitors' experiences that the questionnaire did not provide. The interviews provided valuable, deep, and personal information, as well as reflections that I was not able to obtain via the other research methods applied in this thesis.

### **Appendix 1.3. The Study: "What do you want to become when you grow up?"**

This study was aiming towards signs of transformations among the children and was a very direct and simple method. The study of children's future career dreams was conducted, in order to examine whether there is a shift in their preferences before and after visiting the Experimentarium. This is the only study where the younger children are asked directly, but this is a simple, child friendly study, which was easy for the young visitors to understand and relate to. To examine the children's preferences and examine signs of transformation I had drawn 10 pictures of different stereotypes of jobs: Archaeologist/Palaeontologist, Craftsmen, Hairdresser, Fire-fighter/Police-man, Chef, Scientist, Businessman, Doctor, Lifeguard, and Teacher (see Appendix 4.1 for the pictures).

Some of the jobs are directly linked to the content, objectives, and exhibitions of the Experimentarium, such as the archaeologist/palaeontologist, scientist, lifeguard, and doctor. It was expected that the children's interest for these jobs could be increased during a visit to the Experimentarium, and these jobs were chosen in the hope to determine a change in the children's preferences before and after their visit to the Experimentarium and thereby deduce signs of transformations.

All of the drawings are cartoon monkeys "doing" their profession, which ensured the validity and reliability of the study as all the drawings were the same and there were no difference on how funny, pretty, or cool the drawings appeared to the children. This also minimized the bias in the answers. All of the drawings were based on the pictures of monkeys in the book "*Verdens Største Ordbog*" (Mogensen, 2009). The drawings were all coloured and the job title was written on each drawing before they were laminated.

The study was executed on a Saturday in the beginning of October, to examine how the children would respond to the drawings, and how the pictures should be presented physically.

The final study was executed in the autumn break. One day the children were asked what they wanted to be when they grow up, when they were arriving at the Experimentarium and the next day the children were asked the same question exactly when they were leaving. The pictures were presented on a board in child height in the hall at the Experimentarium, and when children approached I asked their parents' permission to ask their child/children a short question. I then explained the different drawings to the children to make sure that they understood them, and then I made them chose what they wanted to be when they grow up. Obviously, I allowed the children

to answer, “I do not know” or give another specific job title, which have been categorized as “Other jobs”.

I deliberately chose to ask different children on different days, as I believed that the selection of children is big enough to be representative and thereby illustrate the tendency.

This study was applied as an objective to gain deeper knowledge and information on the children preferences and maybe even show signs of transformations. The study provided valuable information about the children, that could not be obtained via the other research methods applied in this thesis.

#### **Appendix 1.4. E-mail Survey among Students of Physics**

This survey has been conducted to explore whether there is a connection between visiting the Experimentarium and an increased interest in the area of natural sciences. Further, I wanted to explore if visits at the Experimentarium in the respondents' childhood have had any effect on their choice of education. An e-mail survey is a quick and efficient way of gathering data, and this method was chosen, as I only wanted a few questions answered and a high response rate. The questionnaire was designed especially for the physics students at the University of Copenhagen, and it contained five questions. Two of them were answered on a five-point Likert-type scale and one was a comment box (see Appendix 5.1 for the questionnaire).

The survey was send out by the very helpful physics department to approximately 400 students and I received 209 completed answers in return. This high response rate may be due to the fact that the survey was ultra short and I offered 2x2 Free Admission tickets to the Experimentarium in return for answering.

This survey has enlightened the connection between visiting the Experimentarium and the physics students' interest and choice of education.

## **Appendix 2: Face-to-face Survey**

### **Appendix 2.1: Questionnaire**

Hej.

Har du 5 minutter til at deltage i en spørgeskemaundersøgelse? Det handler om Jeres besøg på Experimentarium og vi skal bruge det i forbindelse med vores kandidatafhandling på CBS.

- 1) Hvem er du herude sammen med i dag?  
a. Mor/far, bedsteforældre, \_\_\_\_\_ børn, venner, kæresten, skolen, andet
- 2) Hvem tog beslutningen om at I skulle på Experimentarium i dag?  
a. Mig, manden/konen, kæreste, ven, børnene

#### **Har du besøgt udstillingen om dinosaurer?**

- 3) Har du lært noget af udstillingen om dinosaurer?  
a. Ja, nej, ved ikke
- 4) Hvis ja, hvad har du lært?
- 5) Hvis ja: hvordan har denne nye viden påvirket dig?
- 6) Hvis nej. Hvorfor ikke?

#### **Har du besøgt udstillingen om vand?**

- 7) Har du lært noget af udstillingen om VAND?  
a. Ja, nej, ved ikke
- 8) Hvis ja: Hvad har du lært?
- 9) Hvis ja: Hvordan har denne nye viden påvirket dig?
- 10) Hvis nej: hvorfor ikke?
- 11) Har du (ellers) lært noget nyt i dag?  
a. Ja, nej, ved ikke
- 12) Hvis ja: Hvad har du lært? (Skriv svaret)
- 13) Hvis ja: Hvordan har denne nye viden påvirket dig? (Skriv svaret)

- 14) Hvis nej, hvorfor ikke? (Skriv svaret)
- 15) Har du i det store hele lært noget nyt i dag?  
a. 1      2      3      4      5      Ved ikke
- 16) Hvor aktiv har du selv været i dag?  
a. 1      2      3      4      5      Ved ikke
- 17) Hvor interesseret var du i natur, teknik og fysik inden du kom på EXP i dag?  
a. 1      2      3      4      5      Ved ikke  
Hvor stor er din interesse nu?  
b. 1      2      3      4      5      Ved ikke
- 18) Hvorfor valgte I at tage på Experimentarium i dag? (Skriv svaret)  
a. (Vejr, pris, interesse, anbefalinger, mor/far bestemte, børnene ville gerne, særligt arrangement, for at lære noget (på en sjov måde)
- 19) Hvorfor valgte I Experimentarium i dag fremfor andre alternativer, som fx Zoo, Tivoli osv.? (Skriv svaret)
- 20) Har I valgt at tage på Experimentarium for at lære noget eller for at børnene skulle lære noget?  
a. Ja      Ja, børnene      Nej      Ved ikke
- 21) Har du lagt mærke til guiderne her på EXP – dem i det blå tøj?  
a. Ja      Nej      Ved ikke
- 22) Ved du hvad I kan bruge dem til?  
a. Ja      Nej      Ved ikke
- 23) Har I benyttet Jer af dem? (Nej, hvorfor ikke?)  
a. Ja      Nej      Ved ikke
- 24) Hvad synes du om ideen om disse guider der går rundt, og som rent faktisk kan komme med råd til de forskellige opstillinger, og som du kan spørge om hjælp og generelle spørgsmål?
- 25) Tror du at du ville have lært mere herude hvis du kunne spørge guiderne til råds?

26) Forestil dig næste gang hvor du skal ud sammen med familien/vennerne, ligesom I dag. Nu nævner jeg 5 forskellige steder, og vil gerne bede dig om at sætte dem i prioriteret rækkefølge alt efter hvad du helst vil.

- ZOO  
Nationalmuseet  
Experimentarium  
Tivoli  
Badeland/Svømmehal

- 27) Ville du have lyst til at komme igen hvis EXP fremstår uforandret ved næste besøg? (Hvorfor)  
a. Ja      Nej      Ved ikke

28) Hvilke forventninger havde du til dit besøg i dag?

29) Har besøget levet op til dine forventninger?

30) *Hvordan har helhedsoplevelsen af besøget været*  
a. 1      2      3      4      5      Ved ikke

31) *Hvorfor?*

32) *Hvorfor har helhedsoplevelsen ikke været til en 5'er?*

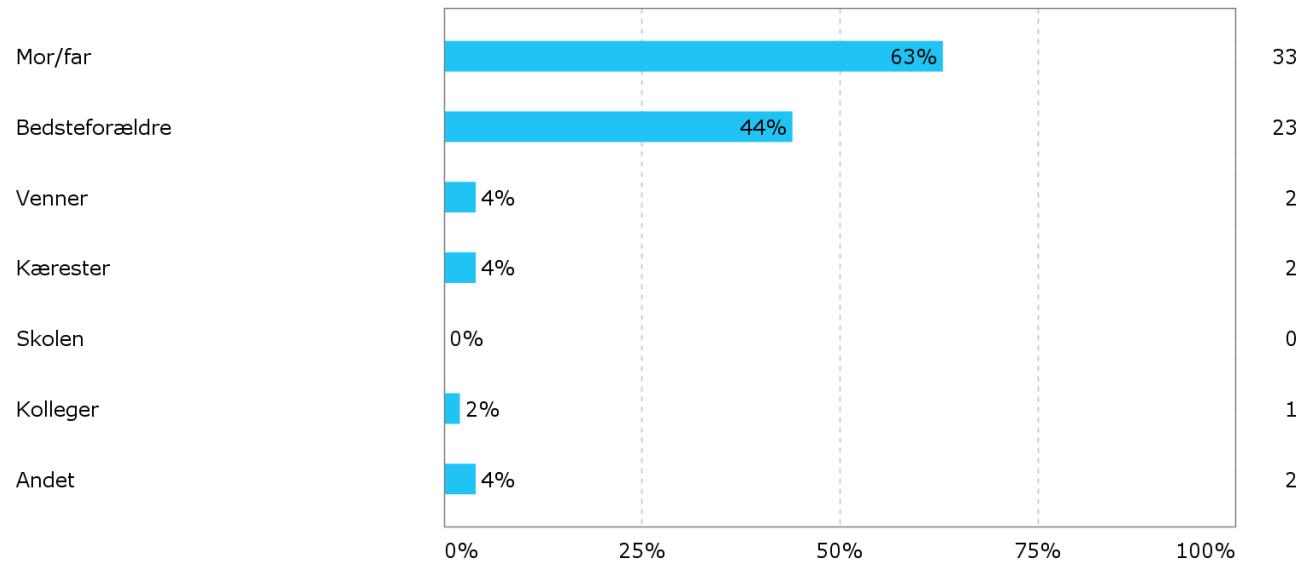
33) *Er der noget der ikke har fungeret så godt i dag?*

## Demografi

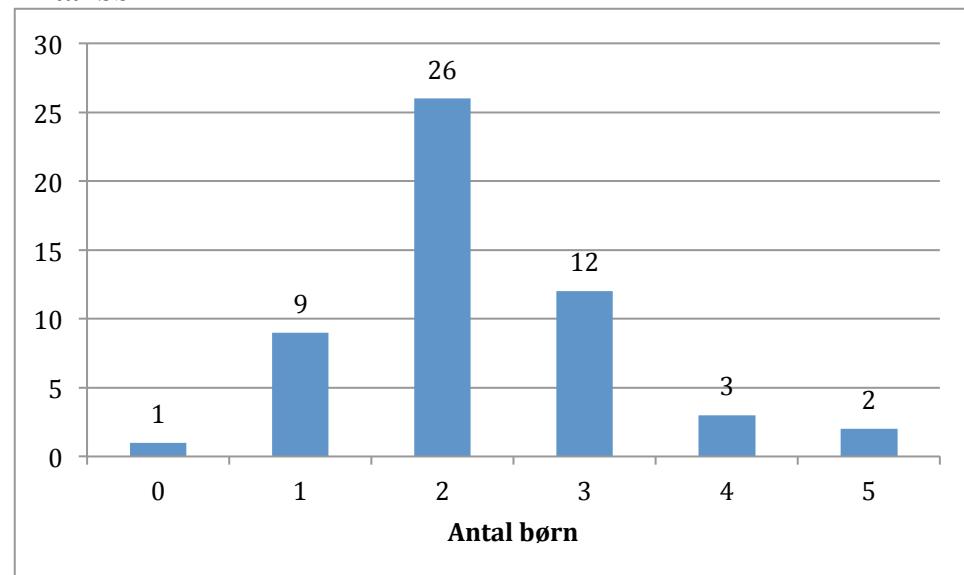
- |                       |             |        |
|-----------------------|-------------|--------|
| 1) Alder              | 2) Mand     | Kvinde |
| a. _____              |             |        |
| 2) Bopæl              | 3) Stilling |        |
| a. Region Hovedstaden |             |        |
| b. Sjælland og øerne  |             |        |
| c. Fyn                |             |        |
| d. Jylland            |             |        |
| e. Andet              |             |        |

## Appendix 2.2: Results

### 1) Hvem er du herude sammen med i dag?

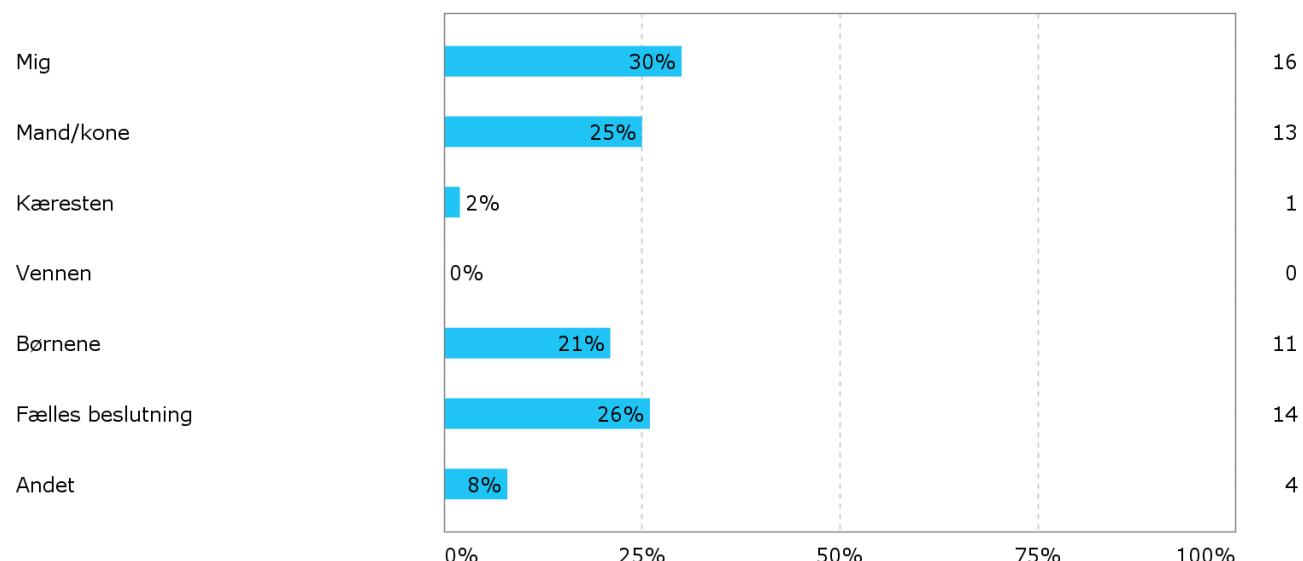


Antal børn

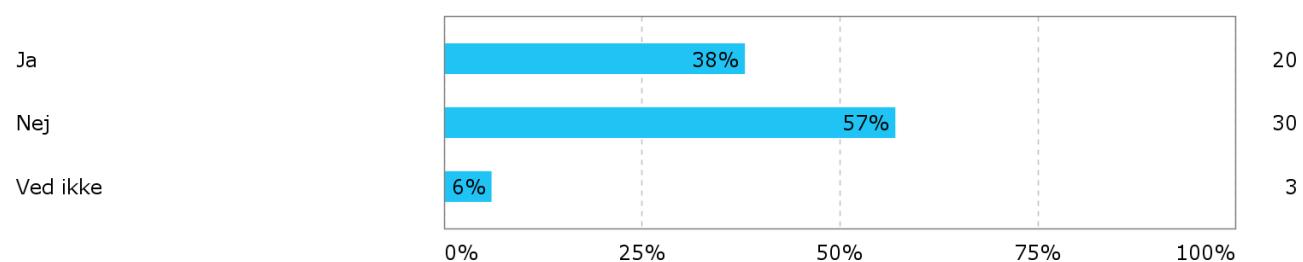


Det gennemsnitlige antal børn i følgeskab med den adspurgt: 2,25

## 2) Hvem tog beslutningen om at I skulle på EXP i dag?



## 3) Har du lært noget af udstillingen om dinosaurer?



## 4) Hvad har du lært?

## 5) Hvordan har denne nye viden påvirket dig?

## 6) Hvis nej, hvorfor ikke?

Har du lært noget af  
udstillingen om  
dinosaurer?

Hvad har du lært?

Hvordan har denne nye  
viden påvirket dig?

Hvis nej, hvorfor ikke?

Nej

For barnebarnet

Nej

Det er for børnene, og  
jeg vidste meget af det  
i forvejen

Nej

Vidste det i forvejen

Nej

Min egen skyld, jeg  
var ikke så grundig

Ja

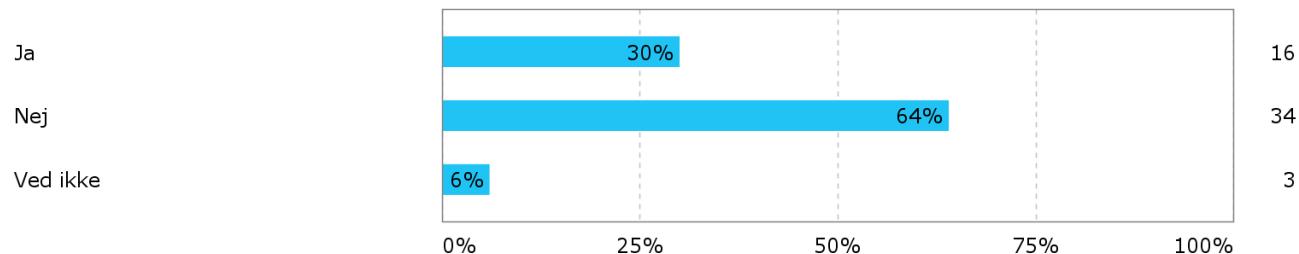
Spørgsmål om  
forskerne

Nysgerrig om  
dinosaurer

Har du lært noget af udstillingen om dinosaurer?	Hvad har du lært?	Hvordan har denne nye viden påvirket dig?	Hvis nej, hvorfor ikke?
Ja	Hvordan de levede, hvordan man finder dem		
Nej		Har ikke besøgt den	
Nej			
Nej		Vi manglede uddybende oplysninger	
Ja	Hvordan de uddøde		
Nej		Det interesserer mig ikke	
Ja	Størrelsesforholdene om dinosaurer		
Ja	Hvor store dinosaurerne var		
Nej		vidste det i forvejen	
Nej		vidste det i forvejen, men børnene lærte noget om fossiler	
Nej		ved ikke	
Nej		vidste det i forvejen	
Nej		blev skuffet over hvor lille den var	
Nej		gik den hurtigt igennem	
Ja	nye arter	ved ikke	
Nej		den var meget dårlig og henvendte sig kun til små børn	
Ja	mange små ting	ved ikke	
Nej		ved ikke	
Ja	det er svært at hakke sten med en pensel	ved ikke	
Nej		vi har ikke set den	
Nej		her ikke set den	
Nej		har bare observeret	
Nej		for mange mennesker	
Ja	noget om fossiler	ved ikke	
Nej		holdt øje med børnene	

Har du lært noget af udstillingen om dinoaruer?	Hvad har du lært?	Hvordan har denne nye viden påvirket dig?	Hvis nej, hvorfor ikke?
Ja	Hvor lidt forskerne egentlig ved om deres udseende og kunnen, og hvor meget de reelt gætter sig frem til	Det er interessant og tankevækkende, og samtidig imponerende hvor meget man kan finde ud af ud fra så relativt lidt. Ting der foregik for flere millioner år siden	
Ja	Historie om verden	Det er svært at sige lige nu	
Ja	Generelt, svært at sige		
Ja	Om historien og hvordan de levede	Ved det ikke rigtigt	
Ja	Det er svært at forklare lige på stående fod		
Ja	Filmen om meteornedslaget, hvordan dinosaurerne uddøde	Hvor hurtigt det gik, og hvor hurtigt altting kan blive ødelagt	
Ja	udgrave knogler	ved ikke	
Nej			ved ikke
Nej			henvendte sig ikke til mig, er for gammel
Nej			ved ikke
Nej			har set den tidligere
Nej			ved ikke
Nej			synes den var dårlig, udstillingen "Bodies" var bedre
Nej			ved ikke, men børnene gjorde
Ja	noget om knogler og tænder i udgravnningen	ved ikke "interessen kom ved første tand"	
Ja	nye dino arter	ved ikke	
Ja	de forskellige dino-arter	ved ikke	
Nej			ved ikke
Ved ikke			
Ved ikke			
Ved ikke			

## 7) Har du lært noget af udstillingen om vand?



## 8) Hvad har du lært?

### 9) Hvordan har denne nye viden påvirket dig?

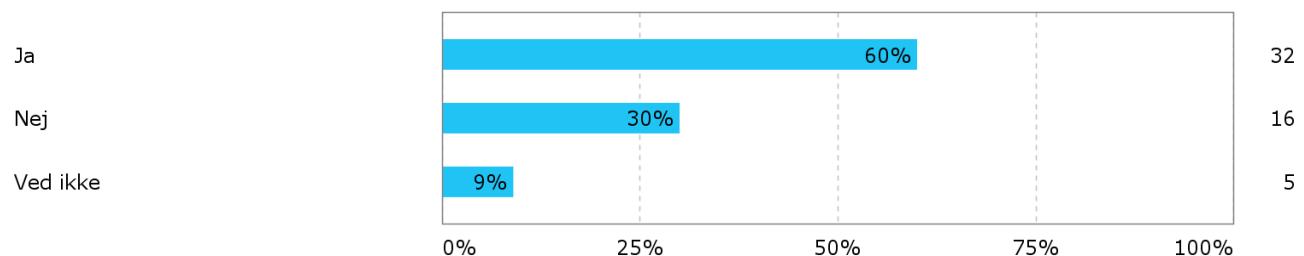
### 10) Hvis nej, hvorfor ikke?

Har du lært noget af udstillingen om vand?	Hvad har du lært?	Hvordan har denne nye viden påvirket dig?	Hvis nej, hvorfor ikke?
Nej			
Nej			
Nej			Der var ikke noget jeg ikke vidste i forvejen
Ja	Lydbølger	Indsigt i fysikken, jeg er blevet klogere	
Nej			
Ja	Min søn har, hvordan man kan bruge vand og hvor mange kræfter det har	Positivt. Det er svært at sige, al ny viden påvirker vel i større eller mindre grad	
Ja	Bølger, tryk, vanddampe, lyde	Nej	
Ja	Kræfter i vand, bølger, tryk	Nysgerrig efter mere viden	
Ja	Hvordan det bevæger sig, dets kraft		
Ja	Børnene har lært noget, kræfterne i vandet		
Nej			
Nej			
Ja		Det var sjovt	
Nej			
Ja	ved ikke, mange små ting. Den er bedre end den gamle udstilling om vand	ved ikke	

Har du lært noget af udstillingen om vand?	Hvad har du lært?	Hvordan har denne nye viden påvirket dig?	Hvis nej, hvorfor ikke?
Nej			Der var alt for mange mennesker
Nej			meget for små børn
Nej			ved ikke
Nej			ikke interesseret
Ja	ved ikke	ved ikke	
Ja	ved ikke		
Nej			meget for de små børn
Nej			barnlig
Nej			ved ikke
Ja	hvad der kan flyde	ved ikke	
Nej			er for gammel
Ja	ved ikke		
Ja	ved ikke		
Nej			kommer her tit
Nej			for mange mennesker
Nej			for barnlig
Nej			holdt øje med børnene
Ja	Om sluser og opdæmning	Det var spændende, og har givet mig en forståelse om hvordan det fungerede engang hvor jeg selv var på bådtur hvor vi sejlede igennem en masse sluser. Den gang synes jeg det var helt vildt at vi kunne sejle "opad" men nu giver det mening	
Nej			Det var mest for småbørn, og der var så mange
Ja	Generelt, svært at sige		
Nej			Mest for små børn
Nej			
Nej			Vi har været her så mange gange
Ja	noget om gejsere	ved ikke	
Nej			ved ikke

Har du lært noget af udstillingen om vand?	Hvad har du lært?	Hvordan har denne nye viden påvirket dig?	Hvis nej, hvorfor ikke?
Nej			nej, ikke min aldersgruppe, men den var meget flot og underholdende
Nej			det var mest for børn
Nej			har set den før
Nej			har ikke besøgt den
Ved ikke			jeg er voksen
Nej			det har ingen interesse
Nej			har ikke besøgt den
Nej			ved ikke, nok mest for mindre børn
Ved ikke			
Ved ikke			
Nej			det var meget basisviden jeg havde i forvejen
Nej			vi kom meget sent, så vi har bare gået en hurtig gennemgang

### 11) Har du ellers lært noget nyt i dag?



### 12) Hvad har du lært?

### 13) Hvordan har denne nye viden påvirket dig?

### 14) Hvis nej, hvorfor ikke?

Har du ellers lært noget nyt i dag?	Hvad har du lært	Hvordan har denne nye viden påvirket dig?	Hvis nej, hvorfor ikke?
Ja	Luftryk	Ved ikke	
Ja			

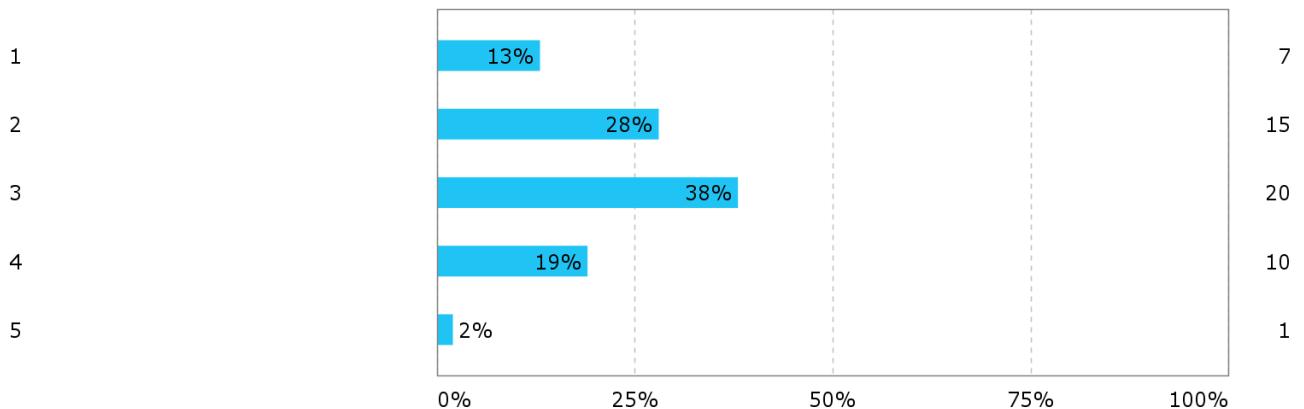
Har du ellers lært noget nyt i dag?	Hvad har du lært	Hvordan har denne nye viden påvirket dig?	Hvis nej, hvorfor ikke?
Nej			jeg ved meget i forvejen, og vi kommer her tit pga. årskort
Ja	Om mennesket, fysikken, synsbedrag	Lærdom, bonusinfo som kan anvendes i selskabelig sammenhæng, tingene er ofte mere end de ser ud til	
Ja	Om mennesket, og hvordan mad rådner	Det var ulækkert og spændende	
Ja	Om dinosaurer, fysikshow,	Det er måske ikke trængt helt ind endnu, men man bliver vel altid påvirket når man lærer noget	
Ja	Fysikshow, mad der rådner		
Ja	Fysikshow, mad der rådner		
Nej			Vi har været her mange gange
Nej			
Ja	Om mennesket, man har prøvet sig selv af	Man forholder sig til det man lærer	
Ja	Om luftbølger, generelt om fysik og teknik		
Nej			
Ja	Kan ikke huske noget specifikt		
Nej			der var for mange mennesker, til at man kunne koncentrere sig
Ja	Noget om sæbebobler	det har den ikke	

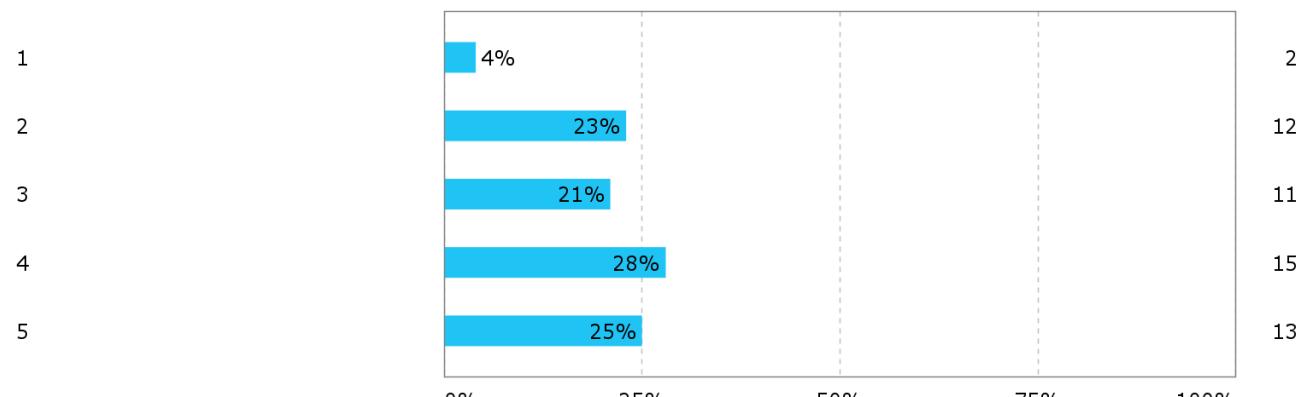
Har du ellers lært noget nyt i dag?	Hvad har du lært	Hvordan har denne nye viden påvirket dig?	Hvis nej, hvorfor ikke?
Nej			kan ikke lige komme i tanke om noget lige nu
Ja	mange småting	ved ikke	
Nej			ikke interesseret
Nej			kan ikke lige komme på noget
Ja	kemishowet	ved ikke	
Ja	noget om fysik (showet)	ved ikke	
Ja	mange små ting	ved ikke	
Ved ikke			
Ja	mange små ting noget om nervebaner i hjernen	tænkte over hvor skrøbelig man er	
Ja	noget om sæbebobler (showet)	kan bruge det i mit arbejde og sammen med børnebørnene	
Ja	noget om lugtesansen	ved ikke	
Ja	noget om sæbebobler	ved ikke	
Nej			kommer her tit, har årskort
Nej			der var alt for mange mennesker, så der var ikke tid til at fordybe sig i opstillingerne.
Ja	noget om strøm	ved ikke	
Nej			holdt øje med børnene

Har du ellers lært noget nyt i dag?	Hvad har du lært	Hvordan har denne nye viden påvirket dig?	Hvis nej, hvorfor ikke?
Ja	Om mennesket, og krible krable	Hvor mange mider og utøj der er i vores hverdag, og hvor meget jeg gerne vil undgå det. Også hvordan mennesket fungerer, fx med hjerteslag og logisk tankegang	
Ja	At jeg er et tålmodigt menneske		
Ja	Fysikshow	Han var god til at forklare og formidle	
Ja	Fysikshowet var spændende og sjovt	Ved ikke	
Ja	Om hjernen og hukommelsen	Det er spændende at vide hvordan man fungerer	
Nej			Vi har bare leget herude i dag, vi har årskort så vi er her tit
Ja	noget om lyd og lydbølger	ved ikke	
Nej			vidste det meste i forvejen, det er kun specifikke fakta der er ny viden
Nej			ved ikke
Ja	noget om bioethanol og benzin	ved ikke	
Nej			synes mere bare det var en genkendelse af gammel viden jeg havde i forvejen
Ved ikke			
Ja	noget om fysik (showet)	ved ikke	
Ved ikke	men der var mange sjove ting		

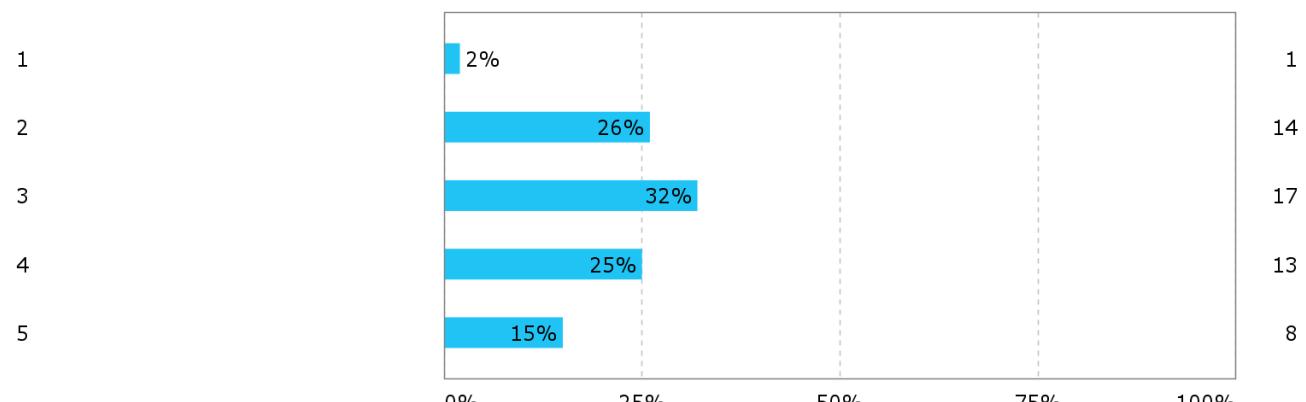
Har du ellers lært noget nyt i dag?	Hvad har du lært	Hvordan har denne nye viden påvirket dig?	Hvis nej, hvorfor ikke?
Ja	videnskabsshowsene kan man altid lære noget af	ved ikke	
Nej			har været her før
Ved ikke			
Ja	noget om energiregnskab	ved ikke	
Ved ikke			kan ikke sætte ord på om hvad jeg har lært...
Ja	noget om gejsere		
Ja	noget om hvordan hjernen fungerer	ved ikke	

### 15) Har du i det store hele lært noget nyt i dag? - Rating

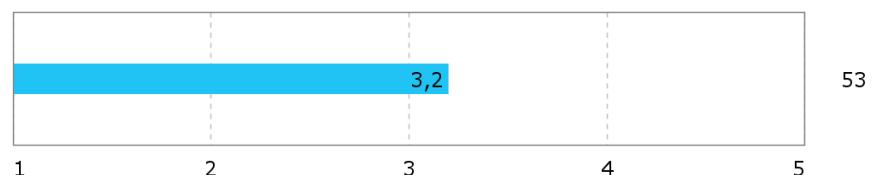


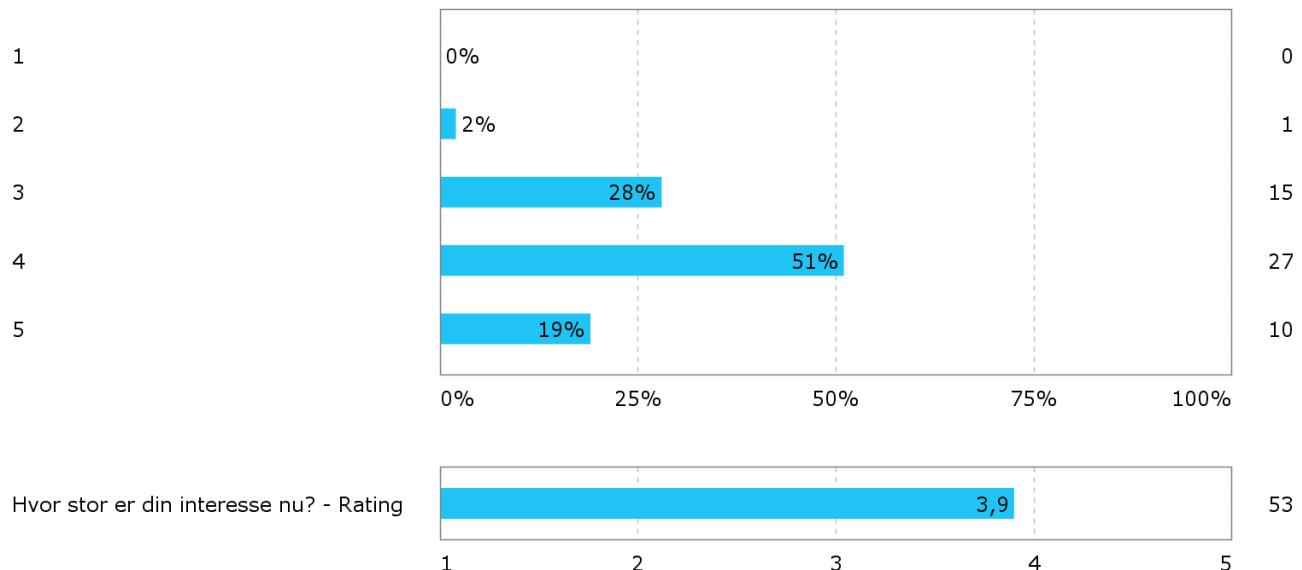
**16) Hvor aktiv har du selv været i dag? - Rating**

Hvor aktiv har du selv været i dag?  
Rating

**17) Hvor interesseret var du i natur, teknik og fysik inden du kom på EXP i dag? - Rating**

Hvor interesseret var du i natur, teknik  
og fysik inden du kom på EXP i dag?  
Rating



**17a) Hvor stor er din interesse nu? - Rating****18) Hvorfor valgte i at tage på EXP i dag?****19) Hvorfor valgte i EXP i dag fremfor andre alternativer?**

Hvorfor valgte i at tage på EXP i dag?

Dinosaurer-udstillingen

Dinosaurer-udstillingen

Pga. oplevelsen, og for at børnebørnene kan lære noget og forstå lidt mere af den verden vi lever i

Det er spændende, og børnebørnene er meget nysgerrige og informationssøgende. Det at man lærer noget er mere som en bonus

Har ikke prøvet det før

Vejret, det er spændende, vi er her 2-3 gange om året

For at kunne lege, oplevelsen, hyggen

For at have det sjovt

Søsteren (til den mandlige respondent) ville, ungerne ville, vi har årskort

Aktiviteter for børnene

Det er en fed oplevelse, alle får noget ud af det

Det er spændende, vi læster om det på internettet

Vi har ferie

Hvorfor valgte i EXP i dag fremfor andre alternativer?

Vejret + dinosaurer-udstillingen

Vejret + dinosaurer udstillingen

Fordi man er aktiv

Læren om fysik og mennesket

Fordi det lød spændende og anderledes

Fordi man er aktiv og selv kan være med, man kan prøve noget

Har været de andre steder for nylig

Vi har prøvet det andet

Søsteren valg

Det er anderledes

Nostalgi - vi (forældrene) har været her som børn og husker det som noget særligt. Og fordi man kan prøve noget.

Vi har prøvet Tivoli og ZOO - det kan man prøve alle steder. Så vi ville prøve noget nyt

Vi har været de andre steder

Hvorfor valgte i at tage på EXP i dag?	Hvorfor valgte i EXP i dag fremfor andre alternativer?
Vi er en stor flok, så det var for at tilfredsstille alle	Det er indendørs
Vejret Dino udstillingen	vejret
For at lære noget nyt på en sjov måde	vejret Dino-udstillingen
vejret det er sjovt	vejret
ferie	vejret prøve noget nyt for at hygge
ferie man kan være aktiv med børnene	-man kan være aktiv med børnene -gider ikke tivoli -skal i Zoo i morgen -sjovt med leg og læring for børnene
ferie besøg fra Jylland Dino udstillingen	for at prøve noget anderledes
for at lave noget sammen	-vejret -for at lære noget -blive underholdt på en anderledes måde
Vejret	-vejret -det er let at parkere -børnene kan godt lide dinoer
ferie for børnenes skyld	vejret
-for børnenes skyld -for at lære noget nyt -det er interessant	vejret -skal i zoo og tivoli senere på ugen
-vejret -spændende	-gad ikke de andre steder, det er ikke så lang tid siden vi sidst var i zoo og tivoli
-vejret -det er et godt sted, selv for de små børn - alle er aktive sammen	-det var et fravalg, ville hellere have været i tivoli, men det regnede
-for at lære noget -opleve noget kulturelt	vejret
-for at lære noget -hyggeligt	vejret
-for at se Dino-udstillingen -har årskort -bruger det som en indendørs legeplads	-bor i Hellerup -har årskort
ferie	hele familien kan være aktiv sammen
ferie har aldrig været her før	vejret det er indendørs
os pædagoger opstillede nogle valgmuligheder, og børnene valgte	børnene ville -for at give dem en oplevelse -alt leg på EXP er læring
For at lave noget sjovt sammen, og pga. nostalgi. Man husker det fra man var der som barn, og der var det helt fantastisk.,	Pga. vejret, og vi er tit i Tivoli så vi ville gerne prøve noget nyt. Det er anderledes.
Jeg har været her før, og mente at det kunne være spændende for børnene	Gode minder fra sidste besøg
Vi har været her for 2 år siden, hvor der var en udstilling om kondi, og det var virkelig spændende og gjorde stor indtryk. Nu var vi i København igen, og ville gerne tilbage hertil	Gode minder
Fordi vi har været her før, og der var det rigtig sjovt og spændende	Det er interessant at lære noget på denne måde, og så kan vi være aktive sammen
Barnebarnet har ferie	

### Hvorfor valgte i at tage på EXP i dag?

Børnene ville gerne

fordi det er en god kombination af underholdning og indlæring

Ferie

ville prøve noget nyt, og så er det et godt sted for de små børn

børnene elsker det

vi så en reklame i tv det er indendørs

vi var forbi forleden, men der var kø, så vi udskød det til i dag

børnene ville gerne det er ferie

der er mange muligheder for at udfolde sig, og så øger det vores viden, så der er en god dobbelt effekt!

har ikke været her før børnene ville gerne

ferie for at have en sjov dag med familien

Ferie

det er hyggeligt

det er inden for vores interessefelt børnene ville gerne det er altid spændende

interesse dino-udstillingen

dino udstillingen

### Hvorfor valgte i EXP i dag fremfor andre alternativer?

Det er sjovere end Tivoli, med fx sansebanen til børnene

det er en anderledes oplevelse, som du kun får et sted i Danmark (vi er fra Århus)

barnet ville gerne

der er mere i oplevelsen, end bare at tage i vandland, der er noget alternativ læring involveret i underholdningen

ved ikke børnene ville gerne

det er indendørs

børnene elsker dinoer, så det var for at se den nye udstilling

vi skal i tivoli i morgen og zoo har vi derhjemme.

alle kan være med, også selvom vi har mange forskellige aldre

vi har været i tivoli for at prøve noget andet

begge børn er interesserede

det var for dyrt at tage i forum og se dinoerne der, og på EXP kan man altid få tiden til at gå, og have det sjovt

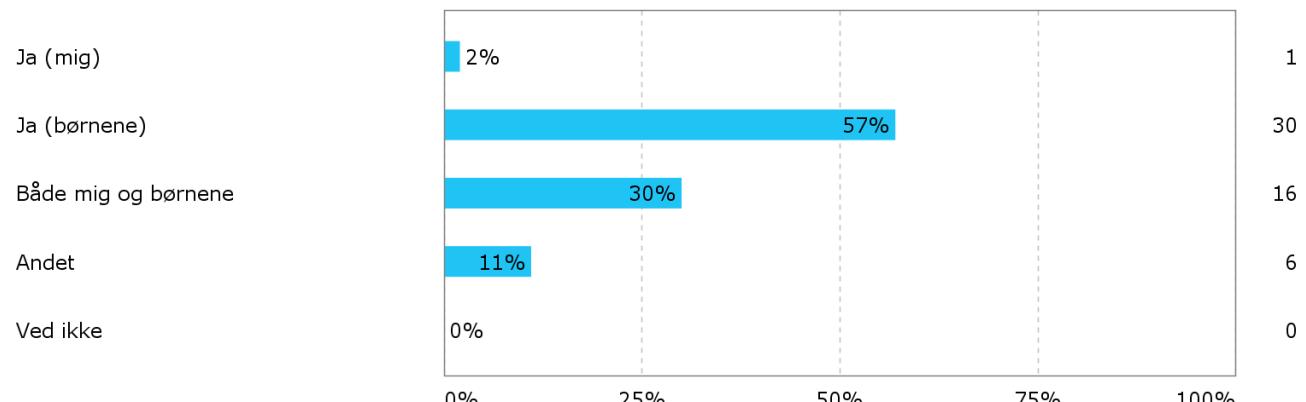
man lærer meget på EXP

det er et fedt sted, hvor børnene også oplever et element af læring

ved ikke, konen bestemte

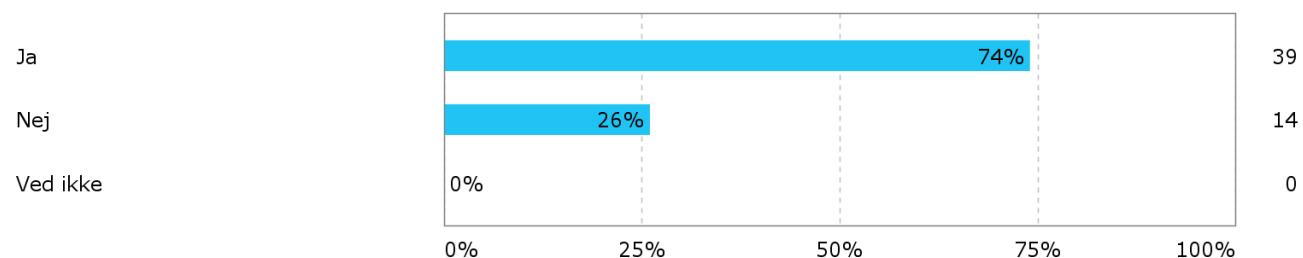
vi var lige i KBH på ferie, og EXP finder man ikke andre steder

### **20) Har i valgt at tage på EXP for at lære noget, eller for at børnene skulle lære noget?**

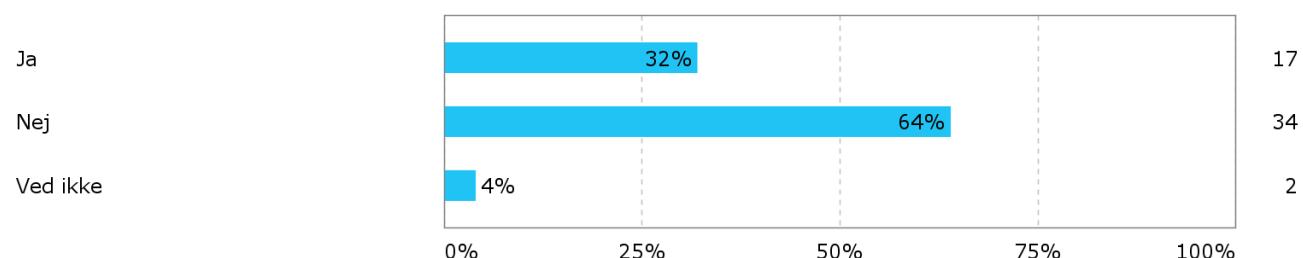


Note: "Andet" betyder "Nej".

**21) Har du lagt mærke til guiderne her på EXP? -Dem i det blå tøj.**



**22) Ved du hvad du kan bruge dem til?**



**23) Har I benyttet Jer af dem?**

**24) Hvad synes du om ideen om disse guider der går rundt, og som rent faktisk kan komme med råd til de forskellige opstillinger, og som du kan spørge om hjælp og generelle spørgsmål?**

**25) Tror du at du ville have lært mere herude hvis du kunne spørge guiderne til råds?**

Har I benyttet Jer af dem?	Hvad synes du om ideen om disse guider der går rundt, og som rent faktisk kan komme med råd til de forskellige opstillinger, og som du kan spørge om hjælp og generelle spørgsmål?	Tror du at du ville have lært mere herude hvis du kunne spørge guiderne til råds?
Nej	God ide	Ja meget, de kan hjælpe når man er i tvivl
Nej	God ide, hjælpsomt for børnene	Ja, børnene vil
Nej	God ide, men de skal være mere opsøgende	Ja
Nej	God ide for mindre børn, de kan blive hjulpet på vej	Absolut
Nej	God ide	Ja
Nej	God ide	Ja man kan forstå meningen med udstillerne, mere forståelse
Nej	Vi kunne ikke finde dem - ellers god ide, rart med ekstra uddybning	Ja

Har I benyttet Jer af dem?	Hvad synes du om ideen om disse guider der går rundt, og som rent faktisk kan komme med råd til de forskellige opstillinger, og som du kan spørge om hjælp og generelle spørgsmål?	Tror du at du ville have lært mere herude hvis du kunne spørge guiderne til råds?
Nej	Vi kunne ikke finde dem. God ide	Ja
Nej	Fint	Ja
Nej	God ide	Ja
Nej	God ide, vi kunne ikke finde dem	Ja, helt sikkert
Nej	God ide	Ja
Nej	God ide	Ja
Nej	Fint hvis man er i tvivl, de kan hjælpe, fungerer som repræsentanter på gulvet	Ja
Nej	Godt	ja
Nej	Det er en super god ide!	ja, helt sikkert
Nej	godt	nej, vi klarer det fint selv
Nej	god	nej
Nej	godt	absolut! føler mig lidt snydt, at jeg ikke vidste det på forhånd
Nej	godt	nej
Nej	super ide	ja, helt sikkert! savnede faktisk nogen at spørge om hjælp
Nej	fint	ja, er ikke så teknisk og god med alt det moderne teknik
Nej	Super ide	Ja, uden tvivl
Nej	ja	måske
Nej	god	nej, der var alt for mange mennesker
Nej	god	ja
Nej	god	ja
Nej	smart, nogle opstillinger er svære at forstå	ja
Nej	fint	ja
Nej	fint -giv dem en ny uniform i en pangfarve, så de er lettere at få øje på	ja

Har I benyttet Jer af dem?	Hvad synes du om ideen om disse guider der går rundt, og som rent faktisk kan komme med råd til de forskellige opstillinger, og som du kan spørge om hjælp og generelle spørgsmål?	Tror du at du ville have lært mere herude hvis du kunne spørge guiderne til råds?
Nej	fint	ja mange opstillinger er svære at gennemskue
Nej	God ide. Det kunne være fedt med lidt hjælp og at blive guidet i den rigtig retning	
Nej	Har ikke benyttet dem - men det er et flot tilbud, hvis man nu ikke har nogen andre man kan spørge om hjælp	Ja
Ja, de var til shows'ne og hjalp os på plads	Rigtig god ide, de var opsøgende og hjalp os rundt omkring	Ja
Ja, de har hjulpet os nogle steder	God ide	Ja
Nej, har ikke kunne finde dem	Fint, det giver muligheden for at man kan forstå lidt mere	Ja
Nej	Perfekt, så kan man spørge når man er i tvivl om hvordan tingene virker	Ja
Nej	god	ja
Nej	god ide	ja, men nok først når barnet bliver ældre
Nej	god ide, de kunne komme med gode råd og forklare de forskellige opstillinger	nej, synes egentlig ikke vi har haft brug for dem
Nej	god ide	ved ikke
Nej	god	ja
Nej	ved ikke	nej, jeg er meget passiv, da jeg har dårlig hofte
Nej	god ide	ja, men vi har også brugt dem før, og det fik vi rigtig meget ud af
Nej	godt	tror det ikke, vil hellere bare passe os selv
Nej	god	nej, der var for mange mennesker
Nej	god ide	nej, synes ikke vi havde brug for dem
Nej	god ide	nej

Har I benyttet Jer af dem?

Hvad synes du om ideen om disse guider der går rundt, og som rent faktisk kan komme med råd til de forskellige opstillinger, og som du kan spørge om hjælp og generelle spørgsmål?

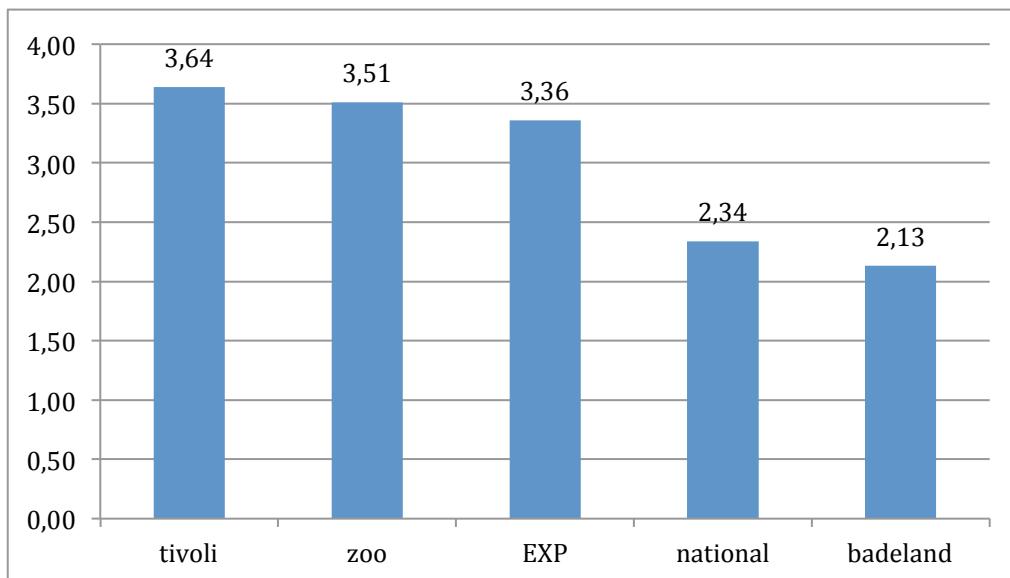
Tror du at du ville have lært mere herude hvis du kunne spørge guiderne til råds?

Nej	god ide	ja, helt bestemt
Nej	det er da en ok ide	ja
Nej	god	ved ikke
Nej	jo, det er en god ide, der var nogle opstillinger der var svære at gennemskue og få til at virke	ja, men guiderne skulle have været mere synlige

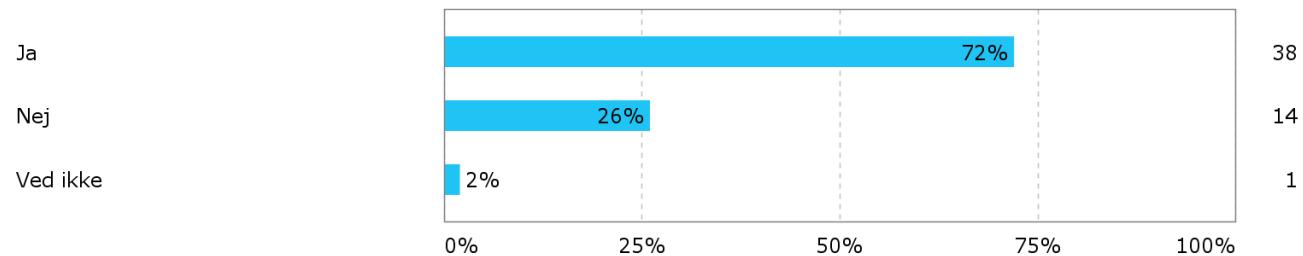
**26) Hvor vil du hen næste gang du skal ud med familien – prioriteret rækkefølge?**

Prioritet	Tivoli	Zoo	Experimentarium	National museet	Badeland
1	19	16	6	6	6
2	14	12	16	6	4
3	7	12	24	6	4
4	8	9	5	17	16
5	5	4	2	18	23

Jeg har ”inverted” resultaterne i nedenstående søjlediagram, så den højeste prioritering giver en værdi på 5 og den laveste prioritering giver en værdi på 1.



**27) Ville du have lyst til at komme igen hvis EXP fremstår uforandret ved næste besøg?**



Ville du have lyst til at komme igen hvis EXP fremstår uforandret ved næste besøg?

Hvorfor?

- Ja Det er sjovt, og der er meget vi ikke har prøvet endnu
- Ja Billigere end Tivoli
- Ja Det er spændende, men vi vil også gerne have nye ting
- Ja Jeg har ikke været her før
- Ja
- Ja Det er sjovt
- Ja
- Ja Vil gerne prøve nogle nye ting
- Ja en stor legeplads meget lærerigt
- Ja det er en sjovt sted hvor man kan være aktiv sammen med børnene
- Ja det er sjovt spændende man kan være aktiv med børnene
- Ja spændende
- Ved ikke
- Nej der skulle komme en ny udstilling
- Ja det var sjovt
- Nej ny udstilling
- Nej dino udstillingen var meget dårlig
- Nej udstillingen skal skiftes
- Ja det var sjovt
- Nej ny udstilling

Ville du have lyst til at komme igen hvis EXP fremstår uforandret ved næste besøg?	Hvorfor?
Ja	det var sjovt og hyggeligt
Ja	fordi det er sjove, alle kan deltage og fordi man lærer noget på en sjov måde
Ja	årskort
Ja	det er sjovt, der er stadig meget at opleve og lære
Ja	fordi det er sjovt
Ja	det er sjovt
Nej	Der måtte gerne ske noget nyt, nu synes jeg ligesom vi har oplevet og prøvet det der er i dag
Ja	
Nej	Vi vil gerne se nye ting, ligesom vi havde forventet noget nyt fra da vi var her sidste gang
Nej	Der skal ske noget nyt, for nu har vi prøvet det der er her nu
Ja	
Ja	
Nej	der skulle komme en ny udstilling
Ja	det er ikke så meget speciale-udstillingen der trækker, men oplevelsen generelt
Ja	det er meget spændende, og man opdager og lærer altid noget nyt
Ja	det er spændende, men kommer helt sikkert igen når der kommer en ny udstilling
Ja	man kan jo altid lære noget nyt
Nej	er for gammel, er her kun fordi familien fra Jylland kom på besøg
Nej	ny udstilling og mindre mennesker
Nej	ny udstilling
Ja	man kan jo altid lære noget almindelig nysgerrighed
Ja	det er ikke særudstillingen der er hovedattraktionen, men alt det andet.
Ja	det var sjovt
Ja	det er altid underholdene at være herude
Ja	man kan altid lære noget nyt
Ja	for at dyrke det noget mere
Nej	det skal ske noget nyt

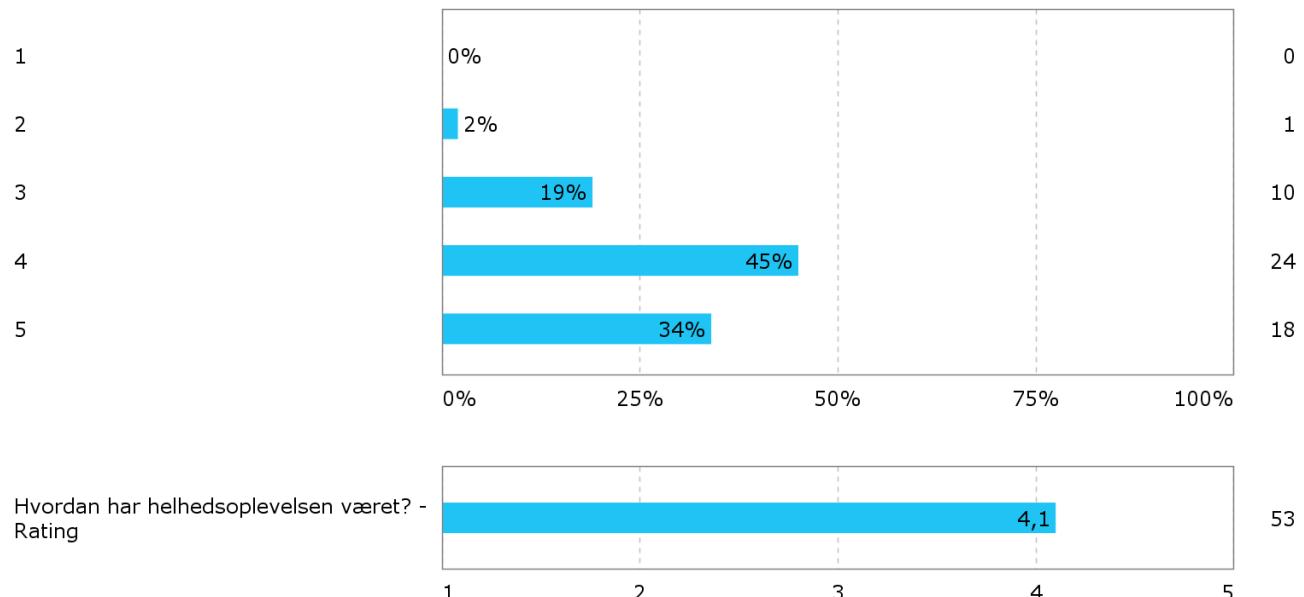
**28) Hvilke forventninger havde du til dit besøg i dag?**

**29) Har besøget levet op til dine forventninger?**

Hvilke forventninger havde du til dit besøg i dag?	Har besøget levet op til dine forventninger? (Ja/nej...)
Sjovt og lærerigt	Ja
Sjov, hygge og aktiviteter	Ja
At børnene skulle hygge sig, oplevelsen, lære noget	Ja
Sjovt og lærerigt for børnene	Ja
At det ville være sjovt	Ja
Hyggelig dag	Ja, i højeste grad
Prøve en masse sjove ting	Ja
En hyggelig dag og prøve noget sjovt	Ja
At det ville være sjovt, spændende, viden om naturkræfterne	Ja
Sjove ting, tiden går, det er anderledes - det er ikke det lærerige vi går efter	Absolut
At alle i familien ville få noget ud af det	Ja
Ikke store	Overgået forventningerne i stor grad
Oplevelser + underholdning	Ja
høje forventninger	Ja Meget!
Gode	ja, i den grad!
at have det sjovt	ja
se noget nyt	nej, det var bedre sidste gang
hygge os have det sjovt lære noget nyt især børnene	ja
stor dino udstilling	nej dino udstillingen var skuffende
-lære noget -være aktiv -hygge	ja
at opleve/se en masse forsøg og forskellige ting	ja det var rigtig godt
at have en god dag	nej dino udstillingen var meget dårlig
at lære noget	ja
at se dino udstillingen	ja den overgik dem, vi har haft en super dag!
at kunne være aktive med børnene	ja
ikke det store	ja, det var langt bedre end forventet
ved ikke	ja det var godt
at se dino udstillingen	ja, det var godt
at se noget tjubang	ja
at surfe og hygge	ja
give børnene gode oplevelser	ja
En hyggelig dag, og at lave noget sammen	Ja, det har været sjovt og tankevækkende

Hvilke forventninger havde du til dit besøg i dag?	Har besøget levet op til dine forventninger? (Ja/nej...)
Jeg har glædet mig til at høre om drengenes oplevelse	Ja
At vi fik bevæget kroppen, og havde det sjovt	Ja
at det ville være sjovt og spændende	Ja
At vi ville opleve noget og have det hyggeligt sammen	Ja
At vi kunne hygge os - lidt af det hele faktisk. Der har bare været for mange mennesker til at man kunne lære noget og fordybe sig i tingene	Ja
at blive underholdt og blive klogere	ja
at blive underholdt, lære noget, have en god tur og komme lidt væk	ja
at have en hyggelig dag	ja
de var moderate	ja
at have en super dag, hvor både børnene og de store kan være med og lære noget	ja
have en god dag, og se hvad Experimentarium er for noget	ja, det har været en god dag, og her er rigtig flot
ved ikke	ved ikke blev skuffet over hvor lille dino udstillingen var, og synes den var dårlig men det er en god "legeplads" til børnene
at få en god dag	ja
at få en anderledes oplevelse	ja, men næste gang kommer vi en dag hvor der ikke er så mange mennesker, og så bliver den nok endnu bedre!
at have en hyggelig dag	ja
at have det sjovt	ja
at der havde været færre mennesker	nej
Gode	ja
at børnene ville være underholdt	ja
at se dino udstillingen at lære noget nyt og blive klogere	Ja

### 30) Hvordan har helhedsoplevelsen været? - Rating

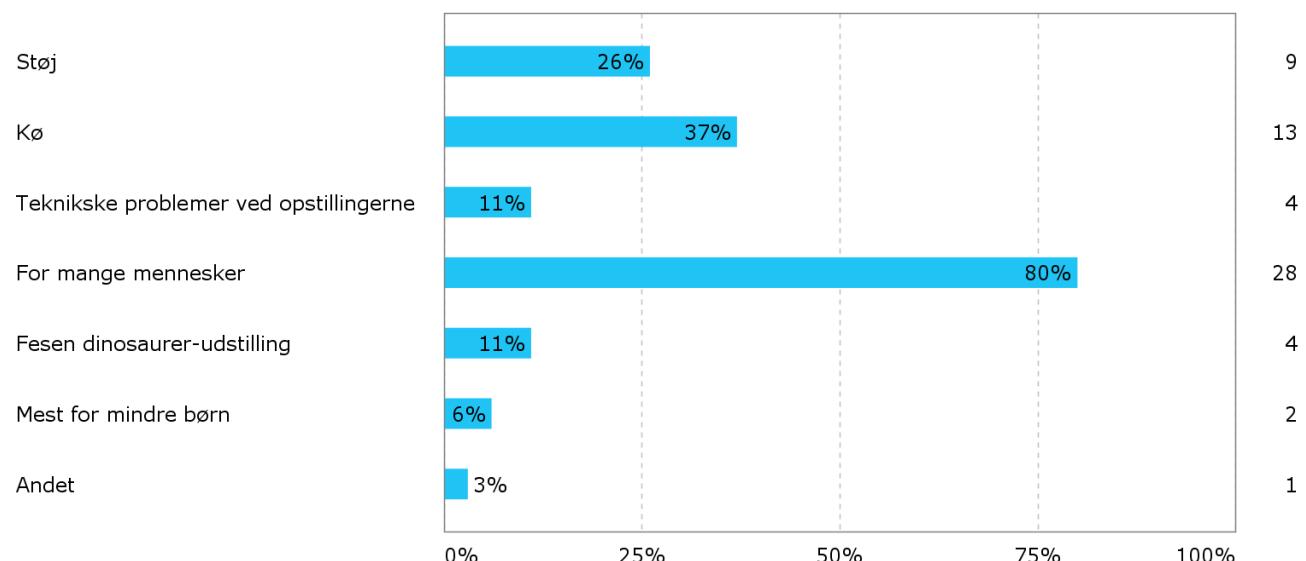


### 31) Hvis ”5” ikke blev valgt: Hvorfor var helhedsoplevelsen ikke til en 5'er?

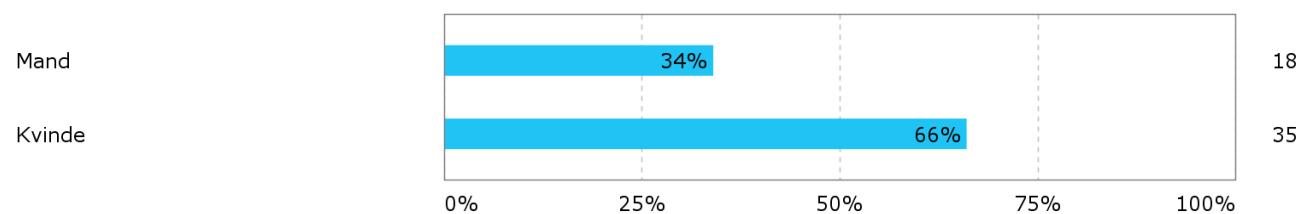
- Der har været for mange mennesker i dag, så man har ikke haft mulighed for at fordybe sig
- Mangler guiderne så man kan få mere viden
- Vi manglede uddybende informationer nogle steder, der var for meget spildtid ved Fysikshowet med at skulle hente ting os hælde op osv. De små børn mister hurtigt koncentrationen
- Vi forventede oplevelser og underholdning, men vi forventede ikke egentlig læring
- toiletforholdende er dårlige mangler borde og bænke i forhallen generelt haltede de praktiske ting
- mange mennesker, men vi kom hurtigt til de forskellige opstillinger man må selv tage mad med
- Dino- og vandudstillingerne var lidt kedelige end forventet -før skete der mere
- Vi ville gerne have vidst det med guiderne inden vi kom, så ville vi nok have fået mere ud af det
- Dinoudstillingen var lille -der var lang ventetid i cafeen og pladsmangel
- Savnede hjælp/forklaring til nogle opstillinger -guiderne var ikke synlige nok -ingen køkultur - meget støj
- Der var meget lang kø i cafeen, ingen siddeplader og der manglede service
- Manglede noget mere co-creation, altså noget hvor man selv kunne være med til at skabe noget, og ikke blot trykke på en knap og se noget ske. -der var mange forklaringer der var svære at forstå, det kunne have været rart med disse guider. -guiderne var ikke synlige nok
- Meget støj
- Det kunne godt have været færre mennesker
- Der var alt for mange mennesker
- Alt for mange mennesker
- Der var mange mennesker
- Alt for mange mennesker skal holde meget øje med børnene når der er så mange
- Ville gerne have "mødt en spastiker" men nåede det ikke -det var ikke til at komme til -alt for mange mennesker -støj
- Parkeringsforholdene var dårlige
- Her har været for mange mennesker, og så mange mennesker hvert sted at man nærmeste ikke har kunne være bekendt at fordybe sig

- Cafeteriet var virkelig ikke lækkert, og man havde slet ikke lyst til at spise der. Og så var der alt for mange mennesker, det var ikke til at få bord. Og så har der ikke været garderobeskabe nok.
- Når der er så mange mennesker, er der flere ting der ikke virker og det er irriterende. Det var ikke til at få en P-plads, og der var ikke mere plads i garderoben
- Ved ikke
- Jeg var meget træt
- Der mangler lidt fornyelse i den stationære udstilling og der var mange tekniske problemer
- det har været en dejlig dag, det er flot lavet og børnene elsker det
- Alt for mange mennesker ingen ledige borde i cafeen billetprisen er for dyr
- Jeg synes det var meget dyrt, og svært at gennemskue årskortpriserne
- I lukker meget tidligt, og vi ville gerne have haft mere tid til at fordybe os i oplevelsen

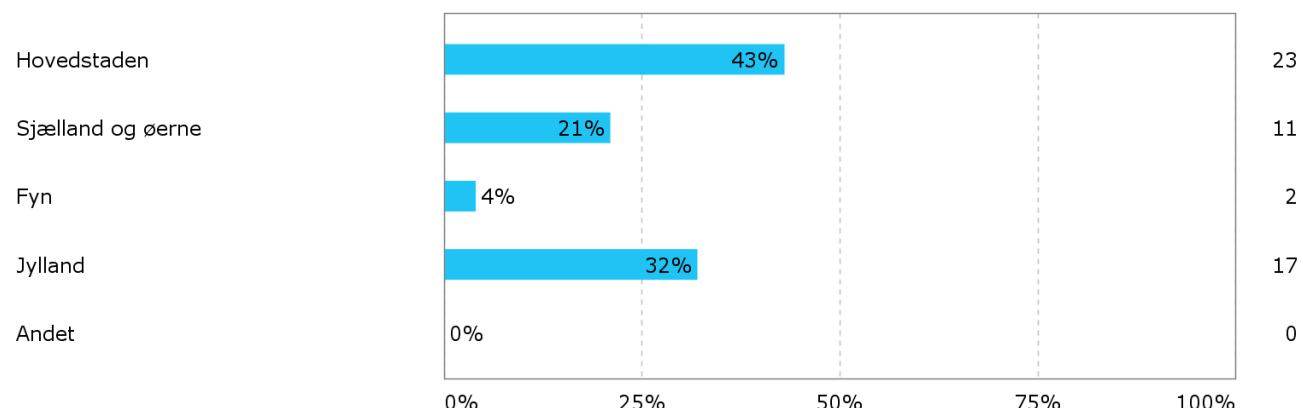
### 32) Hvilke gener har der været i dag?



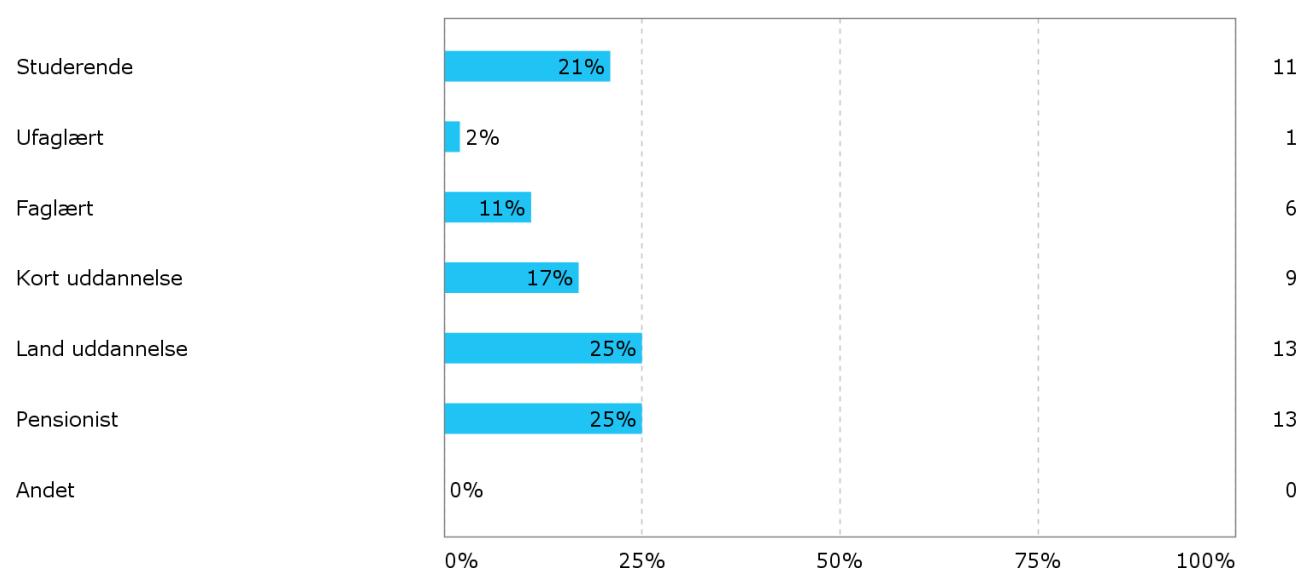
### Køn?



## Bopæl?



## Uddannelse?



## **Appendix 3: Interviews**

### **Appendix 3.1: Guide for the interviews conducted at the Experimentarium**

Navn, stilling, alder.

- 1) Hvem har du været på EXP sammen med?

#### **Læring**

- 2) Hvad har I fået ud af Jeres besøg?
  - a. Har I lært noget I ikke vidste i forvejen?
- 3) Er der nogen af de ting i har lært eller oplevet på EXP som I har tænkt nærmere over?
  - a. Tror du noget af det i har oplevet i dag vil påvirke jer fremadrettet?

#### **Forventninger**

- 4) Hvilke forventninger havde I til jeres besøg?
- 5) Har besøget levet op til Jeres forventninger?
  - a. Hvorfor?
  - b. Hvordan har helhedsoplevelsen været?

#### **Præferencer**

- 6) Hvorfor har I valgt at tage på EXP?
  - a. Er det noget specielt I er kommet for (specifik ting vs. Helheden)
  - b. Er det for at børnene skal lære noget?
  - c. Får I som voksne noget ud af det?

Når I skal ud med familien er der også ZOO og Tivoli som muligheder.

- 7) Hvordan synes I EXP adskiller sig fra Tivoli og ZOO?
  - a. Hvorfor vælge Experimentarium?
- 8) Hvem bestemte at I skulle på EXP i dag?
  - a. Hvem bestemmer hvad familien skal?

#### **Fluency**

- 9) Hvordan er det gået med at finde ud af hvordan tingene og opstillingerne fungerer?
  - a. Har I haft problemer undervejs, eller ting I har droppet fordi I ikke kunne finde ud af dem?
- 10) Har I lagt mærke til guiderne på EXP – dem i det blå tøj?
- 11) Ved I hvad I kan bruge dem til?
- 12) Har I benyttet jer af dem?

a. Hvordan fungerede det?

#### **Co-creation**

- 13) Hvad kunne have gjort oplevelsen i dag bedre?
- 14) Noget du har savnet ved jeres besøg i forhold til opstillingerne og de ting man kan lave?
- 15) Har du savnet at i blev engageret og involveret mere end i har været?
- 16) Synes du at det er EXP der har bestemt hvordan jeres dag skulle forløbe eller har i selv skabt oplevelserne?
- 17) Har du følt der har været et bestemt mønster eller rækkefølge i har skulle følge herude?
  - a. Hvis nej, savner du et mønster – en eller anden vejledning/instruktion til hvordan man tilrettelægger sit besøg
- 18) Gener – ting der ikke fungerede så godt
- 19) Billetpriser – sammenlignet med Tivoli og ZOO

## **Appendix 3.2: Guide for the interviews conducted four days after visiting the Experimentarium**

Navn, stilling, alder

- 1) Hvem har du været på EXP sammen med?

### **Forventninger**

- 1) Hvilke forventninger havde I til jeres besøg?
- 2) Har besøget levet op til Jeres forventninger?
  - a. Hvordan har helhedsoplevelsen været?

### **Præferencer**

- 3) Hvorfor valgte I at tage på EXP?
  - a. Er det noget specielt I er kommet for?
  - b. Er det for at børnene skal lære noget?
  - c. Får I som voksne noget ud af det?
  - d. Er det sjovt for voksne?

Når I skal ud med familien er der også ZOO og Tivoli som muligheder.

- 4) Hvordan synes I EXP adskiller sig fra Tivoli og ZOO?
  - a. Hvorfor vælge Experimentarium?
  - b. Hvad er særligt ved Experimentarium?
  - c. Synes du at der er forskel i oplevelsen de forskellige steder?
  - d. Kræver det mere af forældrene at tage på EXP fremfor andre steder?
  - e. Hvornår vælger man EXP fremfor andre alternativer?
- 5) Hvem bestemte at I skulle på EXP?
  - a. Hvem bestemmer hvad familien skal?

### **Læring**

- 1) Hvad har I fået ud af Jeres besøg?
  - a. Er i taget på EXP for at lære noget?
- 2) Har I lært noget I ikke vidste i forvejen?
  - a. Tror du at du har lært noget, men måske har svært ved at sætte ord på?
- 3) Hvor aktive var I under jeres besøg?
  - a. Tror du man lærer mere når man aktivt deltager fremfor at læse om tingene i en bog?
- 4) Er der nogen af de ting i har lært eller oplevet på EXP som I har tænkt nærmere over siden i kom hjem?
  - a. Har det påvirket Jer på nogen måde eller haft en effekt på jeres hverdag?
  - b. Tror du noget af det i har oplevet vil påvirke jer fremadrettet?

- c. Hvornår begyndte I at tænke over det?

### **Fluency**

- 5) Hvordan gik det med at finde ud af hvordan tingene og opstillingerne fungerer?
  - a. Har I haft problemer undervejs, eller ting I har droppet fordi I ikke kunne finde ud af dem?
- 6) Har I lagt mærke til guiderne på EXP – dem i det blå tøj?
- 7) Ved I hvad I kan bruge dem til?
- 8) Har i benyttet Jer af dem?
  - a. Hvordan fungerede det?
  - b. Har I savnet nogen der gik rundt og opsøgte jer?

### **Co-creation**

- 9) Hvad kunne have gjort oplevelsen i dag bedre?
- 10) Noget du har savnet ved jeres besøg i forhold til opstillingerne og de ting man kan lave?
- 11) Har du savnet at i blev engageret og involveret mere end i har været?
  - a. Har i savnet at skabe jeres egne oplevelser?
- 12) Synes du at det er EXP der har bestemt hvordan jeres dag skulle forløbe eller har i selv skabt oplevelserne?
- 13) Har du følt der har været et bestemt mønster eller rækkefølge i har skulle følge herude?
  - a. Hvis nej, savner du et mønster – en eller anden vejledning/instruktion til hvordan man tilrettelægger sit besøg
- 14) Gener – ting der ikke fungerede så godt
- 15) Billetpriser – sammenlignet med Tivoli og ZOO
- 16) Er det de små oplevelser der gør indtryk eller er det helhedsoplevelsen?
- 17) Kunne du tænke dig at jeres besøg på en måde fortsatte efter i kom hjem, fx at i kunne
- 18) Ville I have lyst til at komme igen og igen på Experimentarium hvis altig fremstår uforandret?
- 19) Har I haft tid og ro til at fordybe Jer i oplevelserne?

### **Appendix 3.3: Interview with Christine at the Experimentarium**

**Interview with Christine, 23th of October 2012**

**Place: Conference room at the Experimentarium**

**Age: 36**

**Position: Hotel receptionist**

*Og vi har lige fået klaret alder og navn og hvad vi skriver om.*

*Ja.*

*Perfekt. Så vil vi bare gerne lige høre hvem du har væretude på Experimentarium med i dag?*

Jeg har været af sted med min far, og min søster, min datter og min søsters to drenge.

*Hvor gammel er børnene?*

De er fra... Ja den yngste er 4, så den næste er 5 og den sidste er 7.

*Ja. Hvad har I fået ud af jeres besøg herude i dag?*

Ja, børnene har lært noget om dinosaurus, eller dinosaurer, og så har de jo hygget sig og leget med vand og musik og... Ja, sansetunnel og så videre.

*Ja. Hvad med jer voksne? Hvad har I fået ud af det i dag, jeres besøg?*

Ja hvad...

*Der er ikke noget forkert.*

Det er ikke så længe siden jeg har været her sidst så øh, jeg kender jo de fleste af tingene herude. Øh ja, jeg har da lært noget om dinosaurerne.

*Ja.*

Jeg var faktisk slet ikke klar over at de var blevet udslettet af en meteor. Det ved jeg så nu.

*Ja. Jeg vidste det faktisk heller ikke, så det er spændende at man kan lære noget.*

*Ja.*

*Ja. Er der nogen af de ting I har oplevet her på Experimentarium i dag som I har tænkt nærmere over? Sådan lidt dybere?*

(Længere tænkepause).

Nej, egentlig ikke andet end den meteor der.

*Nej. Det er mere fordi at vi tænker om der er en eller anden lille ting som måske trigger noget som det er at du tænker over fremafrettet i din hverdag, men det gør du nok ikke over meteoren?*

Nej, jeg satser ikke på at der lige kommer sådan en meteor i min levetid i hvert fald.

*Nej, men tror du at der noget af det I har oplevet her i dag som måske fremadrettet kunne påvirke jer i jeres hverdag, måske også børnenes hverdag? Altså et eller andet som man tager med sig herfra?*

Ja, altså ja, men det er jo svært at... Det tror jeg fordi, at de finder ud af hvordan nogle ting fungerer, hvordan vand, altså elementet, hvordan det med vind og laver bølger og sådan noget ik'?

*Ja.*

Så det tror jeg helt klart at de, altså de lærer noget af det, men altså om de lige bruger det i morgen til et eller andet derhjemme, det ved jeg ikke.

*Det er også svært at sige nu, men om det var noget man lige umiddelbart kunne forestille sig. Ja.*

*Så er det generelt hvilke forventninger havde I til jeres besøg i dag, inden I kom?*

Vores forventninger var egentlig at vi bare skulle hygge os og have det sjovt, både børn og voksne. Og det er jo det det kan herude, synes jeg. Altså både for børn, men også for os der er voksne.

*Ja. Har besøget så levet op til forventningerne?*

Ja det synes jeg.

*Kan du komme med nogen konkrete eksempler på hvordan at det har opfyldt jeres forventninger?*

Altså der har... Øh, hvis du for eksempel er på en anden form for museum, så suser ungerne igennem det på en nul komma fem, man får ikke lov til at stå og læse skilte og sådan noget. Her er der så meget som ungerne kan blive grebet af, så de voksne også kan nå at læse og sætte sig ind i måske... Måske ser vi de samme ting, men de voksne får noget andet ud af det end børnene får ud af det, tror jeg egentlig, men ikke på nogen dårlig måde.

*Ja, havde I forventet at I ville lære noget da I tog herud i dag, eller var det sådan primært bare for sjov og underholdning?*

Nej jeg forventer altid at man får noget viden ud af det.

*Ja.*

Ja, herude.

*Hvordan har helhedsoplevelsen været herude i dag?*

Den har været god, og jeg er glad for at vi valgte den her uge og ikke sidste uge.

*Der var virkelig mange mennesker. Vi var også herude og det var helt vildt. Der var otte gange så mange som der var i dag, eller som der hidtil har været i dag. Så det var bonusinfo.*

*Ja.*

*Så vil vi gerne høre lidt om hvorfor I valgte at tage på Experimentarium i dag?*

Det gjorde vi fordi, at vi ville lave noget for både vi og børnene synes var sjovt, og som både piger og drenge synes var sjovt. Altså vi har for eksempel været på Kronborg også hvor der var sådan noget riddertema, som både Sofie og drengene syntes var sjovt. Og så skulle vi ligesom prøve noget nyt og så tænkte vi at herude, der er der noget for alle.

*Er der noget specifikt I er kommet for at se herude eller er det hele oplevelsen I er gået efter?*

Det er hele oplevelsen.

*Ja, og var det et element, da I valgte netop Experimentarium, at det var vigtigt for jer at børnene lærte noget?*

Ja det var det. Altså nu har vi for eksempel også planlagt en tur vi skal på til december og det skal så være i Planetarium. Altså det er jo også noget som både piger og drenge kan syntes er sjovt.

*Har I som voksne fået noget ud af dagen i dag?*

(Længere tænkepause).

Ja. Ja, det synes jeg. Det synes jeg. Altså jeg har da lært noget om dinosaurer som ja...

*Ja. Super. Hvis nu I som i dag erude med familien, så er der jo for eksempel også Zoologisk Have og Tivoli som muligheder. Hvorfor har I valgt Experimentarium i dag frem for, for eksempel Zoologisk Have eller Tivoli?*

For at være helt ærlig, så med Zoologisk Have har min søster årskort derind til, så der har vi været jeg ved ikke hvor mange gange snart ik'? Så, altså ja... Og Tivoli, jamen det er bare... Ja, det er bare Tivoli. Det er jo bare underholdning altså, kan man sige. Det er mere sjovt, synes jeg, at der lidt fornuft i det på en eller anden måde også.

*Ja. Så du ser ligesom Experimentarium som det fornuftige?*

Ja jeg ser det lidt som læring. Læring med sjov eller hvad man skal sige.

*Ja, hvordan synes I at Experimentarium adskiller sig fra Zoologisk Have og Tivoli? Nu kører vi rundt i det samme, men hvad er forskellene?*

Her skal man være aktiv deltagende i de forskellige ting. Det skal man jo ikke på samme måde.

Der bliver man bare kørt rundt, kan man sige ik'?

*Ja, hvem bestemte at I skulle herud i dag?*

Det fandt vi ud af sammen. Det var nok mest mig og min søster som forældre ik', der fandt ud af at det kunne være sjovt at tage herud.

*Hvorfor valgte I at I skulle herud?*

Det var netop for, at det var noget hvor vi alle sammen kunne få noget ud af det, på hver vores måde.

*Har børnene haft nogen indflydelse? Eller er det bare jer der har?*

Nej det har de egentlig ikke, for jeg er ikke engang sikker på at de vidste at det her eksisterede.

*Nej okay, så det er måske første gang at de er med herude?*

Ja det er første gang at de med ja.

*Okay.*

Vi var faktisk lidt i tvivl om den mindste på 4 var for lille, men det har vist sig at det er han i hvert fald ikke.

*Okay det er dejligt at han også har haft det sjovt.*

Ja.

*Synes I at det sådan er med Experimentarium at det er for alle aldre?*

Ja.

*Ja.*

Ja det synes jeg.

*Så alle kan få noget ud af det uanset alder?*

Ja.

*Eller i hvert fald 4 år og op?*

Ja.

*Hvordan synes I ellers at det er gået med at finde ud af hvordan tingene og opstillingerne fungerer herude på Experimentarium? Opstillinger det kalder vi, du ved, alle sådan nogle små...*

Ja. Ja det synes jeg har været rimelig nemt og overskueligt.

*Ja.*

Men vi snakkede faktisk om, lige inden jeg kom herind, det var at hvis man skulle igennem alle tingene i hele Experimentarium, så skulle man jo bruge flere dage nærmest.

*Ja.*

Altså der er virkelig mange ting.

*Ja. Synes I at det er positivt?*

Jamen det synes jeg egentlig, ja.

*Ja. Hvorfor?*

Fordi at så kan man komme igen en anden gang, og så kan man få en ny oplevelse ud af det ved at se de ting man ikke fik afprøvet sidst man var der.

*Ja. Er der nogen, har I haft nogle problemer undervejs? Har der været nogen opstillinger hvor der har været noget teknisk eller noget I ikke forstod, så I for eksempel blev nødt til at droppe en opstilling eller?*

Nej.

*Nej. Jamen fantastisk. Så det hele har sådan været til at finde ud af og gennemskue?*

Ja.

*Alle tiders. Det er simpelthen super. Har I lagt mærke til guiderne der går rundt her på Experimentarium?*

Ja.

*Dem i det blå tøj?*

Ja.

*Ved du hvad I kan bruge dem til?*

Jeg tænker at hvis man er i tvivl om hvad meningen er med nogen af de der opstillinger som du kalder det, så kan man spørge dem. Det er det jeg tænker at de er der for.

*Lige præcis. Og det er ikke nogen i har brugt i dag?*

Nej.

*Har I haft brug for at bruge dem?*

Nej.

*Så I har ikke savnet nogen vejledning på noget tidspunkt, et eller andet hvor de, hvad kan man sige, blander sig eller går ind og deltager og siger I kan gøre sådan her eller I kan give det an? Det har simpelthen fungeret fint?*

Ja det synes jeg. Ja det synes jeg.

*Super. Er der noget i dag som kunne have været med til at gøre jeres oplevelse endnu bedre?*

Nej det kan jeg ikke lige se hvad det skulle være, altså bare velkomsten da vi kom ind af døren med hende damen der straks forklarede om dinosaurer, altså det var jo en... En helt wow.

*Ja, det var faktisk marketingschefen tror jeg.*

Okay.

*Var det ikke? Jo det var.*

Det var virkelig okay.

*Ja det var faktisk en bonus, fordi at det er ikke lige det gængse at hun står dernede og man får sådan en velkomst.*

Ja det var virkelig... Det var stort.

*Ja jeg lagde godt mærke til det, hvor hun spurgte børnene sådan det største tal de kan sige og så sagde de sådan millioner milliarder, eller et eller andet. Det var meget sjovt lige at se.*

Ja ja.

*Er der noget I har savnet I jeres besøg i forbindelse med opstillinger? Er der noget I godt kunne tænke jer at der havde været noget om, eller noget specielt ved nogen opstillinger I synes I har manglet eller I har godt syntes kunne være sjove at have?*

Nej, nej det synes jeg altså ikke.

*Nej, det er helt fint. Og så igen lidt, om I kunne tænke jer et mere element med at blive engageret, involveret mere i oplevelsen end I er blevet herude i dag?*

Næh, for jeg synes faktisk at man er så engageret som man næsten kan blive.

*Ja.*

Altså både fysisk og hjernemæssigt, skulle jeg til at sige.

*Ja.*

*Ja.*

*Ja. Har I savnet at skabe et eller andet, altså at I har været med til at bygge et eller andet op, eller at der er kommet noget nyt ud af det kan man sige? Hvis du forstår hvad jeg mener?*

Ja, men jeg forstår godt, men nej. Det er ikke noget vi sådan, eller jeg har tænkt over, nej.

*Nej, alle tiders. Føler du at Experimentarium har bestemt hvordan jeres dag herude skulle forløbe, eller du ved sat rammerne for, eller er jer selv der sådan er kommet ind og så har valgt hvor I skulle gå hen eller hvad I skulle gøre?*

Altså man kan jo sige, nej jeg føler ikke at det er Experimentarium, jeg føler at det er ungerne. Vi har bare fulgt efter dem.

*Ja, ja.*

Altså så har vi forklaret. Hvad er det, hvad er det? Det er sådan og sådan ik'?

*Så det er ligesom jer i fællesskab der, kan man sige, I har skabt oplevelsen, at det ikke er sådan noget der er blevet dikteret ovenfra?*

Nej.

*Nej. Har I følt at der har været et bestemt mønster eller rækkefølge man skulle gå igennem Experimentarium herude, eller følge rundt?*

Nja, næh, men det er sjovt jeg går egentlig altid den samme vej rundt, men øh... Men nej, ikke en jeg føler der er dikteret.

*Nej.*

*Nej.*

*Hvordan synes du at det fungerer med at man sådan kan gå lidt frem og tilbage eller zigzag eller hvad man vil?*

Det synes jeg fungerer fint. At det ikke er sådan ja, en guidet tur kan man sige.

*Ja, ja.*

At man kan vende tilbage, også netop at man kan sige til ungerne, at fordi at vi så endte rimelig tidligt nede ved, jeg kalder det legeafdelingen, nede ved vandafdelingen og det. Altså at man kan sige til dem at nu tager vi lige og går lidt mere denne her vej, så går vi tilbage bagefter.

*Ja.*

Og så, ja at det ikke ligesom sådan er overstået når man er gået forbi. Det er jo fint nok at man kan vende retur.

*Så har I savnet sådan, altså nu, men I har ikke savnet sådan at der har været en eller anden vejledning eller instruktion eller en den her vej skal I følge?*

*Nej*

*Det er måske tværtimod...*

Det jeg synes er fedt at man bare kan hoppe fra det ene til det andet som det lige passer en.

*Ja, har der ellers i dag været en, været nogen gener ved jeres besøg, eller nogen ting som ikke har fungeret så godt?*

(Længere tænkepause).

*Nej.*

*Nej.*

*Nej.*

*Det var da dejligt. Nu ved jeg godt at I har fået indgangen gratis i dag, men generelt hvad synes I om billetpriserne herude?*

Jeg synes jo at de er dyre.

*Ja.*

Det synes jeg, altså når man tænker på tre voksne og, altså jeg tænker at vi tager et interview og vi har sparet 800 kr. ik'?

*Det er mange penge.*

Altså det er rigtig mange penge.

*Ja.*

Det synes jeg.

*Altså hvad synes du at en rimelig billetpris ville være herude?*

Hvad er det? Det er 105 og 165, er det ikke sådan det er?

*Jo.*

Jeg synes 105 for børn... Jeg synes børnepriserne de er vanvittige.

*Ja.*

Det synes jeg. Jeg kunne forstå hvis de kostede 75 eller 85 måske, og så voksenpriser måske lige 100-120 eller sådan noget.

*Ja.*

Synes jeg. Altså jeg ved faktisk ikke engang hvad det koster i Zoologisk Have, men det er i hvert fald, tror jeg, billigere.

*Generelt...*

Selvom man måske ikke helt kan sammenligne stederne.

*Men ja, stadigvæk hvad det koster en dag ude for familien.*

*Ja.*

*Ja. Jeg har også sådan lige, i forhold til Experimentarium i helhed. Synes I at det er små forskellige opstillinger der er vigtige eller er det mere helhedsfornemmelsen? Altså hvad er det der gør indtryk når man går herfra? Er det bestemte ting, eller er det sådan..*

Nej det der har gjort indtryk når man går herfra, det er at der har været så mange ting man har kunne fordybe sig i, altså at det hele ikke kun har handlet om vand, eller kun handlet om noget andet. Altså at... Ja det er det at der er mange forskellige ting som kan, hvad kan man sige, folk og børn har jo også forskellige interesser med hvad de synes er spændende. Nogen synes måske at det er det med musik og så videre at det er rigtig spændende og nogen synes måske at det med hjertet og sådan noget er spændende ik'?

*Ja.*

Så det synes jeg er, der er noget for alle.

*Okay. Ville I have lyst til at komme igen og igen herude, hvis nu altting står uforandret ved de næste besøg?*

Ja det tror jeg. For jeg tror også at aldersmæssigt får man noget nyt ud af tingene.

*Så det kan være man er altså, at man lærer noget den ene dag og så..*

Altså det kan godt være at man lige altså... Ja jo, hvis nu jeg boede tættere på så kunne man godt... Jeg har en veninde som bor lige herover, og de har årskort herud til, fordi hun siger at det er bedre end at tage ud på legepladsen.

*Ja.*

Altså ik'?

*Det er jo virkelig smart.*

Ja. Jeg bor i Roskilde, det er lige lidt længere væk, og der vil jeg sige at tage en tur herud en gang om året, det ville ungerne også synes var fedt, selvom det er de samme ting.

*Ja okay. Cool. Så bare lige jeg tror, afrundingsmæssigt synes du at I haft tid til at fordybe jer i de forskellige opstillinger, altså til at lave dem hvor der ikke har været kø? Jeg ved godt at der ikke har været særlig mange mennesker i dag. Har I haft tid og ro til at lave de forskellige øvelser?*

Ja det har vi. Det har vi. Der har ikke været kø ved noget af det. Jo måske lige lidt ved den der hvor man står på... Øh.

*Surbanen?*

Ja den har jeg så ikke lige prøvet, men altså ellers har der jo ikke været kø til noget som helst så...

*Yes. Super. Men jeg tror vi har været hele vejen igennem.*

Det var jo hurtig klaret så.

*Ja det var dejligt. Du skal have tusind tak for hjælpen, det har virkelig været dejligt. Det var simpelthen fantastisk og det var virkelig godt. Det kan vi helt sikkert bruge til noget.*

## **Appendix 3.4: Interview with Christian at the Experimentarium**

### **Interview with Christian, 23th of October 2012**

**Place: Conference room at the Experimentarium**

**Age: 35**

**Position: Police man**

*Hvem har du været herude med i dag?*

Jeg har været herude med min kæreste og min søn.

*Hvor gammel er han?*

Han er snart 3 år.

*Ja. Nu vil jeg gerne spørge lidt ind til lidt læring. Hvad har I fået ud af jeres besøg i dag?*

Vi var her sådan mest for hyggens skyld, og det har været hyggeligt og vi altså... De voksne har også fået lidt ud af det, men vi har ikke fået lov at prøve så mange ting som vi godt kunne have tænkt os, men det var rigtig spændende.

*Hvordan kan det være at I ikke har prøvet så meget?*

Ej, det var på grund af ham. Han laver unoder jo.

(Alle griner).

*Ja, har I voksne lært noget i dag, som I ikke vidste i forvejen?*

Øh ja, vi har lært noget, vi har prøvet de dernede hvordan ens, hvad man reagerer på følelsesmæssigt.

*Ja.*

Og der har jeg fundet ud af at jeg er dårlig til højder. Så det kan man godt sige, ja.

*Det er da meget sjovt.*

*Ja.*

*Hvad er det helt præcist for en opstilling?*

Det er hvor du stiller, eller sætter dine fingre og så skal du reagere på, jeg tror 10 forskellige, 10-12 forskellige billeder.

*Nå ja, det er rigtigt ja.*

*Ja.*

*Yes, den er jeg med på. Og er det en ting du har oplevet i dag, som du vil tænke nærmere over i fremtiden?*

Øh, det har jeg ikke tænkt over. Det ved jeg ikke rigtig om jeg vil, øh hvor jeg skulle bruge det.

*Nej. Tror du at der er nogle af de ting I har oplevet i dag, som på en eller anden måde kan påvirke jeres hverdag, eller noget som I vil tage med jer herfra og som på en eller anden måde vil påvirke jer fremover? Som I kan anvende i hverdagen?*

Næh, ikke andet end at sådan rent familiemæssigt som samtaleemne. Så på den måde ja.

*Ja. Hvilke forventninger havde I til jeres besøg i dag?*

Vi skulle egentlig bare ind og så dinosaurusserne, fordi at det vidste vi at Silas ville reagere på.

Og så havde vi ikke de store forventninger, fordi at vi vidste ikke hvad der ellers var til hans øh...

*Det er måske første gang at I har ham med herude i dag?*

Ja det er det, og jeg har ikke været her i 15 år eller sådan noget lignende.

*Hvordan har dagen så været? Har den levet op til forventningerne?*

Altså ja, det synes jeg, det synes jeg. For hans vedkommende.

*Ja.*

Men altså, vi ville jo gerne have haft mere tid. Når man så kommer ind og prøver det så, altså voksne vil jo også godt lege med her, så jeg er da blevet hooked på noget mere.

*Ja, så I vil gerne tilbage hertil?*

Ja ja. Ja ja.

*Nu sagde du at I regnede med at dinosaurerudstillingen ville leve op Silas' forventninger og hans interesse. Har I fundet andet herude der også har interesseret ham?*

Øh ja, øh.. Altså specifikt?

*Ja eller et eller andet som han også blev grebet af eller synes var sjovt?*

Ja han blev grebet af den der... Der er sådan en skærm, hvor at der er sådan nogle pigge der går ud. Så kan du trykke din hånd eller dit hoved eller et eller andet på. Det synes han er voldsom morsomt.

*Det synes jeg også stadigvæk er sjovt.*

Og så var der sådan et mørkt rum, man kunne gå ind i, hvor man skulle føle sig frem. Det var han ikke meget for. Det ville han overhovedet ikke.

*Var han igennem eller gik han ud igen?*

Jamen så bar jeg ham så igennem det mørke, og så synes han at det var uhyggeligt og så ville han ikke være der mere, men det... Så skulle han jo tilbage igen i det mørke så, så jeg fik ham igennem.

*Ja okay, så I var også inde i det der spejlrum og sådan noget?*

Ja nemlig.

*Synes han at det var sjovt?*

Ja.

Ja.

Det synes han.

*Hvordan generelt har helhedsoplevelsen været herude i dag?*

Jamen den synes jeg har været positiv. God.

*Ja. Kunne du som forældre godt have tænkt dig lidt mere tid til at fordybe dig i tingene?*

Ja altså, det kunne jeg jo godt, men nu er det igen det der med han jo kun lige er under 3 år, så faktisk meget det, det er ikke noget han sådan kan selv. Så derfor, som forældre, har man måske ikke så meget tid til at prøve alle tingene.

Ja.

Men jeg kunne godt have tænkt mig at prøve det.

Ja.

Ja.

*Hvorfor har I valgt at tage på Experimentarium i dag?*

Det er på grund af dinosaurusserne. Vi har snakket om at tage til en eller anden udstilling, jeg tror at det var nede i Slagelse at de kørte sådan en her i ferien, men den missede vi lige akkurat, og så fandt vi ud af at der var noget herinde med dinosaurusser, og så valgte vi det.

*Så det er simpelthen dinosaurusserne der trækker og ikke selve helhedsoplevelsen som sådan?*

Nej for der var jeg sådan lidt i tvivl om hvor meget der var til Silas.

Ja.

Alternativet det havde nemlig været Tivoli. Mille hun ville gerne have været inde og se det der...

*Halloween?*

Halloween lys, og det synes jeg måske bare var sådan lidt tamt for ham.

*Ja. Har I valgt at tage herud, nu ved jeg godt at han er meget lille, men har det været med i jeres overvejelser at det er fordi at han skal lære noget?*

Jah... Ja og nej, altså han skal jo bare have oplevelsen. Det er jo det der... Ja han lærer jo ved oplevelser, så ja.

*Ja. Nu snakkede du lige om Tivoli. Altså vi har faktisk undret os lidt over hvorfor folk vælger at tage på Experimentarium i stedet for, for eksempel Zoologisk Have eller Tivoli. Hvorfor netop Experimentarium frem for Tivoli?*

Vi ville også gerne have været i Zoologisk Have, men der har han været en gang i år. Og Tivoli... For at kigge på lamper. Det tænkte jeg, så Experimentarium det lyder mere spændende.

*Ja.*

Han kunne få lov at prøve flere ting ik'. Det byder på flere oplevelser.

*Ja, fordi hvordan synes I at oplevelsen adskiller sig her på Experimentarium fra Tivoli og Zoologisk Have?*

Jeg har jo faktisk ikke været inde i det der Tivoli, for at se på lygterne, så jeg ved ikke om de generelt har åben.

*Det har de.*

Det har de?

*Ja.*

Nå okay, det var jeg lidt i tvivl om. Men, men jeg tænkte det var sådan lige afpasset efter hans niveau at tage herud. Hvor at Tivoli, der var... Der er rigtig meget. Også fordi at vi bor tæt på Sjælland Sommerland, så det der med, forstå mig gøgl, det har han, det har han ligesom prøvet en tre-fire gange i år.

*Ja. Hvem bestemte at I skulle ud på Experimentarium i dag?*

Det gør far.

*Det gør far.*

(Alle griner)

*Havde kæresten eller sønnen noget at sige?*

Sønnen havde ikke noget at sige.

*Nej.*

Fordi at det er for abstrakt, men jeg snakkede med Mille om det, og hun ville gerne have været i Tivoli, og så snakkede vi om, eller jeg snakkede om at jeg ikke gad at se på lamper så...

*Ja, og det er sådan generelt at det er dig der tager beslutningen om hvad I skal lave?*

(Alle griner)

Det er det godt nok ikke, men nej, når der er noget jeg ikke gider, så gider jeg ikke.

*Nej.*

Så er det bare sådan at det er.

*Okay.*

Og jeg gad absolut ikke at se på lamper, for det var sådan at jeg opfattede det.

*Ja.*

Det synes jeg er noget pladder.

*Hvordan er det gået i dag, med at finde ud af hvordan alting fungerer herude med opstillingerne, det kalder vi de forskellige ting man kan lave? Hvordan er det gået i dag?*

Altså generelt synes jeg at når man går rundt og lige stiller sig et lille øjeblik ved hver ting, så er der en god, sådan instruktion til hvordan og hvorledes, så det er meget let at gå til. Hvis man så ikke lige havde sådan en lille størrelse med, fordi at så kan det godt knibe lidt med udførelsen.

*Ja.*

Men jeg synes at det er nemt at gå til.

*Okay. Har I haft nogen problemer undervejs, med at finde ud af hvordan tingene fungerer, eller har I ligefrem droppet noget fordi at man var i tvivl om hvad det egentlig var der var meningen med det?*

(Længere tænkepause).

Øh, nej det synes jeg egentlig ikke. Der var en eller anden ting med en... Der er sådan to slanger der blæser op i luften, og så er der en bold den kan du sætte, og så bliver den ligesom fastholdt oppe over den ene øh... Ja nu sidder jeg og udstiller mig selv, den kunne jeg ikke finde ud af hvordan virkede.

*Ja, okay. Det er fordi at der er sådan en... Fandt du ud af den hvor man kunne skrue op og ned for styrken på de forskellige?*

Ja, men jeg synes ikke at det gjorde nogen forskel. Jeg ved ikke om den var gået i stykker, fordi at det ene rør det var sådan bøjet ned til siden.

*Okay.*

Jeg tror at det var meningen at de skulle stå sådan.

*Ja. Det kan godt være. Vi var heller ikke særlig gode til at få bolden igennem det hul, da vi prøvede.*

Nej, men det lykkedes overhovedet ikke for mig.

*Men omvendt, så selvom at det ikke lykkedes, synes du så at det var sjovt at prøve den, eller blev det frustrerende?*

Nej, nej det var sjovt nok.

(Alle griner).

*Okay. Har I lagt mærke til guiderne herude på Experimentarium? Dem der går rundt i det blå tøj?*

Nej.

*Nej. Så I ved heller ikke hvad man kan bruge dem til?*

Næh.

*Det er nemlig sådan nogle der går rundt her som man kan stille spørgsmål til, hvis der er nogle ting man ikke kan finde ud af, eller man er i tvivl om hvordan det fungerer eller er i tvivl om for eksempel med denne her, er det fordi at man skal skrue op og ned for luften på et særligt tidspunkt og så videre. Det er sådan at de går rundt og hjælper med det. Er det noget i har savnet, at der har været nogen der kunne guide en på vej?*

Nej det synes jeg ikke, men jeg synes da at det er positivt at de er der, fordi igen, hvis nu jeg havde været her sammen med et lidt ældre barn og gerne ville fordybe mig lidt mere, så ville det da være meget rart at have muligheden, kan man sige.

*Ja. Yes. Er der noget i dag, som I har manglet for at gøre oplevelsen bedre? Eller et element som kunne have gjort oplevelsen bedre?*

(Længere tænkepause).

Næh, nej det synes jeg ikke. Altså... Så skulle det være nogle flere ting til de helt små, men igen hvis man tænker sig om, Experimentarium er måske ikke for de helt små på den måde.

*Nej.*

Så det var nok fint nok.

*Ja. Har du savnet opstillinger, noget du kunne blive mere engageret i, eller mere involveret i?*

*Altså hvor det var at du kunne være med til at skabe noget for eksempel?*

Næh ikke... Det har jeg ikke tænkt over.

*Nej.*

*Nej.*

*Hvad synes I om at når I tager ud for eksempel som et sted som her, at I er engageret, at I bliver involveret? Er det noget man gider, er det noget I synes er sjovt?*

Ja til en vis grænse. Jeg synes, altså når man tager af sted sådan som familie, så er det jo sådan at man også godt bare vil gå rundt og hygge sig med det alene. Synes jeg.

*Ja.*

Så... Men det er meget rart at det er noget man kan vælge til selvfølgelig.

*Ja.*

Hvis man godt lige vil prøve en tur eller et eller andet.

*Ja. Så valgfriheden, er det noget I sætter pris på?*

Ja bare det ikke er sådan noget man skal.

*Ja.*

Hvis du skal igennem vores forlystelser, så skal du følges med en. Det ville være ærgerligt.

*Ja. Synes du at Experimentarium har bestemt hvordan jeres dag skulle forløbe, eller har sat rammerne for det, eller synes du at det er helt jer selv der har haft valgfrihed og har været med til at skabe oplevelserne i har haft her?*

Altså det synes jeg, det har vi selv fundet ud af, i og med at vi bare sådan har... Ja gået hvor det sådan passer os.

*Ja.*

Så ja.

*Hvordan synes du det var at man kunne gå hvor det passede en, og der ikke var en bestemt rækkefølge rundt man skulle igennem?*

Øh jamen, det er jo fint nok. Man kan sige sådan noget som dinosaurerne. Det er jo fint nok at der måske er en rækkefølge i det.

*Ja.*

Så man ligesom for en historie ud af det, men når man skal gå rundt og prøve en helt masse ting, der ikke sådan umiddelbart hænger sammen, så skal der bare være frit spil.

*Ja.*

Og det er der jo også.

*Men har I savnet på nogen måde at der var et mønster eller en instruktion eller en vejledning i, hvordan man skulle gøre dagen an, og hvordan man skulle tilrettelægge sit besøg?*

Nej, altså ikke i denne her omgang i hvert fald.

*Nej. Har der generelt været noget herude du synes har generet dig, eller som du har synes ikke har fungeret så godt ved besøget?*

Nej det er der ikke.

*Nu ved jeg godt at I fik billetten gratis i dag, men hvordan synes du generelt billetpriserne er herude?*

Øh, jeg skal være helt ærlig og sige at jeg ved faktisk ikke hvad det koster. Jeg er bare...

*Det koster 165 for voksne, og for børn over 3 år koster det 105.*

Ja. Det er meget almindeligt. Det synes jeg er helt fint.

*Ja. Hvordan, i forhold til jeres oplevelser herude i dag, har det været noget specifikt noget der har gjort oplevelsen af en enkelt opstilling eller har det været helhedsoplevelsen?*

*Experimentarium som helhed der har gjort indtryk og gjort jeres oplevelse, hvis man kan sige det sådan?*

Jamen det er både og. Jeg tror at med Silas, der vil vi nok snakke meget om dinosaurusserne ik'?

*Ja.*

Og så for, ja Mille og mig vi prøvede så nogen af de der maskiner deroppe, og det var nok sådan noget mere vi vil snakke om.

*Ja.*

Jeg ved ikke om det besvarer?

*Jo helt sikkert. Synes I at det er sjovt at være herude, også som voksne?*

Ja. Ja, ja. Helt sikkert. Og det er det jeg siger, jeg ville gerne have haft mere tid.

*Ja.*

Det kunne have været kanon. Og det var også det jeg havde i hukommelsen, at der var en milliard ting man kunne prøve, og at der sikkert nok også skulle være et eller andet for Silas, udover de der dinoarurer.

*Ja. Udover at det er sjovt, synes du så også at I har lært noget?*

Nej det har vi jo nok ikke så meget i dag, men det jo på grund af Silas ik'?

*Ja, så det har været ren underholdning?*

Ja ja.

*Ja. Kunne I finde på at komme tilbage til Experimentarium, hvis der stadig er dinosaurusudstilling, eller skulle der komme en ny udstilling, før I gad at komme tilbage?*

Vi vil nok ikke komme tilbage kun for det. Så skulle vi komme tilbage hvor Silas måske er blevet to år ældre, sådan han så kan få mere gavn af de faste ting, kan man sige.

*Ja, så I vil godt have lyst til at komme igen og igen, selvom at altting fremstår uforandret? Så hvis det er præcis de samme ting der er her, så ville man have lyst til komme igen?*

Nej det tror jeg ikke, det tror jeg ikke.

*Hvorfor ikke?*

Nej fordi, at jeg kommer jo nok ikke igen år efter år, hvis der ikke er noget der erændret. Man kan sige, for eksempel Sjælland Sommerland, oppe hvor vi bor, der får man det der kriller i maven, eller hvad det nu er, af de forskellige rides, men hvis man ligesom kender opgaven ved de forskellige stationer, så er nyheden måske væk efter et par gange.

*Ja. Nu sagde du at i Sommerland Sjælland, der får man det der kriller i maven af oplevelsen, hvad er oplevelsen på Experimentarium, hvad får man ud af det?*

(Længere tænkepause).

Jamen der er selvfølgelig også nogle ting der kriller lidt, men det er mere sådan nogle a-ha oplevelser mange gange.

*Ja.*

Det jeg forbinder det med ik'? Nu har jeg ikke, som sagt, været rundt og kigge alle steder så...

*Nej. Har du mere? Nej det var faktisk det vi gerne ville spørge om. Jeg tror at det var det.*

Det var en hurtig halv time.

*Ja, det var hurtigt og smertefrit.*

Ja for søren.

## **Appendix 3.5: Interview with Malene four days after her visit**

### **Interview with Malene, 31th of October 2012**

**Place: Weekend cottage in Nødebohuse, close to Malene's place of residence**

**Age: 38**

**Position: Midwife**

*Hvem var du på Experimentarium sammen med?*

Jeg var derude med mine fire børn

*Hvor gamle er de?*

De er 12 og 10,5 og 5,5 og 2,5

*Det var en håndfuld. Hvordan, ham eller hende på 2,5...?*

Ham

*Ja, synes han det var sjovt?*

Han synes det var så skægt, ja.

*Dejligt at høre.*

Ja, han var især vild med vandafdelingen hvor man bare kunne få lov at plaske vand uden at der var nogen der sagde stop.

*Dejligt. Hvilke forventninger havde i til jeres besøg inden i kom derud?*

Altså, de to store drenge havde været der før, så de var jo, de kendte sådan den der almene del af det, men de havde jo ikke set vandlandet, og dinosaurerne havde de heller ikke set. De to små vidste slet ikke hvad de gik ind til og hvad det var, og havde bare hørt de skulle ud og se dinosaurer. Så de er, ja, det var sådan det der var vores forventninger, jeg har ikke selv været der siden jeg gik i 9. Klasse, så det er nogen år siden... (griner)

*Ja okay, det er længe siden. Har det forandret sig meget siden da?*

Jamen jeg kan slet ikke huske det.

*Okay.*

Så det har det formentlig, der hænger ingenting fast fra dengang. Men det er godt nok også nogle år siden

(Alle griner)

*Synes du at besøget levede op til jeres forventninger?*

Ja, det synes jeg. Der var noget for dem alle sammen og der var noget for mig, og øhhh, ja de havde det simpelthen så dejligt og sjovt og de kunne alle sammen få noget ud af det.

*Mm, dejligt. Hvordan synes du helhedsoplevelsen derude var?*

Øhm.... Jamen jeg synes det var rigtig fint, jeg synes vi... vi kom lige der hvor de åbnede kl. 11. og gik igennem dinosaurer-afdelingen og så den, og så gik vi op og spiste mens de sad, og så sidder man jo midt i stedet, og kigger på alt det der vand og alt det der er spændende og spiser. Og så gik de – wutsj – ligesom ud derfra og skiftes til at løbe i hælene på den lille og så fik de, ja, bare set det hele og ”kom nu” og det var bare ”mor, mor, mor, mor, kom og se her” fra dem alle fire, så det var rigtig rigtig sjovt og skønt for dem alle sammen.

*Spiste i på cafeen eller havde i selv mad med?*

Vi spiste på cafeen

*Hvordan synes du det fungerede med at i sad midt i det hele og spiste? Var det forstyrrende eller var det godt?*

Jamen når man har fire børn så er det altid forstyrrende at spise...

(Alle griner)

Så det var ikke... det var ikke fordi det var det store måltid jeg hav frem til dem. Så de øhh, de spise noget pizza og nogle pølser og så drønede de videre, så det var ikke forstyrrende, overhovedet ikke.

*Hvis vi nu ser bort fra, nu har i selvfølgelig fået billetterne i forbindelse med det her interview, men kunne du forestille dig at i selv kunne vælge at tage på Experimentarium en anden gang?*

Øhh, ja hvis ikke det var så dyrt.

*Okay. Hvis vi nu ser bort fra billetprisen, hvorfor ville i så vælge at tage på Experimentarium?*

Helt klart fordi det er en afgrænset område hvor man kan være afsted med flere børn på en gang, og så er der grænser for hvor meget de kan blive væk, hvis man sammenligner med at gå i Tivoli eller sådan et eller andet stort sted hvor de rigtigt...ægte kan forsvinde. Det kan de ikke rigtigt der. Så det er den ene ting fra en voksens synspunkt at det er sted man kan være med dem alle sammen, og så det at der er oplevelser for dem alle sammen, og det er ikke noget med at stå i kø i lang tid for at prøve noget, som det ellers ofte er i sådan forlystelsesparker hvor, så er der én der vil prøve noget og så står de andre og venter, og det er rigtig kedeligt. Det når ikke at blive kedeligt, altså det er sjovt hele tiden og der er hele tiden noget nyt og ”nu skal i lige se denne her” og ”prøv at se denne her gynge”, ”prøv og se de her magneter” og øhm, altså min ene dreng har Asberger (Asbergers Syndrom, red.) og flakker sådan lidt rundt fra det ene til det andet, og det gør jo ikke noget sådan et sted, for han behøver ikke have tålmodighed til at blive ved noget i længere tid, så kan han bare gå videre når han ikke kan fastholde opmærksomheden mere.

*Ja.*

Så det har helt klart være det med at der er noget for alle aldre, altså, det var sjovt for mig, det var sjovt for de der pre-teenagere og det var sjovt for de små. Så det øhm, ja jeg vil helt klart anbefale det til alle aldre, også mindre børn end 2,5 år, for det er altså, der er noget... selvfølgelig noget af det som de ikke forstår noget som helst af, som det kun er de store der forstår noget ad, men der er meget store dele af det som også er for de små.

*Ja. Er det også for at børnene skal lære noget at man tager derud? Er det noget man forventer?*

Ja. Altså i hvert fald de store tænkte jeg, at de får sådan lidt aha-oplevelser, nu er de begge to naturvidenskabeligt interesserende i forvejen, så det gør jo også en forskel, men jeg kan ikke forestille og at jeg havde nogen børn med derud hvor ikke et eller andet sidder fast.

*Mm.*

Et eller andet de synes var... jeg ved ikke hvor meget ham den lille har lært, men han har da i hvert fald fået en masse oplevelser, men om det er noget han kan bruge senere det er svært at sige.

*Ja.*

Men øhm, jeg tror da, ja, jeg tror de har lært noget, og det er helt klart også noget af det som gør det sjovt, at snakke om det på vejen hjem i stedet for bare ”hvor var det sjovt i karrusellen” så er det ”tænk på det, hvad skete der dér” og, ja...

*Fik du noget ud af det som voksen?*

Øhm... altså jeg havde lidt travlt med at løbe efter den lille vil jeg sige.

(Alle griner)

Så det var mest, der var ikke så meget tid til at stå og læse plancher, og stå og fokusere på det. Der var noget ovre i, der er sådan et område hvor man med energi, så.. og vi er meget økologiske og bevidste omkring energiforbrug, så det synes jeg jo var rigtig interessant at se hvordan ”jamen hov, det er faktisk den isolering vi har. Er den egentlig bedre end ”– er den egentlig bedre, eller er den bare mere miljørigtig, jeg har bare sådan.. især det område synes jeg, der fik jeg noget lærdom ind og nogle ting på plads, i de andre områder der løb jeg ret meget rundt.

(Alle griner)

*Dette er måske også en del af det for de voksne. Når i for eksempel skal ud med familien, hvis vi ser bort fra pris, hvordan synes du så Experimentarium adskiller sig fra for eksempel Zoologisk Have og Tivoli?*

Øhm... (pause). Altså nu synes jeg Zoologisk Have og Tivoli er to ret forskellige ting, fordi i Tivoli som jeg sagde, det er oplevelses-orienteret, øhh, man er fuldstændig baldret bagefter og man har fået en på opleveren, men man har jo ikke lært noget som helst. I Zoologisk Have kan man sagtens have lært en hel masse og det kan på også på Experimentarium, og der hvor de to ting så adskiller sig fra hinanden er ved de fysiske omgivelser, men også de ting man lærer, altså det er virkelig et bredt spektrum man kan få lov til at snuse til, til noget, og har man alderen til det, til at fordybe sig i noget. Zoologisk Have er udelukkende dyr og miljø ik', kan man sige.

*Ja.*

Så det er sådan der det adskiller sig synes jeg, hvor øh, jeg er helt klart også den mor der heller tager i Zoologisk Have med mine børn end i Tivoli, i stedet for de der hektiske "tju, tju, tju" der kører lige op i en spids alle sammen.

*Det er hektisk i Tivoli?*

Det er hektisk i Tivoli, ik.

*Ja. Hvad er særligt ved Experimentarium synes du, også set i forhold til de andre, hvordan adskiller Experimentarium sig?*

Mmm... jeg tænker at det at det er så begrænset et område, altså jeg tror det vil være for stor en mundfuld hvis det havde været større, så det at er så begrænset et område gør at man kan nå at se det hele og øhm, og lige sætte sig ned og slappe af en gang i mellem, de kunne alle fire vente på hinanden uden at blive irriteret. "Jeg vil gerne lige lave de her sæbebobler, prøve lige og se", "Jeg vil gerne lige det, prøv lige og se". Der adskiller det sig helt klart fra de der kæmpestøre udendørs parker som, hvor det kan være svært at nå det hele og hvor man som voksen bagefter er fuldstændig bims oven i hovedet efter at være hevet fra den ene ende af parken til den anden for at skulle se giraffen.

(Alle griner)

*Men hvordan synes du, kræver det noget forskelligt af forældrene at tage på Experimentarium end det for eksempel gør at tage i Tivoli og Zoologisk have? Du siger du blev hevet meget rundt i parkerne. Kræver det ikke også meget af forældrene at tage på Experimentarium?*

Jo, men det er mere sådan... "kom og se og forklar lige hvad et er der står her", øh, hvor i, de andre stedet er man mere sådan... står bare og kigger. Og jeg synes ikke de spørger til, i Zoologisk Have for eksempel der spørger mine børn ikke ret meget til "hvad står der på plancherne", "sig noget om giraffen", hvor, nogle af de ting som i hvert fald de store havde glæde af var også at få, de kan jo læse ik', men vi snakkede om "hvad står der her", hvad er det det her det handler om, hvorfor hænger der denne her stige her, hvad er det interessante ved det, eller hvad... det er der det adskiller sig, at de stiller nogle spørgsmål, hvor de slet ikke bliver motiverede til at stille spørgsmål de andre steder, så de lærer noget af det, ik'.

*Kunne du godt li' den rolle som forældre, ligesom at kunne være med til at uddanne dine børn, ved du hvad du mener?*

Jamen jeg tænker det som en fuldstændig naturlig del af at være forældre, at man er en rigtig vigtig del af deres uddannelse. Jeg ville synes det var meget mærkeligt hvis man som forældre slet ikke gik ind i... det ved jeg godt der er nogle forældre der ikke gør, og jeg kan ikke forstå det.

*Det er måske sådan et lidt kroget spørgsmål, men er man er bedre forælder når man tager sine børn med i Experimentarium end i Tivoli i, sådan rent.. ansvars, og det outcome der er fordi man lærer noget på Experimentarium, er det så noget man gerne vil vise udadtil at "jeg har haft mine børn med i Experimentarium", jeg har ikke bare haft dem med i Tivoli.*

Det er det ikke for mit vedkommende, øhm... for mig handler forældreskab om omsorg og opmærksomhed og ja, så kommer alt det her oveni, men en god forældre er den der stikker en finger i jorden og ser hvad ens børn har brug for, og ikke så meget, altså... jeg ved godt der er, selvfølgelig er der en eller andet udadtil, og alle folk skal se hvad vi gør, men øh, ej det er ikke det jeg tænker, at så kan folk se jeg har været i eks, og det er jo helt fantastisk jeg har det. Det er det jo, men ikke...

*Det er ikke for at vise det udadtil?*

Nej.

*Nej.*

Så kunne man få travlt.

*Ja, meget. Igen, hvis vi ser bort fra at i nu engang har fået billetterne, hvis i skulle på Experimentarium igen, hvem ville så bestemme at i skulle på Experimentarium – er det dig eller børnene eller i fællesskab?*

Øh... altså jeg tror godt de tre ældste ville kunne udtrykke et ønske om at det ville de gerne prøve igen.

*Ja.*

Den lille kan dårligt sige ordet jo.

(Alle griner)

Men jeg tror da hvis jeg foreslog ”Skal vi tage i Experimentarium eller i Zoologisk Have” så ville de sige Experimentarium. Det tror jeg.

*Mm. Øhm, generelt, hvad har i fået ud af jeres besøg derude?*

Øhm, vi har fået en fælles oplevelse og så tænker jeg at der kommer sådan, formentlig henover de næste par uger, sådan dryppende ”kan i huske det” og ”prøv lige og se..”. Vi har sådan nogle magneter hængende hjemme på køleskabet eller, så sidder en lille og lige pludselig har plasket vand i hele badeværelset ”kan i huske ude på Experimentarium, der kunne man faktisk gøre sådan med en pumpe” eller ”der kunne man gøre sådan”, det er sådan noget jeg tænker vi... sådan en referenceramme, og noget man øh, ”prøv lige og se hvad vand gør når man gør sådan” og ”se hvad magneter gør”. Det, altså det kan jeg jo huske fra jeg selv var lille, det er de der oplevelser af hvad det var der pludselig skete som er sjovt, og det tænker jeg da også er sjovt at få sat nogle billeder på og noget viden om. For mig er det i hvert fald sjovt at få en viden, og det tror jeg også for de store, at det er sjovt at få baggrundsviden om tingene, hvorfor gør de som de gør.

*Har i lært noget i ikke vidste i forvejen? Både sådan, jeg tænker dig, og så også børnene.*

Har jeg selv lært noget jeg ikke vidste i forvejen? (Pause). Det tror jeg ikke. Men altså en ting er, vidste og vidste, så har jeg snuset til det før, ik'. Jeg kan sagtens have stået og læst et eller andet og tænkt ”nå ja, det kan jeg egentlig godt huske jeg har hørt om før”, men ligefrem og sige at jeg vidste det i forvejen, det er måske lige så meget sagt, men der var ikke noget jeg faldt over hvor jeg tænkte ”nå, gud er det sådan”, men det var der helt sikkert for børnene.

*Ja.*

Ja, hvorfor gør det sådan, hvorfor laver det de lyde, det var sådan de der overraskelsesoplevelser igen og igen for dem, de der mange ting man kan eksperimentere med selv.

*Noget vi også undersøger, det er lidt det her med at man måske har lært noget men har svært ved at sætte ord på det, eller måske ikke er bevidst om det. Tror du det måske er tilfældet?*

Ja. Det tror jeg sagtens kan være tilfældet, at øhm, at jeg pludselig står i en eller anden situation og tænker ”gud ja, det var faktisk lige præcis sådan det fungerede” eller som de viste derude, det var rigtig fint vist, for nu falder den på plads.

*Ja.*

Men det er ikke noget jeg lige nu står og tænker ”lige præcis det havde jeg ikke hørt før”.

*Så du mener at det er når man står i en situation hvor noget af det man har lært på Experimentarium måske bliver relevant, så er det først der der går op for en "gud ja"? "Gud hvor er det faktisk rigtigt, tænk at det lige passer sammen sådan her."*

Ja. Hvor aktiv var i under jeres besøg, det lyder som om I var ret aktive og rundt til cirka det hele? Nåede i hele vejen rundt?

Øhm. Jeg vil sige til allersidst var de små lidt trætte, hvor de store stadigvæk piskede lidt rundt. Der var sådan et område omkring kroppen, sådan et lille område, som vi næsten ikke var ovre at se , fordi de kunne ikke magte mere på det tidspunkt.

*Nej.*

Og nede i, ved dinosaurerne, der kiggede de på dem, men de var ikke nede, jeg så man kunne hakke i sten og man kunne tegne og sådan, det gjorde de slet ikke, det havde de slet ikke ro til, de skulle bare videre og se det næste. Så vi, det var mere sådan hen at pille og over at røre og sådan noget, og sæbeboblerne brugte de lang tid på de to små. Så det var sådan lidt... ja det var både og, nogen områder hvor de gik meget ind i det og nogen områder hvor de slet ikke kunne finde ud af at blive stående.

*Tror du at de lærte mere i de områder hvor de virkelig var aktive, fremfor de områder hvor de ikke var så aktive?*

Nej, det tror jeg faktisk ikke. Fordi jeg tænker, altså Emma der på fem et halvt, hun stoppede lige op og stod lidt ved de sten og ville skære lidt i dem, og så kunne jeg godt se på hende "puh", det kunne hun slet ikke, altså, hvis der nu ikke havde været andet havde hun synes det var rigtig sjovt og interessant at sidde og lege med fedtsten, men det kunne hun ikke sidde stille til. Og måske hvis vi havde været der, vi var der i 2,5-3 timer, og hvis vi havde været der længere kunne det godt være der havde været mere ro på. Men øhm, ja, man er jo aktiv mange af stederne, den store var ovre og køre rullestolsræs, og fik i hvert fald lært noget der i forhold til, "hold da op" hvor meget energi man faktisk udleder når man sidder der og arbejder. Så det er sådan lidt et både og-spørgsmål, om man lærer noget, for man lærer også noget bare af at stå og røre rundt med magneter, man er jo aktiv på de allerfleste af aktivisterne, men noget af det får man sådan lidt et outcome, altså man kan se det med det sammen, nu har jeg lavet det, eller her, denne her lampe lyser fordi jeg sidder her og cykler. Det har mest været de to store der har fået noget ud af at gøre noget på den måde tror jeg.

*Tror du at de har lært mere ved at være på Experimentarium og have fingrende nede i de forskellige oplevelser, fremfor hvis man havde læst det sammen i en bog?*

Helt sikkert.

*Ja.*

Jeg kan slet ikke se hvordan de skulle kunne nå at komme omkring alt det hvis de skulle, altså så ville de miste interessen, for så lang tid sidder man sjældent, og så ville det være ét emne der måske ville være blevet helt i, i en skole time eller naturfagstime, ik', natur/teknik hedder det nu om dage.

*Ja. Er der nogen ting som i har oplevet eller lært ude på Experimentarium som i har tænkt nærmere over efter i kom hjem?*

Mmm... (pause) ikke endnu. Altså ikke noget de er kommet med. Ikke andet end den lille, i dag, der godt kunne se at man kunne gøre sådan "wutsj" med en shampoo udover hele badeværelset, for det måtte man jo gerne ude på Experimentarium, der må man jo gerne sprøjte med vand. Så det, eller så har der ikke, der ikke noget de har kommet og sagt "det var ligesom der", men jeg tror det kommer. Der er ting hvor jeg selv har tænkt "nåå, det var ligesom...", især sådan noget magnetisme og øhhh, ja, energi, hvad er det for noget, hvor meget energi bruger vi på det ene og det andet.

*Så du kunne godt forestille dig at nogle af de ting i har lært at det måske fremadrettet kunne påvirke jer i jeres hverdag, eller have indflydelse eller komme op igen.*

Det vil i hvert fald, de vil være noget der kommer op igen. Og fås snakket om hvorfor det egentlig lige er at jeg siger ”prøv lige og slukke lyset når du går fra badeværelset, kan du huske hvor mange kræfter du brugte på overhovedet at få en lampe til at lyse ude i Experimentarium, det er faktisk rigtig meget energi der skal bruges på det, den energi kan vi bruge på noget bedre”. Så det tror jeg godt ville kunne, i stedet for det der med at det faktisk koster tre kroner i timen når du lader den stå og brænde, men altså det er de jo fløjtende ligeglade med, ik’.

*Øhm, hvordan gik det med at finde ud af hvordan opstillingerne og tingende fungerede ude på Experimentarium?*

Altså sådan de enkelte ting?

*Ja, de enkelte ting, hvordan gik det med at forstå det og finde ud af hvordan det virkede.*

De kastede sig bare ud i det. Jeg tror den store læste ind i mellem lidt om hvad man skulle, hvad der skulle ske, og de andre før bare rundt og skulle bare prøve det hele og hoppe på det og trampe på det og hive i det og gøre, altså, nogle gange kunne jeg se at det de gjorde var ikke helt meningen, så måske skulle jeg lige forklare lidt ”prøv og se her, hvis du gør faktisk sådan” eller, der er sådan nogle nedløbsrør der er sat op ved siden af hinanden som et orgel hvor det giver mening at stå og klaske på dem som et orgel og lave lyde, hvor jeg sagde ”der står faktisk her at man kan lytte også” og det havde de jo ikke opdaget at det så gav en helt anden lyd, så det, noget af det var jeg lige henne og sige ”prøv lige og se, det er faktisk, der står det her” og ellers så prøvede de det bare af.

*Har i haft nogle problemer undervejs, også igen med tingene og hvordan de fungerede, eller måske ligefrem noget i har droppet fordi i simpelthen ikke vidste hvordan man skulle gøre det an.*

Nej, overhovedet ikke.

*Super. Lagde i mærke til på Experimentarium de guider der er i det blå tøj som går rundt?*

Nej.

*Nej, så kan jeg næsten regne ud du heller ikke ved hvad man kan bruge dem til?*

Nej overhovedet ikke.

*For ideen med dem det er at de går rundt, og ja, er guider, og hjælper folk hvis der er noget man er i tvivl om, for eksempel hvis de havde set dine børn ved orgelet, så måske de var kommet dig i forkøbet hvis du ikke lige havde været der og havde ”prøve og se her, man kan også gøre sådan her” eller ”prøv og lyt”. Så det er faktisk det de er der til, og gå rundt og hjælpe og guide på vej.*

*Hvad synes du om ideen om det, at de er der til det formål?*

Det er da helt sikkert en fin ide, især når man har så mange børn med, men når man har så mange børn med så kigger man ikke på andre mennesker, så kigger man kun på hvor de er henne.

Ja.

Så jeg havde ikke rigtigt fokus på om der var nogen der eventuelt kunne have givet en hånd med (griner)

*Men kunne du have savnet at der var nogen der sådan gik rundt og måske guidede og opsøgte jer, og hjalp børnene på vej? Sådan at det ikke var dit ansvar med alle fire børn, hvis man kan sige det sådan.*

Jeg savnede det egentlig ikke derude, og jeg tror også kun det var de to store der ville have taget imod det hvis det endelig var, men de har så nok også mere alderen til at nogen, altså... de to små går ikke engang i skole endnu vel, så jeg tror de ville blive for generte til overhovedet at turde tage imod den hjælp.

*Øhm, var der noget derude, var der noget du manglede som kunne have gjort oplevelsen bedre?*  
(Pause). Ikke noget jeg har tænkt over.

*Nej. Altså vi tænker sådan lidt om der var nogle elementer du savnede, for eksempel noget, en slags opstilling, eller en eller anden feature du godt ville ønske kunne være der i en opstilling for eksempel. Altså nogen af de ting man kunne lave, noget man har savnet?*

Nej det synes jeg ikke, jeg synes det var virkelig bredt. Jeg synes faktisk det ar rigtig bredt, der var vind og vand og sten og en flod, og jamen altså, der var alt muligt og de havde fingrene nede i det meste af det. Lyd og, ja...

*Ja, har i savnet noget hvor i kunne få fingrene endnu dybere ned og faktisk selv være med til at skabe oplevelsen, eller du ved, for eksempel forbinde nogle ledninger eller få en lampe til at lyse, har i manglet det eller synes du det har fungeret fint det der har været udbudt derude?*

Ja det synes jeg. Men de ville sikkert også synes det var sjovt med sådan en lampe, men sådan en har de derhjemme, hvor de bare ville sige ”nå man det kan jeg da godt”, og så ville de gøre det, ik’. Men de synes det var ret sjovt med den flod man kunne flytte rundt på, lave dæmninger og flytte rundt på sandet og se hvordan vandet løb.

*Ja, har du savnet at i blev mere engagerede og involverede i de forskellige opstillinger, eller synes du at det har været tilstrækkeligt?*

Altså, øhh, det er lidt en mundfuld at være alene med fire børn derude, så på den måde kunne det, altså hvis jeg nu kun havde været afsted med de to store så havde det været en anden oplevelse, øhm, men øh, der tænker jeg at jeg bedre kunne have engageret ham på 10 med Asberger og holdt ham fast ”prøv lige og se her, nu prøver vi lige og.... Prøv lige og se det her”, ik’.

*Ja.*

Men det er jo mit vilkår, det er jo ikke noget der kunne være gjort anderledes fra Experimentarium side, tænker jeg.

*Nej. Synes du at det er Experimentarium der sådan har lagt rammerne for, og bestemt hvordan jeres dag skulle forløbe, eller er det jer selv der har skabt oplevelserne?*

Mmm...

*Hvis for forstår hvad jeg mener?*

Det er sådan lidt kringlet. Om jeg selv har....

*Er det sådan Experimentarium der har dikteret om jeg så må sige ”nu skal i gå her”.*

Altså det er jo ikke sådan at der er en eller anden rute man skal gå igennem, ligesom man skal følge pileneude i IKEA, vel. Altså... ja, man kan jo gøre hvad man vil og springe det over man ikke har lyst til at se eller orker at se, så det synes jeg ikke. Jeg synes der var rig mulighed, rigtig gode muligheder for, at det ligesom er over det hele, og man skal selvfølgelig lige have et overblik over hvor tingene er henne, men jeg synes ikke jeg følte mig dikteret til at skulle gøre tingene i en bestemt rækkefølge eller gøre noget på en bestemt måde.

*Hvordan synes du det fungerede med at du ikke skulle følge et bestemt mønster, at i ligesom havde frihed til at gå hen hvor i ville?*

Det synes jeg var rigtig fint, det ville slet ikke have været gået med fire børn at jeg skulle være gået i en bestemt rækkefølge og så stå stille med den ene der ville se noget, og så skulle de andre pænt stå og vente fordi vi var i gang med at følge en rute, det ville gå helt galt. Det kan man ikke når man er afsted med flere børn.

*Er der nogen gener i har oplevet under jeres besøg, ting du ikke synes har fungeret så godt, og det kan være alt lige fra helt banale ting som toiletterne...*

Ja, der var faktisk ikke lys i toiletterne nedenunder.

*Nej, okay.*

Så det var lidt kritisk da den lille var ved at tisse i bukserne at vi skulle løbe hele vejen op oven på.

*Ja for søren da.*

For han skulle i hvert fald ikke ind og tisse på en bælgravende mørkt toilet.

*Ej, det kan man da godt forstå*

(Alle griner)

Øhm, og så synes jeg maden i cafeen var sindsvagt dyr

*Ja.*

Jeg kom til at sige til dem da vi havde spist og der var gået et par timer, at nu kan vi lige spise en kage inden vi gør det sidste, og så gik jeg over og konstaterede at jeg skulle give 100 kr. for kage til os alle fem, ik'. Så skulle vi altså ikke have kage, det synes jeg er urimeligt, for det er den eneste sted der er at få noget, og så er priserne skruet sådan op, det synes jeg faktisk var lidt vanvittigt.

*Ja. Hvad med billetpriserne derude, igen hvis vi ser bort fra at i har fået billetterne, men hvor det koster 105 for børn mellem tre og elleve, og børn over elleve bliver kategoriseret som voksne og det koster 165.*

Jamen, jeg synes det er sindssygt dyrt. Øhm, hvis man prøver at sammenligne med hvad det koster at komme ind andre steder, for eksempel Zoologisk Have som også har kæmpe mange udgifter, de har jo ved gud udgifter til dyr og sådan noget, og det er altså billigere at komme i Zoologisk Have. Når man er alene med fire børn, så er det altså ikke lige sådan en udskrivning man gør sig den ene gang efter den anden, og det synes jeg er rigtig ærgerligt, at der ikke er, jeg tror der er rigtig mange børnefamilier der bliver afskåret fra at tage derud pga. prisen. Jeg lagde billeder på Facebook, og så var der flere der sådan kommenterede ”hold da op, har du brugt penge på det, det var da helt vildt at du har gjort det”.

*Okay.*

Jeg kan ikke forstå, der må være et statstilskud, jeg kan ikke forstå at det kan være så dyrt.

*Så den gængse opfattelse..*

Den gængse opfattelse hos rigtig mange af dem jeg kender er at Experimentarium det gør man max en gang hvert andet år, for det er simpelthen for dyrt at tage derude, hvis man har mere end et barn.

*Okay. Så i forhold til, hvis man kunne sige som et konkurrenceparameter, så er prisen helt sikkert noget der trækker ned for Experimentarium sammenlignet med andre?*

Ja, det er det.

*Ja, Øh, generelt, jeres oplevelse på Experimentarium, var det de små opstillinger der gjorde indtrykket, eller var det helhedsoplevelsen?*

Mmm, altså den der almene del hvor der var en masse små opstillinger, der , det var selvfølgelig lidt mere hektisk, hvor jeg... Jeg synes nede i den der dinosaureropstilling, det var simpelthen så godt fundet på, og de sugede det til sig og sådan noget. Fordi der var mørkt og man kommer ind og, de der dyr der skal forestille at være levende er lukket inde bag noget, altså, bare helheden, stemningen man kom i, det synes vi, eller både jeg og børnene at det var rigtig fedt. Og det var ikke hektisk på samme måde, når man komme op ovenpå er der lidt mere ”tju, tju, tju” fordi man skal nå det hele, så øhm... Så jeg tænker sådan, altså også andre udstillinger der er der, at hvis de skaber sådan, den der trygge ramme nedenunder så man lige kommer ind og så, så får man lidt begge, at skulle gå igennem kun sådan en som der var nedenunder hele tiden, så tror jeg man ville begynde at tænke ”ah, okay, nu må der gerne ske noget mere at bare at gå og kigge på de syr og man ikke kan gøre så meget.”

*Ja.*

Men det var helt fint lige og komme ind og se dem, og så ovenpå så gik det helt løs.

*Så en god kombination af..*

Ja, det synes jeg, der er virkelig noget for alle sanser og alle aldre.

*Kunne du tænke dig at jeres besøg på en eller anden måde havde fortsat da i kom hjem, for eksempel, nu din store dreng kørte på denne her kørestol, at så de data derfra var noget der var personligt for ham, og noget i kunne gå ind og se når i kom hjem, og så...*

Ja, det kunne være ret sejt. Vi har faktisk prøvet noget tilsvarende på glasmuseet i Ebeltoft hvor man kan gå ind på en computer, hvor man lader som om man puster et glas, og så stå og forme det glas, og så kan man gemme det, og så bliver det lagt ud, og så får man sendt det på mail, billedet af den kande man selv har lavet, ik'.

Og det koster dem jo ingenting at lave, og børnene synes det er så fedt at have de der billede og de kander de pustede på computeren, ik'. Og det, altså, jeg, nu om dage er det ret simpel computerteknik at kunne, at man taster sin mail og så får man sendt sine oplysninger, ik', så det ville helt klart være noget de synes var sjovt at kunne gemme, **i stedet for at de skulle gå og gemme det hele inde i hovedet.**

*Spændende.*

Så ville der komme et konkurrenceelement i det også, tror jeg.

*Ja, og tror du at det kunne være med til at gøre at i også ville snakke mere om det derhjemme?*

*Altså at det var noget der ville komme mere op?*

Ja, det kunne sagtens være at vi havde ”prøv lige at se her, prøv lige og se de her tal. Hvor er det alligevel vildt”, og så sidder man måske og læser på en pære eller en mælkekarton, noget hvor der er energi angivet. ”Hold da op, prøv lige og se, du afbrændte faktisk så meget, ved at gøre sådan”, og det er jo ellers ikke noget man bare lige, bare helt automatisk får målt. Det kunne være en rigtig fin ide, og ret simpelt gøre tror jeg i virkeligheden, ikke at jeg ved ret meget om computerteknologi, men jeg tænker ikke at det er svært at få det til at fungere.

*Nej, umiddelbart lyder det sådan... Tænker du at i ville have lyst til at komme tilbage, igen hvis vi ser bort fra billetpriserne, men ville i have lyst til at komme tilbage hvis alting fremstår uforandret ved jeres næste besøg, altså alting er fuldstændig som det var.*

Så ville vi bare starte i den anden ende, og have mere krudt til de ting vi endte med at gå lidt let henover til sidst, og så tror jeg at jeg ville tage afsted med to bør ad gangen i stedet for.

*Ja. Men man ville godt have lyst til at komme igen og igen selvom det hele var...?*

Ja, jeg tænkte at hvis jeg boede inde i området og kun havde ét barn, så kunne jeg godt være sådan en der havde et årskort dertil, ligesom folk har et årskort til Zoologisk Have hvis de bor lige om hjørnet, ik'.

*Ja.*

Øhh, fordi det også bare er en kæmpe fed legeplads og gå op og hygge sig på, ik'.

*Ja.*

Så det tror jeg sagtens, men med fire børn så er det altså lige lidt af en mundfuld, ik', og så tror jeg lidt, det der med at tage af sted med få, så ville det være en anden oplevelse.

*Ja. Synes du at i har haft tid, ro og fred til at fordybe jer i de forskellige oplevelser og opstillinger, eller har det været hektisk? Nu ved jeg godt igen det spiller en rolle med fire børn, men har der sådan været plads til at i kunne fordybe jer?*

Altså der var ikke sådan mange mennesker der gjorde at vi skulle stå og vente på at komme til. Det var jeg egentlig lidt overrasket over for det var ret dårligt vejr og det var lørdag, ik', så jeg tænkte, altså der var da nogen mennesker men jeg fik ikke den der oplevelse af at der var mange. Så, og god plads rundt om opstillingerne til at man også kunne stå og kigge på hvad de andre gør, altså de andre gæster. Så, altså mulighederne var der helt sikkert for at stå stille og fordybe sig.

*Er det sjovt det der med, eller sjovt, men hvordan fungerer det der med at man kan se andre gæster, hvordan de griber det an og så selv prøve bagefter?*

Det er meget interessant at man, ”nå okay, så gjorde de sådan” eller ”han lykkes med et”, eller noget hvor de små er for generte til at gå hen og gøre det, så kan de stå og kigge på hvad de andre gør inden de kaster sig ud i det, ik’. Det synes jeg er helt fint.

*Vi har egentlig være vores planlagte spørgsmål igennem, men noget som vi skriver meget om, eller gerne vil skrive mere om og undersøge mere, det er sådan hvorvidt, det at Experimentarium er så unikke som de er, i det de tilbyder sammenlignet med andre tilsvarende steder, hvordan man kan skabe præferencer blandt kunder og forbrugere. Er der noget man foretrækker eller vægter tungt at der også er et læringsmoment i oplevelsen på Experimentarium? Eller er det sådan, ja..*

Altså det, hvis vi ser fuldstændig bort fra pris, så ville jeg hellere have et årskort til Experimentarium end til Tivoli. Det er der slet ingen tvivl om. Det kunne godt være børnene ville synes vi skulle have begge dele, men ja.. altså jeg synes det vægter rigtig højt. Faktisk her i efterårsferien har jeg været i Finland med den ene af dem, og de har noget tilsvarende i Helsinki, som bare er mindre men med nogle helt andre ting også, og der tænker jeg at sådan nogle steder med fordel kunne sparre med hinanden og låne hinandens udstillinger så man også netop... jeg tænker hvis man først har været der fem, seks, syv gange til den samme udstilling, som voksen, så er det måske knapt så interessant mere, end det der med at der hele tiden er noget nyt tror jeg også kunne være medvirkende til at man ville komme igen flere gange i den samme sæson.

*Er prisen den 100% afgørende faktor hvorfor man ikke tager på Experimentarium mere, nu for eksempel...*

Altså for mit vedkommende er det helt klart en faktor, det er det, det har jeg simpelthen ikke fåd til at prioritere.

*Nej. Kunne de gøre et eller andet så at prisen blev det værd, altså hvad skulle man så tilbyde?*

Godt spørgsmål. (Pause). Hvad skulle de tilbyde? Det ved jeg søreme ikke. Den der oplevelse af komme ind, og så er det så dyrt at komme ind, og så dyrt at spise derinde og øhh, oplevelsen af at komme ind og blive lidt flået, det er sådan lidt ”pyha” ik’. Og øh, det ved jeg ikke rigtig hvordan de kunne rette op på, for det er et smadderfedt sted, det er der slet ikke nogen tvivl om, så det er selvfølgelig også et spørgsmål om min økonomi, men folk der arbejder som jeg gør, det er jo sådan økonomien er skruet sammen, vi er jo rigtig mange med en lang videregående uddannelse der ikke tjener kassen, og jeg synes det er ærgerligt at der skal være... også nogen, populært sagt kassedamen nede i Netto, at hun ikke får den mulighed for at tage sit barn med i ex medmindre hun virkelig prioritere det højt, ik’.

*Hvad synes du en rimelig billepris ville være?*

Altså jeg tænker vi skal sådan en 25-30% ned for at det sådan... altså 165 kr. for en voksen, det er godt nok mange penge, ik’. Hvis det allerede er fra 11 år man skal til at betale voksenbillets det er jo dér, i den alder, at det for alvor begynder at være noget hvor de virkelig kan suge til sig at lærdom, ik’. Så øh, ja, jeg synes det er for dyrt, simpelthen. Det skulle ned i pris, vi skulle ned på en lige over 100 kr. for en voksen, jeg tænker de der Zoologisk Have priser er langt rimeligere, der tror jeg det koster 80 kr. for et barn at komme ind, noget i den stil, jeg kan ikke helt huske det.

*Yes. Lige sådan afslutningsvis, bare lige sådan for at opsummere, hvis du skulle sætte nogle ord på jeres oplevelse på Experimentarium, hvad det har været, hvilke ord ville du så bruge?*

Det har været rigtig sjovt, først og fremmest. Og det har været, øhm, lærerigt, det har været samlende, de skændtes overhovedet ikke. Det er jo et succeskriterie at, når de ikke skændes. Altså de var glade hele tiden, så det var, ja, sådan begejstring på en hel anden måde end man oplever i en almindelig forlystelsespark.

*Og hvorfor tror du de er så begejstrede?*

Jamen der tror jeg det der med ”ej hvor er det fedt det gør sådan” eller ”ej hvor er det fedt man kan det” eller ”prøv lige og se”, altså det var den der ”mor, mor, mor” hele tiden, ”kom og se her, kom og se her”, ”her kan man hoppe rundt på gulvet og spille musik” eller ”prøv at se hvad der sker hvis jeg kravler herop” eller ”prøv lige og se på mig”, altså det var hele tiden ”hvad sker der hvis jeg gør med den her gynge, nu ligger jeg lige her og hvad sker der med de som” og ja, altså de var simpelthen så begejstrede hele tiden. Også ham der havde været med i Finland og lige havde oplevet noget tilsvarende, han synes også det var helt fedt. ”Hvad har i fået ud af det i dag?”, ”Årh det har bare været sjovt”, altså, og så fyldte det meget butikken ik’, så kunne man købe slik i butikken, og så kunne man købe... så var det lidt det det handlede om. Så først bagefter så kunne man snakke lidt mere om det.

*Ja. Og det er også den konklusion vi er komme til, at det i virkeligheden tager den tid..*

Og det er jo rigtig fedt, at det synker ind stille og roligt og man kan samle det op. Vi var ikke engang komme ud på Tuborgvej før Villadssov på bagsædet.

*Ja. Det lyder virkelig dejligt, og som om i har haft et rigtig godt besøg.*

Men det har vi også.

*Jamen det var det, tusind tak for hjælpen.*

## **Appendix 3.6: Interview with Ane four days after her visit**

**Interview with Ane, 1st of November 2012**

**Place: Ane's apartment, Copenhagen**

**Age: 30**

**Position: Stud.cand.scient. Clinical Nutrition**

*Hvem var du på Experimentarium sammen med?*

Jeg var på Experimentarium sammen med min mand der hedder Jakob, og mine to drenge som hedder Jonathan og Emil, hvor Jonathan er 6 år, bliver 7 til januar og Emil er netop fyldt 4.

*Yes, hvilke forventninger havde i til jeres besøg?*

Vi havde forventninger om af få et hyggeligt besøg, hvor vi kunne komme rundt og opleve en masse forskellige ting, de ting de nu har derude bl.a. at se dinosaurudstillingen som vi troede ville fange drengenes interesse.

*Havde i forventet at i ville lære noget derude?*

Jeg havde forventet at, måske ikke så meget at Jakob eller jeg ville lære noget, men at drengene kunne få stimuleret deres nysgerrighed.

*Ja, og har besøget så levet op til jeres forventninger?*

Det var jo bestemt en rigtig hyggelig dag, drengene har også suset en masse rundt, og hvor meget de sådan har lært af at være derude, det ved jeg ikke men altså det er jo for mig at se en oplevelse, hvor man er et sted hvor man kan gå rundt og kigge og snakke om ting.

*Mmmm, og hvordan synes du at helhedsoplevelsen var?*

Det har været en fin helhedsoplevelse. Helt bestemt.

*Hvis vi nu ser bortset fra at i så fik billetterne for at vi skulle lave det her interview, hvorfor ville man så vælge at tage på Experimentarium?*

For mig er Experimentarium et sted man tager hen, fordi der er mulighed for at være aktiv, og fordi der er mulighed for netop og kigge på nogle ting, som man gerne, som man selv har interesse for og som man også ønsker at ens børn skal få interesse for.

*Ja. Så dig og din mand har generelt interesse for det naturvidenskabelige?*

Min mand er meget naturvidenskabelig, grænset til det voldsomt nørdet (folk ler) og jeg har selv også den baggrund, jeg er nok lidt mere bred i det, men har helt sikkert også den naturvidenskabelige tilgang til livet.

*Var der noget specifikt i gik efter på Experimentarium – noget specifikt i søgte, sådan rent opstillingsmæssigt?*

Der er jo nogen af tingene der opfordrer til sådan mere børne aktivitet end andet, og det er de ting vi har vægtet. For eksempel det her med at dreje på solpanelet for at få det det her vand og boblen til at stige op. Det er jo noget hvor de synes det er en fed succes jo højere man kan få den op ik'. Det er sådan nogle ting, hvor de får den her output, i at de kan se hvor godt har de ramt den, hvor nu kom der en sky for solen og så kom der ikke noget, altså der er der for mig at se en stor oplevelse, der er i øvrigt også læring i lige netop sådan en opstilling hvor... de var for eksempel også vilde med at klatre op af en rebstige, der sådan lå ned der kunne vælte rundt, men læringsperspektivet er måske ikke helt så stort i det, som i forhold til det andet, hvor man sådan kan snakke om hvor meget kraft der egentligt er i solen.

*Får i som voksne noget ud af det, sådan et besøg på Experimentarium?*

Nej... vi får en hyggelig dag med børnene.

*Ja*

Altså, det... Ej, jeg tænker ikke at jeg er gået derfra og tænker: Aha, sådan og sådan hænger det sammen, det tror jeg også afhænger af ens baggrund.

*Men er det sjovt at være derude som voksen?*

Det er sjovt, men der er også mange mennesker, og det er et sted hvor det ikke er umiddelbart meget nemt at holde styr på sine børn, fordi der er mange ting, og det er tæt på hinanden, og altså der er ikke en naturlig afgrænsning, det er jo det her åbne plan. Så man skal virkelig holde øje, og der var et par gange hvor Jakob, han lige vandrede ud for at kigge på et eller andet, uden at sige til, og så skulle jeg lige.. uhwahov.. så var han væk, og så... det er ikke et sted der sådan på den måde er afslapning at komme. Så det kommer også an på hvor store børnene er, om man ligesom kan slippe dem ud selv eller om man ligesom vil have lidt hånd i hanke med dem.

*Ja, nu tænker vi på, altså når man skal ud med familien, som i var for eksempel i søndags, så er der jo også sådan noget som Zoologisk have og Tivoli som muligheder, og hvordan synes du at Experimentarium adskiller sig fra Zoo og Tivoli?*

Det adskiller sig helt klart fordi det er indendørs, det gør en forskel, også at det har åbent hele året. Så adskiller det sig også i og med at det er mere orienteret mod at man som forældre, altså på mine vegne, oplyser sine børn, man er på og man forklarer. Man prøver at skabe en undring, man prøver og skabe en interesse, en nysgerrighed, som også finder sted i Zoo i og med at man kigger på dyrene, hvordan lever de, hvad er forskellene og de her ting, som en institution som tivoli for eksempel ikke har.

*Ja, men synes du det kræver mere som forælder at tage på Experimentarium end fx mange andre steder?*

Det afhænger meget af børnenes alder, jeg har også været på Experimentarium som lærer med en klasse, og der går man jo selv rundt og kigger, og så lytter man efter om der er nogle af de værste rødder der er ved gå helt bananas, men ellers så er børnene jo der selvkørende på en hel anden måde, så der er det et meget afslappende sted at være. Jo mindre børnene er, jo mere kræver det sted.

*Ja okay, så du synes det kræver meget...?*

Jeg synes ikke det er krævende på en negativ måde, men det kræver du er på, på en anden måde, end hvis du tager hen i et legeland, så kan du sætte dig i en sofa i 4 timer, og du ser ikke dine børn, de drøner rundt og har det fedt. Altså her er du en meget mere aktiv del af det, så det er ikke krævende i negativ forstand.

*Men er det noget man tænker på når man har besluttet sig for at man skal lave et eller andet med familien, tænker man så over at okay måske i dag har jeg ikke så meget lyst til Experimentarium fordi, selvom det ikke er i negativ forstand, det kræver for meget?*

I og med det økonomiske aspekt normalvis spiller ind, så ville jeg ikke mene at en Experimentarium tur er så spontan en ting at tage på, tilsvarende heller ikke Zoologisk have eller Tivoli, så det vil i højere grad være ting jeg har besluttet mig for at gøre. Hvor sådan et boldlegeland det, hvis nu man havde pengene, så kunne jeg godt se for mig at man tænkte en eller anden eftermiddag at man bare hold kæft jeg er træt, bare tog ud i sådan et. Mere den anden vej rundt vil jeg sige...

*Altså med den økonomiske del?*

Nej, det er den anden vej rundt i forhold til, at man, de her lidt større ting man planlægger, det er ting man gør uanset hvad det kræver af opmærksomhed eller ej, hvor man en dag hvor man trænger til afslapning kunne finde på at tage hen på en legeplads eller hen i et legeland, eller hvad det nu kunne være...

*Okay, så hvis nu man skulle planlægge en tur hvor der er sådan relativt store omkostninger...*

Så spiller det ikke ind om det er mere nærværdskrævende eller ej, tværdigmod så synes jeg jo netop at interaktionen med børnene der er hyggelig.

*Ja, men hvorfor vælger man så Experimentarium? Hvad gør at i vil vælge at tage på Experimentarium frem for alternativer?*

Altså hvis jeg stod og skulle vælge mellem Tivoli og Experimentarium, og jeg måtte give børnene én oplevelse ét år, så havde jeg taget Tivoli. Og det er udfra sådan en traditions ting og en nostalgi i forhold til min egen barndom.

*Ja*

Øhm.. Men Experimentarium er en af de ting, de muligheder som ligger højere hos mig end for eksempel et besøg på National Museum eller andre tilsvarende. Og det er helt klart på grund af den her mulighed for at lege med det naturvidenskabelige og for at være mere aktiv sammen med dem, end i de sådan mere traditionelle museums miljøer hvor det er meget mere passivt.

*Giver det dig, som forælder, noget det at du faktisk kan lære dine børn noget? Har det en betydning for dig?*

Det har en stor betydning, men det har det jo i min hverdag, så jeg ved ikke om den bliver større nødvendigvis, men for mig er det et referencepunkt man har sammen, sådan en oplevelse, så en anden gang man oplever, ej nu har vi tændt for radiatoren fordi nu er det ved at være koldt, så kan man drage ind at man også kunne bruge solvarme til at få varmt vand. Altså på den måde giver det nogle referencepunkter. Men det er jo en daglig ting og hele tiden...

*Hvornår vælger man Experimentarium frem for andre alternativer? I hvilke situationer eller hvad skal der til?*

Jeg har primært brugt Experimentarium på dage, hvor jeg har været alene med en af børnene og gerne har villet lave noget sammen med dem. Netop fordi der er den her interaktion der er meget direkte og meget tilstede og nærværende. Så jeg har brugt det som at nu skal min store søn snart i skole og så kan jeg ikke længere bare tage en fridag sammen med ham når jeg har en studiedag, og så nu tager vi på en tur sammen, og vi tager herud. Det med at det er indendørs spiller også en stor faktor, fordi du ikke har denne her vejrusikkerhed. Så på den måde er Experimentarium også en plan B i forhold til solskinskrævende ting.

*Ja, men synes du at man som forælder er mere nærværende eller tilstede på et besøg på Experimentarium frem for, nu nævner jeg igen, Tivoli og Zoologisk Have?*

Ja, det vil jeg mene... Især i forhold til Tivoli

*Okay... er man sådan, nu vi tænker på det læringsmæssige aspekt der er i Experimentarium, tænker man så over at man er en bedre forælder ved at tage sine børn med på Experimentarium, frem for, for eksempel Tivoli, fordi at de måske lærer noget på Experimentarium? Også når man skal sige til folk: "Ja jeg tog mine børn med i Experimentarium", betyder det noget?*

(lang tøven)

Jeg tror det handler rigtig meget om ens baggrund, i og med at min mand og jeg ikke er veluddannede, så ved at være det, så er der nok en anden tilgang til at nogle læringselementer er vigtige, og man har den her interesse og nysgerrighed, og jeg kan forstille mig at der var andre befolkningsgrupper der ikke på samme måde fik lysten eller ideen til at tage på Experimentarium... altså at det er den vej rundt, jeg tænker ikke – det gør jeg generelt ikke – det her med at nu skal jeg lige være særlig ekstra plus god mor, fordi jeg har gjort et eller andet, fordi jeg tænker at der ligger ligeså meget læring i hverdagen og ligeså meget træning i forhold til deres intellekt.

*Så du mener at Experimentarium og valget om Experimentarium egentlig hænger sammen med, hvad kan man sige, sociale status på en eller anden måde?*

Jeg tænker det er mere nærliggende og tage på Experimentarium hvis man selv har en interesse og en horisont der vender den vej, end hvis man ikke har...

*Og ikke nødvendigvis en naturvidenskabelig baggrund, men mere bare sådan, eller hvordan?*

Måske nok især naturvidenskabelig, fordi hvis nu man havde en eller anden historisk baggrund, og bare synes at Danmarks historien eller et eller andet var det mest centrale at få givet sine børn et godt indblik i, så ville man nok vælge et andet sted at tage hen. Så jeg tænker da at det er et element i at det er primært naturvidenskabeligt derinde.

*Spændende... Igen hvis vi ser bort fra at i har fået de her billetter, hvem ville så normalt bestemme når i skulle på Experimentarium?*

Jamen det ville i høj grad være mig.

*Ville børnene have nogen indflydelse?*

(lang tænkepause)

Nej, altså både og, de ville have en indflydelse i og med at de har været der nogle gange og jeg kunne finde på at spørge dem om de ville have lyst til at komme derhen igen... Men nej, det er sgu mig der bestemmer.

*Ja, og hvem bestemmer normalt hvad familien skal?*

Det gør jeg...

(alle ler)

Men jeg vil så sige at det er en af de ting hvor det er nemmere at få faren med end så meget andet.

*Hvad har i fået ud af jeres besøg derude?*

Hvad tænker du? Sådan mere konkret?

*Altså er i taget på Experimentarium for at lære noget, har i lært noget derude, hvad har i fået ud af det i det perspektiv?*

I et læringsperspektiv?

*Ja*

(lang pause)

*Du må også godt svare på vegne af børnene hvis du kan det...*

**Ja, jamen jeg synes det er svært at gøre det meget konkret hvad det er man har lært...** Der er helt klart den her solfanger, der er en af de ting som fanger børnene meget, det gør for eksempel det her løvehoved man kan skrige ind i også... De er begge to nogen ret nördede børn, hvilket jo ikke er særligt mærkeligt... de går op i tal og op i at kunne systematisere og måle og sådan... Det der med de forskellige måleskalaer, man kan måle lyd og man kan måle energi og man kan måle, altså alle de her ting. Det er nok sådan der jeg ser at de sådan mest konkret har fået nogle ting med hjem. At man kan måle varme med det her kamera hvor man står og hvis man sætter sin hånd på blusen, så kan man lave et håndaftryk med den varme hånden har på blusen, det er sådan nogle opdagelser de gør sig. Og Jonathan kom med en kommentar undervejs, at han synes det var sjovt at man kunne både have 200 sol og 200 løveskrig, altså det er jo de samme tal vi bruger, men det er nogle forskellige skalaer, det bliver konkret sådan et sted.

*Ja. Har i lært noget i ikke vidste i forvejen? Nu tænker jeg både jer voksne men også børnene?*

(lang pause)

Øh... det har jeg svært ved at svare på...

*Tror du at man på Experimentarium måske lærer noget, men egentlig har svært ved at sætte ord på det?*

Det tror jeg i høj grad man gør, altså der er jo mange læringsskridt, og ting som man ikke kan sætte ord på, som der ligger nogen forståelse i, som ikke er så eksplisit.

*Hvor vigtig synes du læringselementet på Experimentarium er en del af helhedsoplevelsen, hvor vigtigt synes du det er?*

Et eller andet sted, så er det jo det som Experimentarium slår sig op på, og jeg synes også at det mange steder lykkedes godt for dem at få skabt nogle miljøer hvor der er noget for at vække

børns interesse. Jeg synes også at der er mange af de ting som der er derude, som er det samme som der har været længe. Og jeg synes den her værdi ved at komme igen er ikke nødvendigvis så høj..

*Fordi at der er mange af tingene der er de samme?*

Der er mange, ja det er mange ting.. og der er noget gensynsglæde, men der tænker jeg bare at det er ikke sådan det helt store læring der ligger der... Altså noget af det børnene også synes var sjovt, og som især den lille gerne ville hen til igen, det er den her kran med at flytte blokke og så videre. Og selvfølgelig er der noget med at lære at styre i nogle retninger og kunne lande tingene rigtigt og så videre, men altså det er jo så der hvor man kan sige at vi træder mere tilbage, for det er jo sådan mere intuitiv læring. Der er ikke så mange nye ting, hvor man kan fange ham i og fortælle ham et eller andet om verden...

*Hvad ville du synes var en optimal kombination af nye og gamle ting, for det lyder som om at i også værdsætter ting der går igen på grund af gensynsglæden, men hvad ville være optimalt?*

Det ville være optimalt at der var lidt flere nye ting, altså jeg synes... vi har ikke været der før, hvor det her vand-halløj nede bagved var færdigt, men sidst vi var der, der var der noget andet vand-halløj, som der havde været der i mange år. Og forskellen fra det gamle til det nye, taget i betragtning af hvor meget det sikkert har kostet er ikke vanvittig stor... Jeg synes den var rigtig sjov den der var omme bagved, hvor man havde en varmeplade man kunne skyde vand på og en neutral, og så en kold, hvor man kunne se vandets forskellige faser. Den synes jeg var sjov, men det er jo ikke en hvor børnene selv går ind helt og oplever, de synes det var meget sjovt at trykke på knappen, men det der med, hvad det egentligt er der sker og hvad det egentligt er man oplever, det er der hvor man kommer ind som voksen og har en rolle... og igen, der tænker jeg også at det kræver en eller anden vis baggrund at synes det er interessant for ens børn at vide at vand kan have flere forskellige faser.

*Ja, helt sikkert.*

Men mange af tingene i det der vandland er relativt det samme, der var et surfbræt eller noget, det var min tanke at de var for små til den, så den prøvede vi ikke, det var selvfølgelig jo noget nyt... og så var der det her boldhav, hvor det ene så desværre var lukket, og hvor den store ikke måtte komme ind i det lille, det var ikke godt.

*Nej, det har været kritisk... Scheize... Men hvorfor er det at i gerne vil have nye ting derude?*

*Fordi for eksempel Tivoli er det jo sjældent at der kommer nye ting.*

Jamen det er jo netop, hvis det skal være... der handler det jo netop at der er et læringsperspektiv, og selvfølgelig er der mange af de ting der er derude, som er ting man ikke nødvendigvis har opdaget... så det er jo også hvad man som voksen selv falder over, altså hvad der selv fanger ens egen interesse, så man får slæbt børnene hen til den... men det er netop på grund af læringsaspektet, for i Tivoli, der handler det om noget helt andet. Det er noget helt andet der er på spil, det er netop med at prøve nogle ting, prøve nogle grænser af og prøve nogle ting også med sine børn, som man kan huske fra da man selv var barn, altså der er en stor nostalgi-ting i det, hvor det jo også er fint at der kommer noget nyt engang imellem i Tivoli, behovet er bare ikke helt ligeså stort. I hvert fald ikke fra vores målgruppe, hvorimod på Experimentarium, hvis jeg skal betalt – var det 160 kroner pr. voksen og 105 pr. barn, eller sådan et eller andet i den stil, så skal jeg have noget for pengene, og det jeg vil have for pengene, det er et eller andet jeg kan gå rundt og kigge på med mine børn, som jeg også synes er spændende.

*Ja, okay.*

Og det er ikke gentagelsens glæde udelukkende.

*Okay... Et lidt andet spørgsmål. Hvor aktive var i under jeres besøg? Både børnene, men også jer forældre.*

Fysiskaktive eller hvad tænker du?

*Ja. Altså bare aktive, med til at gå rundt, med til at involvere jer...*

Børnene har ikke løbet rundt overhovedet selv, så vi har været med rundt hele tiden.

*Okay, så det har været sådan en fælles familieaktivitet, hvis man kan sige det sådan...*

Ja, der var for mange mennesker og det er for stort et sted, og mine børn er for kaotiske til at bare skulle have frit lejde og så mødes vi klokken et-eller-andet-sted, nej det kan de ikke.

*Nej, tror du at man, eller måske især børnene, lærer mere ved at komme på Experimentarium og selv afprøve tingene, frem for selv at sidde derhjemme eller i skolen og læse om det i bøger?*

Ja, altså jeg synes de ting komplementerer hinanden. Altså, man har jo mange forskellige måder at lære på, forskellige læringsteknikker, forskellige intelligenser afhængigt af hvor meget læresnak vi skal ind i, men altså jeg synes det er vigtigt at få nogen referencer forskellige steder fra. Og min tanke er netop at et besøg på Experimentarium bliver sådan en hverdagsreference som man tager frem som sådan et eller andet holdepunkt.

*Ja, fordi det er netop, er der nogle af de ting i har lært eller oplevet på Experimentarium som i har tænkt nærmere over siden i kom hjem? Altså, har snakket om?*

(lang tænkepause)

Jamen det er for eksempel den der solfanger, som børnene synes var vild sjov, hvor vi har snakket om hvor meget energi der egentlig er på solen og hvor meget kan man hente den, og siden der er så meget energi, hvor varm er den så egentlig, og når man sige så og så mange grader hvordan kan man forholde sig til det i forhold til hvor varm ovnen egentlig er. Så kører det der spind på en eller anden led, og der kan man så sige at det spind, det er måske ikke startet på Experimentarium, men lige præcis de der forskellige rækker blev initieret af sådan et besøg.

*Så har det på en eller anden måde påvirket jeres hverdag, eller haft en effekt på jeres hverdag?*

*Måske ikke endnu, men kunne du forstille dig at det ville have det fremadrettet? Noget af det i har oplevet eller lært.*

Jeg tænker det giver en bevidsthed om nogle forskellige muligheder, men jeg tænker ikke nødvendigvis at vi går ud og ændre vores liv, det er ikke en livs ændrende oplevelse at gå på Experimentarium, det er det ikke.

*Nej, men tror du det er noget som påvirker bare nogle små ting i hverdagen eller i livet?*

*Hvordan ens tilgang til verden...*

(lang pause)

*det kan godt bare være helt ned i det små, sådan noget som at finde ud af hvor meget vand man bruger, og så slukke for vandhanen...*

det er vi jo ret bevidste om i forvejen, men jeg tror det bliver måske mere håndgribeligt for børnene, på en eller anden led.

*Ja. Hvordan gik det med at finde ud af hvordan tingene og opstillingerne fungerede derude?*

Jeg synes at, det er ikke sådan at jeg tænker at det er overvældende med information om hvad der er tænkt. Der tænker jeg at man i høj grad selv skal finde ud af hvad de forskellige ting kan gøre og hvad de kan bruges til. Jeg tænker også at hvis de her børn kan jo, ej Jonathan kan en lille bitte smule, men altså det er jo ikke dem der begynder at læse en stor roman, så det er jo ikke at det nødvendigvis er det der skal til. Men der er da mange af tingene hvor man ligesom selv skal hitte rede i hvad det egentligt er det går ud på.

*Ja, har det fungeret fint nok, eller har i haft nogen problemer?*

Altså, lige når man kommer op ad trappen og går til højre, så er der nogen spejle og noget forskelligt, og der er også nogen computer og noget man kan sidde og bruge, og ungerne ville gerne sidde og trykke på de der computere, men altså de har jo ikke noget begreb om hvad de har lavet. Og de ting var ligesom heller ikke for deres målgruppe, til deres aldersgruppe, men altså... Så der er nogen ting hvor det jo også afhænger af alder.

*Ja... Er der nogen ting derude, som i slet ikke kunne finde ud af, eller som i måske ligefrem掉了因为我在怀疑这个想法?*

Det mellemstykke der ligesom ligger mellem det her kamera med varme og de her ting, og så når man kommer ned bagved til det sådan mere legeting, med bolde der kan køre rundt og op og ned og sådan noget. Den der mellemsektion, den fremstår en lille smule grå i mit hoved... Jeg har ikke helt... Vi har ikke kigget særlig meget på den, det var ikke noget der sådan fangede sådan umiddelbart hvad det lige var man kunne der. Jeg kunne godt tænke mig at der var mere, det er jo selvfølgelig også min interesse, men jeg kunne godt tænke mig at der var mere sådan i forhold til anatomi og så videre derude. Der er den der store øregang man kan se, og et eller andet sted så kunne jeg godt tænke mig at der var mere af det.

*Ja.*

Der stod en og havde gang i nogen lunger mens vi var der, og det var det mest hjælpeløse jeg har set derude længe, der var, ja det var det virkelig. Altså, hun formæde slet slet ikke at få vist tingene, og det endte med at der stod 5-6 voksne der var nysgerrige som ikke har set sådan noget før garanterer, som så synes det interessant, men der var slet ikke... altså det fangede på ingen måde børnene, og det burde have fanget mine børn.

*Ja, men simpelthen fordi at hun formidlede det ikke?*

Hun formidlede det ikke, hun stod og talte ned i de her lunger, og de ville ikke rigtig puste op og hun fik ikke rigtigt skåret tingene ud, taget det frem og vist det... Det var meget i hendes lille cirkel det foregik.

*Okay, så hun kom slet ikke udover scenekanten, om man så må sige?*

Nej, slet ikke i forhold til børnene.

*Nej.*

Bare sådan noget at man vælger et højt bord der gør at man er nød til at stå men ungerne på skuldrene eller på armen, er jo principielt håbløst.

*Ja. Generelt, det var jo sådan en af Experimentariums guider, der var der. Så i dem ellers end lige der med lungerne?*

Der var meget meget få derude. Jeg synes jeg ligesom plejer at kunne spotte noget koboltblåt hist og pist. Men nej, jeg synes ikke der var mange... der var noget sæbebobleshow, hvor der valfartede folk til, hvor der selvfølgelig var nogen. Der gjorde vi så det, at vi i stedet for styrtede hen til det lille boldhav med den lille og mere med vanden med den store, fordi vi så udnyttede at der var færre mennesker. Og de har set det her sæbebobleshow før, så det fandt vi ikke så vigtigt. Men nej, det var ikke sådan at vi sådan stødte på... jeg tror der var en der havde gang i hjertemassage, men der stod en del folk rundt om, så det var ikke noget vi kom hen til.

*Okay, men du ved godt hvad man kan bruge de her guider til?*

*Ja.*

*Her i benytter jer af dem førhen?*

Ikke at jeg er gået hen og prikket dem på skulderen, men vi har da ført set nogen af de her forestillinger eller shows... og vi har, for eksempel den der luftballon de kan hejse op i forhallen og så videre.

*Ja, savner i at der er nogen der går rundt og kan guide en på vej og hvis der er noget man er i tvivl om, og kan komme med nogle nye perspektiver, måske hjælper børnene på vej?*

Det synes jeg kunne være et fint initiativ, helt klart!

*Hvorfor?*

Fordi det er noget andet end hvis det ikke er ens mor og far. Og fordi hvis nu man forestiller sig at de stod henne ved en eller anden ting og havde gang i noget, så ville det vække børnenes interesse, at det der foregik et eller anden, som de ville hen og se. Og de kan jo godt lide at spørge, også andre mennesker, så det ville jeg da helt klart se en værdi i.

*Ja. Så en ny kategori, helt overordnet, hvad kunne have gjort jeres oplevelse på Experimentarium bedre?*

(lang pause)

Altså, der er noget med menneskemængden, det er der. Og så er der, det var nu ikke fordi at der var sådan helt vildt tætpakket, men der var alligevel en del. Så var vi nede og kigge på de der dinosaurusser, og det var en lille smule skuffende synes jeg. Altså, de var jo flotte lavet og sådan noget, men der var ikke de her elementer, der som sådan fangede børnene. Det var sådan lidt ”arh, den er stor”, og så var de klar til den næste. Hvor sådan noget som den der mad, der står og mugner og hvad der ellers sker, altså det synes de jo er sjovt at se hvor hurtigt og hvor klamt det bliver.

*Ja. Er der ellers noget i har savnet ved jeres besøg derude? For eksempel i forhold til opstillinger, nogen ting som man kunne lave?*

Altså sådan ideer til hvad de skulle...?

*Ja.*

Altså, jeg tænker især det der med at det kunne være fint hvis de havde nogle flere anatomiske ting. Det er fint det her hjerte der står og pumper, og viser hvor højt det kan pumpe, og børnene kan sætte deres hænder på og se det. Man kunne have sådan nogen ting også i forhold til respiration og i forhold til... børn ved jo egentlig relativt meget om sådan noget om at de har en mave, og så kommer maden videre, altså hele det aspekt egentligt i forhold til fordøjelseskanalen kunne man godt gå dybere ind i, og vise nogen ting som med øret og så meget andet.

*Ja. Har du savnet at I blev engageret og involveret mere, sådan at der var nogle ting hvor I skulle være endnu mere engagerede?*

Øhm, det ville i hvert fald ikke skade tænker jeg. Altså jeg synes netop, for at vende tilbage til det med solfangeren, det er et eksempel på at man står og styrer noget og man gør noget og ser en effekt af det som er rigtig fin.

*Ja.*

Børnene, især den store kunne også rigtig godt lide den her med det røde og grønne trafiklys hvor de så kan kravle rundt og så videre, øhm... Altså de her ting hvor der sådan sker noget og hvor de kommer i en eller anden proces, øhh, det ville være rigtig godt med flere af dem.

*Også sådan hvor man måske skaber sin egen oplevelse?*

Ja, altså, også de her spejle der er sat op, det er jo også en klassiker og sjovt at se hvor mange sprællemand man kan lave og alt mulig andet, ik'. Øhm, det er så ikke noget der har fanget interessen i lang, lang tid hos mine, der er det måske lige kedeligt nok eller hvad skal man sige, der er i hvert fald nogle andre ting de hellere vil hen til.

*Ja.*

Altså de synes det er sjovt at hoppe rundt på klaveret, og de synes det er sjovt med det der varmekamera, og det er sjovt med rebstigen der kan venderundt og så videre. Jeg synes det handler meget om for et sted som Experimentarium at få skabt de her installationer der gør at børnene bliver stående, og det var det jeg oplevede at der ikke skete ved dinosaurerne.

*Ja. Spændende. Synes du det er Experimentarium der har bestemt hvordan jeres dag skulle forløbe, eller er det igen jer selv der har skabt oplevelserne?*

Det synes jeg i høj grad er os selv. Altså man kommer der, og så bruger man de faciliteter der er der og som sagt gik vi jo igennem hele midterstykker uden sådan lige at fatte interesse for det den dag, jeg kan faktisk ikke rigtig huske hvad der er det. Jeg kan huske der er noget med en parabol man kan stå og snakke i, og der var noget med nogen...ja, der var noget vi ikke kunne få til at virke, det var, øhm.. var det nogle særligt store ører eller sådan et eller andet man skulle stille sig om og sådan... ja, det fandt vi i hvert fald aldrig ud af

*Kunne i have brugt i sådan en situation at der var nogle guider lige ved hånden man kunne spørge om hjælp, og guide jer på vej?*

Altså, man kan sige det vil være nemt at se at vi ikke havde fundet fidusen, eller at vi ikke kunne få det til at virke. Øhh, og igen er sådan en hvor man skal stå op og have ørerne mellem noget, den er dybt uegnet for børn.

*Ja.*

Øhhm, så jeg tænker det havde været nemt hvis der gik en guide rundt og spottede at hov, der er noget, så ved jeg ikke om det ville være for tøjbutiksagtig hvis der kom en rendende. Men det er netop, det skal være en afpasset, balanceret tilgang, ik', så man ikke føler sig overvåget eller forpligtet til at gøre nogle ting, men samtidig også oplever at der er hjælp og hente.

*Ja. Så det er sådan en balancegang.*

Helt klart.

*Øhm, har I følt at der var et bestemt mønster eller en bestemt rækkefølge i skulle gå igennem opstillingerne derude på, eller har i bare...*

Nej. Men jeg synes man får, altså det bliver sådan.... Jeg tror bare meget hurtigt der opstår sådan et ”plejer”, ik’, men altså at man ligesom kommer ovenpå og så tager man runden rundt om hall’en, og så går man ligesom ned, og så især nede bagved er der en masse for de lidt mindre børn, og så tager man dem, i stedet for at skulle slæbe dem tilbage, så ned igennem trappen og så ud den vej, altså der bliver sådan en sluseform, øhh, jeg oplever ikke nødvendigvis at det er noget som Experimentarium har til hensigt, det er ikke sådan en IKEA-rute med pile, men... det har været sådan vi har gjort det.

*Savner du en eller anden form for, sådan, rækkefølge man kunne gå, eller en instruktion eller vejled ledning eller en eller anden form for pejling?*

Nej, men jeg savner at der er nogen ag tingene der ikke i så høj grad selv fortæller hvad de kan. Øhm, en eller anden reklame, ”se mig”, altså hvad kan jeg, og jeg ved ikke hvilken form det skulle have, men der er nogen ting der intuitivt, altså der er mere intuitive at gå hen og pille ved end andre.

*Ja. At der ligesom er nogle opstillinger der er mere anonyme i forhold til andre eller hvad mener du?*

Jo men for eksempel så er der de her ansigter man kan dreje, altså du er ikke i tvivl om når du kommer op om at du kan dreje på de der store nogen og så kan der ske noget, altså den taler meget for sig selv i forhold til hvad du kan, og der er andre ting der ikke på samme måde har denne her indre logik, øh, hvor du har brug for lidt hjælp. Jeg tror Jacob (faren, red.) stod nede bagved ved et nye vand-halløj og pillede ved et eller andet... det var noget med, der var en metalbund der var knækket og så kunne man ligesom skrue den op og ned, og så stod man lidt og drejede rundt på hjulet og synes ikke det gav noget, og sådan, og så bagefter lagde jeg mærket til på bagsiden, jeg tror i øvrigt der stod den ikke virkede, men det var så åbenbart noget med hvordan en bølge bryder op ad stranden.

*Mmm.*

Altså, det havde jeg overhovedet ikke fattet hvad konceptet i det der var, så, altså man kunne tydeligt se et håndtag man skulle dreje på, der sket ikke noget rigtig når man drejede, andet end der var en plade der fladet lidt ud, men det gjorde ikke noget forskel, og i sådan et tilfælde mangler man i høj grad en guide i forhold til hvad pokker det skal gøre godt for.

*Ja.*

Der var også sådan nogle ting i det her vand-halløj hvor man kunne... der var sådan nogle farvede plader på siden af det her grå, og man kunne se at de gik ned i vandet, men man kunne ikke se om det var en knap, eller, altså, var det pynt eller kunne den noget.

*Ja.*

Altså er der nogen ting der bare er mere intuitive end andre, og ligeså snart de ikke er det, så er man på en eller anden måde nødt til at skilte med hvad de kan.

*Ja.*

Men jeg synes også det er fint at der var sådan en hval eller hvad det var, hvor der kommer nogle vandstrålet op af, når man så rører ved vandstrålen, så spiller den musik. Altså det er jo ikke fordi der er nødvendigvis skal være tegnet sådan et musiksимвol der viser at ”hvis du gør noget her, så..”, altså det gør jo heller ikke noget at der er nogle ting man opdager, sådan et sted hvor du piller ved vand vil du typisk også komme til at, hov, så sagde den noget. Så opdager du, så den der også mere intuitiv end nogle af de andre ting, når du står og piller ved det så sker der ikke noget, og så, ”nå”, så er interessen gået videre ik’. Det er kort tid man har til at fange interessen.

*Ja. Ja, så der skal de være bedre til med noget instruktion eller noget guidance?*

Ja, nogen pile nogen et eller andet, et billede af hvad de kan , for det er især i forhold til børnene, det handler rigtig meget om at fange deres opmærksomhed. Hvis det ikke har den her logik eller helt tydelige funktionalitet, jamen så ryger den.

*Ja.*

Så tager de det næste sted.

*Yes, ”videre”. Haha. Øhm, sådan generelt, oplevede i nogle gener eller nogen ting der ikke fungerede så godt? Det er sådan, besøget som helhed altså lige fra da i kom ind, til toiletterne til...*

Jeg synes jeg har nævnt at der var nogle ting der var defekte, altså der var det der boldhav der var lukket, uden at man kunne se hvorfor.

*Ja.*

Et eller andet sted forstår jeg slet ikke hvorfor der er et boldhav, fordi, øhh, for mig at se gør det at Experimentarium bliver mere en legeplads og, altså, børnene kan jo være i det der boldhav i fire timer hvis det skal være, og så, øh... det er ikke godt hvis der er nogle ting der konkurrerer mere med de ting man egentlig gerne vil derude.

*Okay, så interessen, ”fun value” i boldhavet er større end i mange af de andre ting? Men boldhavet er vist også for at vise revlhuller og sådan noget, tror jeg.*

Sikker nok. Men jeg tænker bare, børnene ser noget, de ved hvad de skal, de ved de synes det er sjovt, og de har ikke lyst til at stoppe. Altså, så der er en eller anden genkendelse i, ”hov, det der er sjovt, de andre børn skriger af grin, der skal jeg hen”. Altså, det er jo ikke sådan at man på samme måde skriger af grin når man står på hvalen og sætter fingre på og den så siger lyde, men derfor er det en god oplevelse. Og det er den oplevelse, det er de oplevelser jeg gerne vil give dem når vi tager på Experimentarium. Det er ikke at hoppe rundt i et boldhav.

*Nej.*

Så det er ikke, det er fint det er der, for de små er det jo rigtig god aktivitet og lave, og øhh....

Men, for mig at se er det uden for deres kerneområde.

*Okay. Så det bliver for meget legeland?*

Ja, på en eller anden led. Jeg kan godt se at det trækker, og jeg kan godt forstå at det giver bonus, men det... man skal bare...man skal bare passe på sådan et sted, for du kan sagtens gøre det mere attraktivt for den bredere befolkning og så videre, men det er søreme en svær afgrænsning fordi lige pludselig så bliver det meget meget hurtigt, øhh... det tiden går på end de ting man egentlig gerne ville derude.

*Ja.*

Men det er selvfølgelig god børneparkering, det er der jo ikke nogen tvivl om.

(Alle griner)

*Så det, boldhavet tager simpelthen fokus væk fra læringsaspektet derude?*

Ikke nødvendigvis læring, for jeg synes ikke det kun er læring, men de der oplevelser som så har en sideeffekt der kan være læring, det mener jeg også et boldhav kan have, men det er bare i højere grad en legeplads ting, og sådan har jeg det en lille smule også med det byggeanlæg der er derude. Det er smaddersjovt, det er super velfungerende, det er boldhavet på alle måder også, men det er bare ikke nødvendigvis det jeg synes jeg gerne vil have ud af Experimentarium på mine børn vegne. Der synes jeg de her, øhmm... lange rør med nogle kugler man kan køre rundt hvis man drejer på noget forskelligt, altså så er det for mig at se mere Experimentarium end de her legepladser.

*Ja. Er din opfattelse sådan generelt at Experimentarium er primært oplevelser og at læring er en bonus?*

Det er nok min, ja. Jeg synes det er... i mine øjne skal Experimentarium være en lille opdagelsesrejse hvor man opdager nogle ting og man netop får de her... at der netop er de her installationer som har sådan en eller anden innovativ og intuitiv funktion, som man jo ikke har derhjemme. Der kunne godt være nogle flere eksperimenter, nogle flere ting hvor man sådan kunne påvirke noget, ik'.

*Ja. Hvad med billetpriserne, hvad synes du om dem på Experimentarium? 105 for børn mellem tre og 11, og alt over 11, 165.*

Jeg synes det er rigtig rigtig mange penge, og jeg synes også det er for dyrt. Altså, jeg kan godt forstå at det er dyrt sted at køre, øh... men det gør at det er en sjælden gang man tager derhen og at det ikke er tit. Og, på den anden side kan man også sige, det er ikke min oplevelse at Experimentarium er et sted man kommer hyppigt, heller ikke kun på grund af priserne, men også pga. indretningen.

*Ja.*

Fordi, jeg som forældre ville kede mig fordi mine børn ville løbe hen til det samme igen. Så i den forstand er det jo fint nok at det er lidt dyrere, men jeg synes det er dyrt, det synes jeg.

*Hvad skule der til for at, det ligesom blev prisen værd?*

Jamen der skulle være nogen... der skulle være større udskiftning, og der skulle være nogen flere installationer som inspirerede til at man var ved dem i længere tid. Det bliver sådan lidt hurtigt sådan lidt shopping, "bum-bum-bum-bum", de forskellige ting ned igennem, og så, altså, det er fordybelsen jeg synes mangler... altså der er nogle ting jeg synes der fungerer rigtig godt, og der er nogle ting hvor man for nemt skøjter henover.

*Okay. Så det er fordybelse du savner derude?*

Ja, og de her ting der får involveret mere.

*Ja, generelt ellers, synes du at der var tid og plads ude på Experimentarium til at i kunne fordybe jer i de ting i fandt interessante?*

Jamen det synes jeg overordnet at der er. Men der er mange ting samlet, så det handler også lidt om distraktionsniveauet hos børnene, ik', fordi der hele tiden er 10 ting ved siden af som de også kan se. Så det kræver noget at holde fokus, ik'.

*Synes du at det er de små oplevelser der gør indtryk på Experimentarium og som gør oplevelsen, eller er det sådan helhedsoplevelsen derude?*

Det vil jeg mene er en kombination. Men jeg synes de ting man tager med sig hjem, selvfølgelig har man et helhedsindtryk, men jeg synes de ting der gør at man har lyst til at tage derhen og de ting der gør at man tager derhen igen en anden gang, når der er gået noget tid, det er nok i højere grad de små ting. Det er de der gode ideer som der er rundt omkring.

*Så de gode ideer der er rundt omkring, det er noget der gerne må fremstå uforandret?*

Næ, der må gerne bare være flere. Altså nye.

*Så ikke nogen specifikke gode ideer, bare principippet med gode ideer skulle der være mere af?*

Princippet med sådan nogle ”Ole Opfinder”-ting som man kan pille lidt ved og anatomiske ting man kan se, altså noget hvor man kan gøre noget og påvirke noget, og få et eller andet ud i den anden ende, så man har en oplevelse af selv at have være en del af det. De ting måtte der gerne være flere af.

*Hvad på Experimentarium synes du der er nu som har det?*

Jamen det synes jeg solfangeren, jeg synes det der hjerte der står og pumper, det her varmekamera synes jeg har de her ting.

*Hvor man selv er sådan en del af...*

Og også de her med bolde der kører i rør, det synes ungerne er evigt skønt at man kan stå der og få det hele til at spille sammen. Der var også, det synes jeg i øvrigt ikke vi fandt, mener har i hvert fald tidligere været sådan en robot man kunne give mad.

*Den er der stadig, den er blevet rykket over til den ene side.*

Den så vi så ikke lige, men altså, men det er også en ting hvor der sker noget og hvor man gøre noget, og det samme med den her løve man står og råber ind i. Altså, det, jeg synes de der... det er en god ide, grundlæggende god ide der er nem og simpel og hvor det sådan er til at have med at gøre, og samtidig får man sat billeder på noget.

*Ja. Kunne du tænke dig at jeres besøg på en eller anden måde fortsatte efter i kom hjem, for eksempel at man kunne gå ind på Experimentarium's hjemmeside og så, måske ligefrem nogle af de personlige data man på en måde havde udviklet på Experimentarium, at man kunne gå ind og se dem og arbejde videre med dem, eller at der på en eller anden måde var noget der fortsatte efter.*

Mm. (Pause). Måske hvis børnene havde været større, altså der er nogen ting hvor man kan lave et postkort eller hvad det er, sende rundt, men der er de ikke endnu.

*Nej*

Øhm, så for mig at se så ligger det der fortsætter i at man har en reference, den her fælles oplevelse, reference som, som man jo så bruger i en eller anden udstrækning i hverdagen.

*Ja. Nu har vi været inde på det før, men ville I have lyst til at komme igen og igen på Experimentarium hvis altting fremstår uforandret ved næste besøg?*

Jeg synes, men mellemrum ville vi gerne, øhhh, og det er sådan jeg har det med Experimentarium, jeg synes det er et sted der er godt at komme hen, og få nogen oplevelser. Det er ikke et sted man, altså jeg kunne ikke drømme om at købe årskort derhen til for eksempel, jo hvis jeg boede op og ned af det måske, men det... altså, ikke i den nuværende udformning. Jeg synes heller ikke det er et sted der sådan ligger op til det på den måde, men... jeg synes det er et godt sted at komme hen og de får set nogle ting og de får, altså, sat billeder på nogle ting jeg gerne vil ha' de har billeder på.

*Ja. Tror du ville komme hyppigere hvis udskiftningen derinde var større?*

(Pause) Det ville i hvert fald ikke være utænkeligt vil jeg sige, men for eksempel sådan noget med de laver en dinosaurudstilling, det er jo principielt rigtig spændende, men hvor er jeg glad for vi ikke tog derud ad den grund, altså, på en eller anden led, ik'.

*Fordi der var for lidt aktivitet eller hvordan?*

For lidt aktivitet og fordi det fangede ikke. Altså jo, men det fanger i 30 sekunders intervaller af ”øj, den er fin” og så er man videre.

*Ja.*

Altså øhm, der var på et tidspunkt, jeg kan ikke engang rigtig huske hvad det var, men der var nogle balancebomme når man kom ned af denne her vindeltrappe henne for enden som man kunne kravle rundt på, altså det synes de var rigtig sjovt. Så var der et eller andet der, der var en eller anden fidus i det også, man kunne vist også gå på line eller noget, jeg kan sgu ikke rigtig huske det. Men altså, det var sådan noget der fangede og hvor de kunne bruge lang tid, og jeg

synes at elementerne var, ligesom udover det her boldhav, øhhh, det var nogen ting man ikke bare sådan lige fandt andre steder.

*Ja.*

Og det kunne jeg godt tænke mig. Altså de har lavet en klatrevæg, og det er i og for sig et fin t, og det er en god oplevelse at klatre op og ned, det er bare ikke noget der på den måde er voldsomt specielt.

*Nej.*

Øhm, og det er de der mere kreative, innovative ting som jeg vil tage på Experimentarium efter.

*Okay, så det skal være ting man ikke kan finde andre steder som de udbyder på Experimentarium?*

Ja, det vil jeg mener. Og gerne nogle flere fysik- og kemiting hvor børnene selv kunnestå og blande lidt, og nogle mikroskoper hvor de kunnestå og kigge på et eller andet. Altså, ja. Også i forhold til, børn har også en eller anden stor interesse for livets begyndelse og slutningen og sådan nogle ting, der var en eller anden figur hvor man kunne se, jeg tror det var hjerner man kunne se på en gravid, og så kunne man se en babys hjerne, og det fangede jo at der var en gravid kvinde dér.

*Mm.*

Principielt kunne du jo sagtens have, det tror jeg i øvrigt også de har haft engang, altså sådan mere forklaring af hvordan starter livet og hvad sker der. De ville da synes det var sjovt at se på. Og ville være noget hvor der er en naturlig nysgerrighed at fange, også i forhold til ”hvor kommer sne fra og regnen” og alle de her ting, det er jo også noget der naturligt, øhhh, interesser dem.

*Ja. Så det handler altså mere for Experimentarium at fange, at lave nogle opstillinger der fanger de naturlige nysgerrigheder, fremfor for eksempel boldhavet og klatrevæggen?*

Ja, det synes jeg.

*Er det også ting der relaterer til hver dagen, det lyder det jo meget til?*

Ting der relaterer til hverdagen, og livet og til de spørgsmål...nu kommer vi der for børnene, ik', primært, og hvad er det for nogle ting som pusler rundt i deres liv. Og det er ikke nødvendigvis hvordan bølgerne bryder op ad kysten, det er fint og det er spændende når de er lidt større og alt mulig andet, det kan jo være sjovt hvis man kanstå og generere bølger. Det kan jeg se en kæmpestor oplevelse i, men det er de her sådan daglige ting i en eller anden grad som jeg synes giver mening. Også bare den her mad der står og bliver dårlig. Man får lige pludselig syn for sagen om at ”nå ja, mælk kan blive for gammel” og altså...

*Tror du så også at hvis Experimentarium omhandlede mere daglige ting, at det så også ville være noget der ville påvirke mere efterfølgende i dagligdagen?*

(Pause)

*Nu for eksempel med maden, jeg ved ikke om drengene har ændret...om det er noget der har påvirket dem i forhold til mad fremadrettet, sådan ”ad, mad kan blive helt vildt klamt”?*

Ja... jeg synes i hvert fald det har givet dem et billede på hvad det vil sige at tingene er blevet for gamle, jeg tænker ikke at de ændrer adfærd fordi de ikke på den måde har synderlig stor selvestemmelse over deres køkken...deres mad osv. Men der ligger da helt klart nogle ting dér.

*Ja.*

Børn har jo bare generelt en stor nysgerrighed overfor de ting de omgiver sig med og ser. Altså, jeg synes det ville være godt både at stimulere de ting, og meget af det er jo også, hvordan virker kroppen. Og så også nogle af de andre ting som man jo ikke lige tænker over, jeg synes det er rigtig fint at man også finder nogle felter der ligger udenfor. En kombination af det.

(Pause)

Et eller andet sted har jeg det sådan at der er altid mange mennesker når man kommer derud, i hvert fald i weekenderne hvor vi typisk har været der, og jeg har været der nogle enkelt hverdage, også i efterårsferien engang tror jeg. Altså, der er jo mange mennesker hvor jeg sådan tænker, jeg kan godt forstå man gerne vil have en stor forretning og tjene mange penge, men det kan jo ikke bære at der er voldsomt mange flere mennesker end der allerede er på nuværende tidspunkt. Men i forhold til tekniske/naturvidenskabelige museer i Paris for eksempel, så mangler de nogle ting i forhold til installationer med lyn og... netop sådan noget kemi-halløj hvor et eller andet sige ”puf”. Altså der kunne godt være flere af de her stationer hvor der står folk og laver nogle af de her forsøg som umiddelbart fanger interessen, ik’.

*Ja. Så det kunne skabe præferencer udover hvad I i forvejen har?*

Ja det tænker jeg på en eller anden led, men altså, et eller andet så tænker jeg bare vi er i forvejen i deres målgruppe i og med at vi har den her, sådan nysgerrighed indenfor det felt og vi gerne vil give den videre til vores børn.

*Ja.*

Så jeg er ikke sikker på det vil skabe præferencer hos så mange andre, altså. Øhm, jeg kan godt stå tilbage og savne noget mere, men ja, jeg tænker det er meget forskelligt.

*Ja. Men det der med hvordan man skiller sig ud i en kæmpe pøl af muligheder og profilere sig.*

*Og du synes der er lidt man selv bygger op?*

Nå men altså, jeg tænker...det kom sig af, at jeg synes ikke at Experimentarium ligger i konkurrence med Zoologisk Have og Tivoli, fordi de to ting det er for mig og se nogen næsten obligatorisk aktiviteter at lave med sine børn et givet antal gange i løbet af deres barndom, hvor Tivoli typisk vil være en gang om året, så vil Zoologisk have måske være en gang eller to om året. Jeg synes ikke at Experimentarium har samme position, for mig at se ligger de i højere grad i forhold til Louisiana, i forhold til legeland, i forhold til især museer. Og så ligger de i konkurrence med at det er ganske gratis at køre rundt på alverdens store legepladser hist og pist og kigge på tingene.

*Ja.*

De ting hvor de så kan, det er det her med Experimentarium, altså nogle ting du kan eksperimenterne, nogle ting hvor du kan pille, nogle ting hvor du kan udvikle noget, du kan få nogle oplevelser. Og der er det mit indtryk at nogle af de ting er for meget i kasser, altså de laver et vandland hvor man kan puste til nogle både, og man kan puste dem i én retning ét sted hen. Det kunne være lavet sådan så man kunne stå i hver sin ende og konkurrere om det fordi man ikke kunne et eller andet. Altså det bliver meget at tingene har én funktion, og så kan du får en oplevelse ved at få denne her til at lykkes. Der er en stor muslingskal man kan stå og skyde vand op i med tre kanoner, og når den har fået tilstrækkelig vand, så tipper den.

*Mm.*

Og det bliver sådan meget én ting én funktion. Der kunne jeg godt tænke mig at de tænkte lidt bredere, at der var nogle flere ting hvor man kunne noget mere selv.

*Sådan nogle åbne muligheder?*

Åbne muligheder, og noget mere LEGO-tankegang. Mere med at bygge noget og gøre noget, og selvfølgelig skal du sættes i gang, for det hjælper ikke noget der bare er 27 ting som du kan, men sådan nogle eksempler med kuglebaner, man kan købe sådan noget kuglebane-legetøj, der er det jo også, man kunne godt have sådan nogle ting. Ikke at de skal have kuglebaner i den klassiske forstand, men sådan nogle ting hvor du kan bygge op. Sådan mere Storm P-agtigt hvor du kan tilføje nogle ting, hvor dimensionen også bliver at ”jeg har tilføjet noget” fremfor ”jeg har gjort det de gerne ville have jeg skulle gøre, og dermed har jeg fået min oplevelse”.

*Ja. Det er ret spændende. Det er lige til co-creation. Men noget jeg tænker sådan på med Experimentarium i forhold til Tivoli og Zoo, at du siger at Tivoli og Zoo det er noget man skal*

*give sin børn et x antal gange i løbet af deres barndom. Men er det ikke også fordi, at nostalgien i det, altså det er jo noget, nogle principper, Tivoli er jo 150 år gammel og Zoologisk have har vel været der nærmest altid.*

Men Experimentarium var der alligevel også da jeg var stort barn. Hvornår startede det?

'91

Altså jeg kan i hvert fald huske, jamen der har jeg været 10 år ik', det kan jeg jo godt huske.

Altså jeg kan godt huske jeg har været på Experimentarium dengang, så jeg har jo også en eller anden form for nostalgi i forhold til det som... så på den måde ligger der jo også nogle ting der. Men det er bare ikke på samme måde en obligatorisk ting.

*Nej,*

Og jeg tænker at grunden til at vi har været der som børn det handler sgu meget om vores forældre baggrund altså. Det er jo heller ikke alt der skal være folkeligt, så spørgsmålet er hvad er det man vil, men for mig at se, også som lærer, der handlede det om at prøve og se om man ikke kunne finde et sted hvor man kunne se det sjove i hvordan verden virker og hvordan... hele det er her biologi/fysik/kemi, hele den der dimension synes jeg var sjov at prøve at give børnene en oplevelse af, men... det bliver lidt for meget det her med at man skal en given ting og så har vi klaret den.

*Ja.*

Og det er også, hvis man kan udvikle nogle ting, og man ikke bare skal gennemføre nogle ting så tænker jeg også at der er mere fordybelse og der bliver lidt mindre "løbe hen til den næste ting", for det er også en ulempe sådan et sted. Principielt så kunne de jo have halvt så mange ting som de har, hvis de ting så bare havde nogle andre dimensioner også end dem de har.

*Og plus, det element hvis det var man selv var mere med til at skabe oplevelsen fra ny hver gang, så får man også et forskelligt outcome de forskellige gange.*

Så får man også, så kan man bygge noget andet ik'.

*Ja. Udvikling frem for gennemførsel.*

Ja helt klart.

*Det var lige noget jeg hæftede mig ved.*

Men jeg synes det er meget tydeligt i forhold til det der vandland, også det gamle vandland, det er en supersjov installation, det er rigtig sjovt at lege med det her vand, altså alle børnene synes jo det er fedt atstå der og plaske, men det er bare meget monofunktionelt, og sådan Archimedes reb med kugler dér, det er rigtig fint, men det er bare....det kan kun den ene vej.

*Ja, men tror du ikke også... altså omvendt, kunne det så blive for meget?*

Det kan helt klart også blive for meget, for det er det her med at komme i gang. Der skal være et eller andet fundament for at man kommer i gang med sin leg, men der kunne bare godt være nogle muligheder, ligesom de her bøger hvor man kan vælge at "hvis man vil sådan, så skulle man det", altså man kan godt åbne for nogle flere perspektiver end der er på nuværende tidspunkt.

*Ja. Det er virkelig spændende at høre om. Det vil vi gå hjem og udrette.*

## Appendix 4: "What do you want to become when you grow up?"

### Appendix 4.1: Pictures

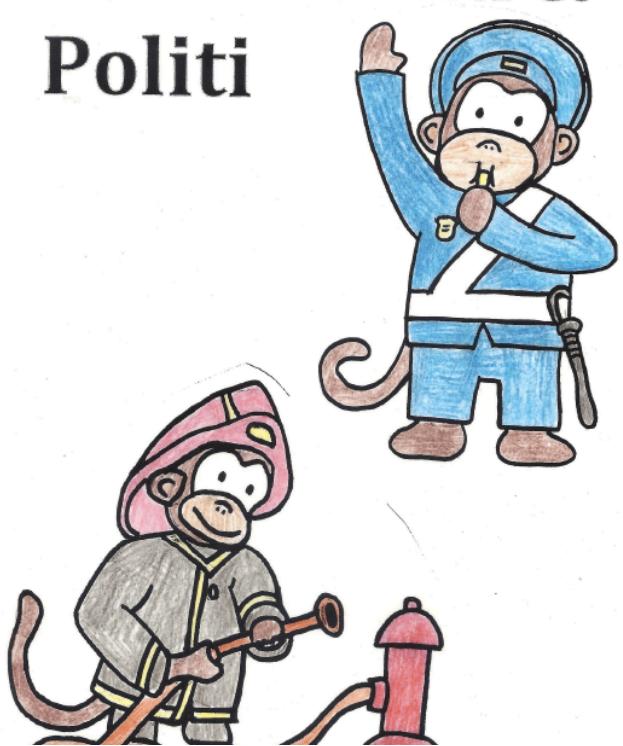
#### Brandmand & Politi



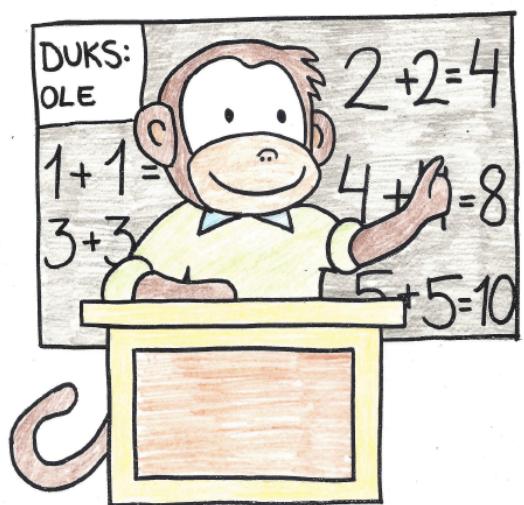
#### Arkæolog



#### Brandmand & Politi



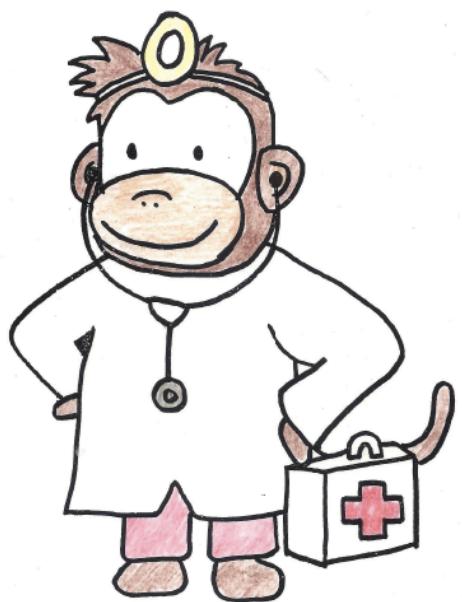
#### Skolelærer



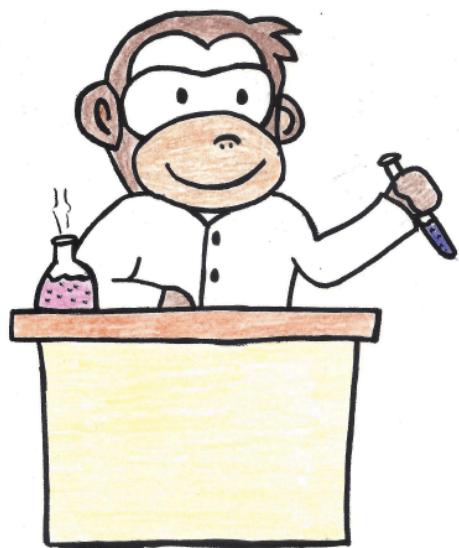
# Livredder



# Læge



# Videnskabsmand



# Frisør



# Forretningsmand



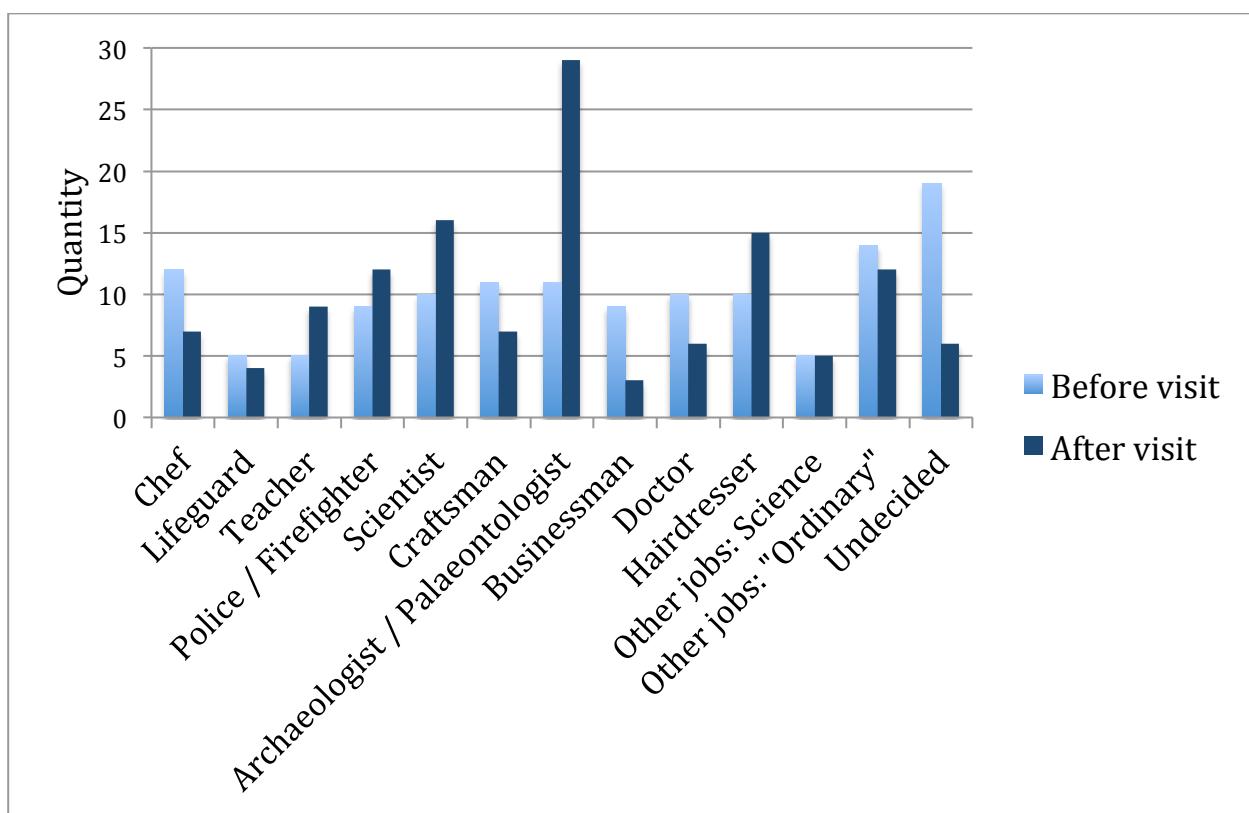
# Kok



*Survey setup at the hall at the Experimentarium*

## Appendix 4.2: Results

	Before	% Before	After	% After	Change in %-point	Change in %
Chef	12	9.2	7	5.4	-3.8	-41.7
Lifeguard	5	3.8	4	3.1	-0.8	-20.0
Teacher	5	3.8	9	6.9	3.1	80.0
Firefighter/policeman	9	6.9	12	9.2	2.3	33.3
Scientist	10	7.7	16	12.3	4.6	60.0
Craftsman	11	8.5	7	5.4	-3.1	-36.4
Archaeologist / Palaeontologist	11	8.5	29	22.3	13.8	163.6
Businessman	9	6.9	3	2.3	-4.6	-66.7
Doctor	10	7.7	6	4.6	-3.1	-40.0
Hairdresser	10	7.7	15	11.5	3.8	50.0
Other jobs: "Science"	5	3.8	5	3.8	0.0	0.0
Other jobs: "Ordinary"	14	10.8	12	9.2	-1.5	-14.3
Undecided	19	14.6	5	3.8	-10.8	-73.7



*Bar chart illustrating the results of the study, respectively before and after the childrens' visit*

## **Appendix 5: E-mail survey among physics students at the University of Copenhagen**

### **Appendix 5.1: Questionnaire**

Jeg er en studerende fra CBS som er i gang med at skrive speciale i samarbejde med Experimentarium.

Jeg undersøger hvorvidt og i hvilken grad Experimentarium har påvirket eller inspireret unge der vælger at læse naturvidenskabelige uddannelser - og i så fald hvordan.

Jeg sætter stor pris på din besvarelse, og trækker lod om 2 x fribilletter til Experimentarium.

Venlig hilsen  
Mette

#### **Har du besøgt Experimentarium som barn/ung?**

- (1)  Ja
- (2)  Nej
- (3)  Ved ikke

#### **Hvor mange gange har du været på Experimentarium?**

- (1)  Aldrig
- (2)  1 gang
- (3)  2-4 gange
- (4)  5 eller flere
- (5)  Ved ikke

Tror du at dine besøg på Experimentarium har øget din interesse for det naturvidenskabelige?  
Markér i nedenstående skala:

1 = I lav grad

5 = I høj grad

Vælg	1	2	3	4	5	Nej	Ved ikke	Jeg har aldrig været der
	(9) <input type="checkbox"/>	(2) <input type="checkbox"/>	(3) <input type="checkbox"/>	(4) <input type="checkbox"/>	(10) <input type="checkbox"/>	(6) <input type="checkbox"/>	(7) <input type="checkbox"/>	(8) <input type="checkbox"/>

**Tror du dine besøg på Experimentarium har påvirket dig i dit valg af studie?**

**Markér på nedenstående skala:**

**1 = I lav grad**

**5 = I høj grad**

1	2	3	4	5	Nej	Ved ikke	<b>Jeg har aldrig været der</b>										
Vælg		(1) <input type="checkbox"/>		(2) <input type="checkbox"/>		(3) <input type="checkbox"/>		(4) <input type="checkbox"/>		(5) <input type="checkbox"/>		(6) <input type="checkbox"/>		(7) <input type="checkbox"/>		(8) <input type="checkbox"/>	

**Hvordan har Experimentarium påvirket eller inspireret dig til at læse fysik?**

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Tak for din besvarelse!

Hvis du ønsker at deltage i lodtrækningen om 2 stk. fribilletter til Experimentarium, indtast venligst navn og e-mail.

**Navn**

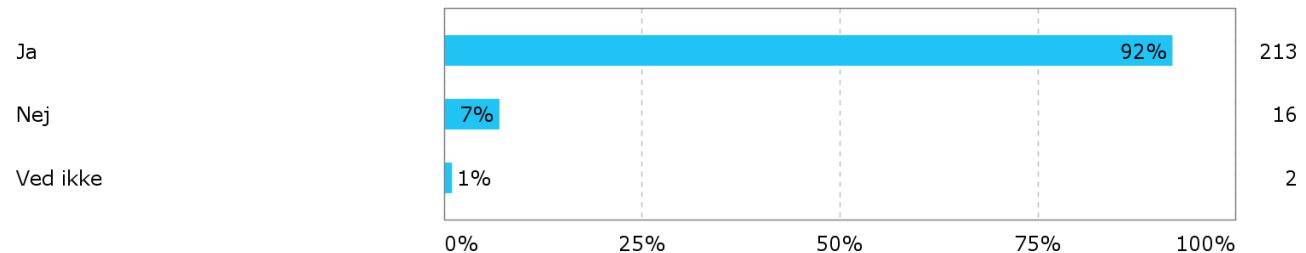
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**E-mail**

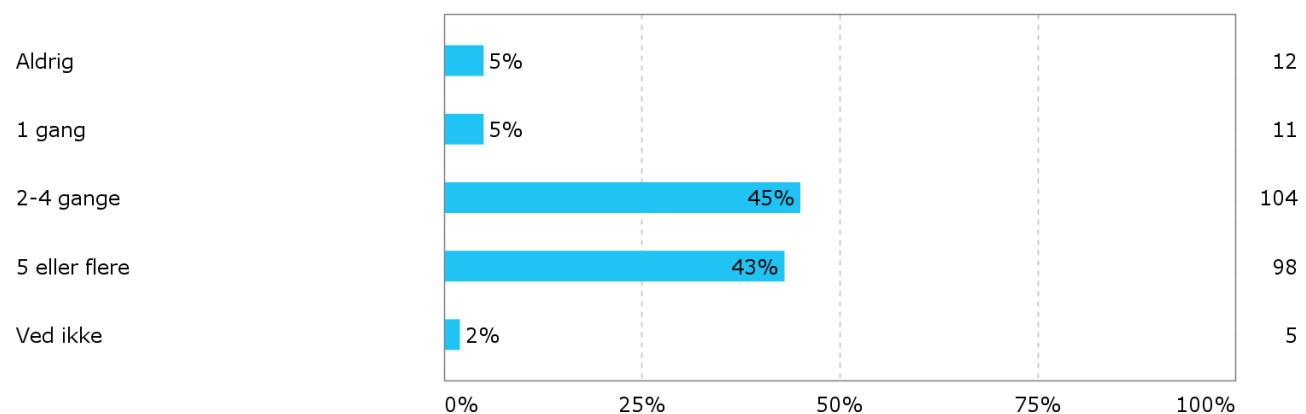
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## Appendix 5.2: Results

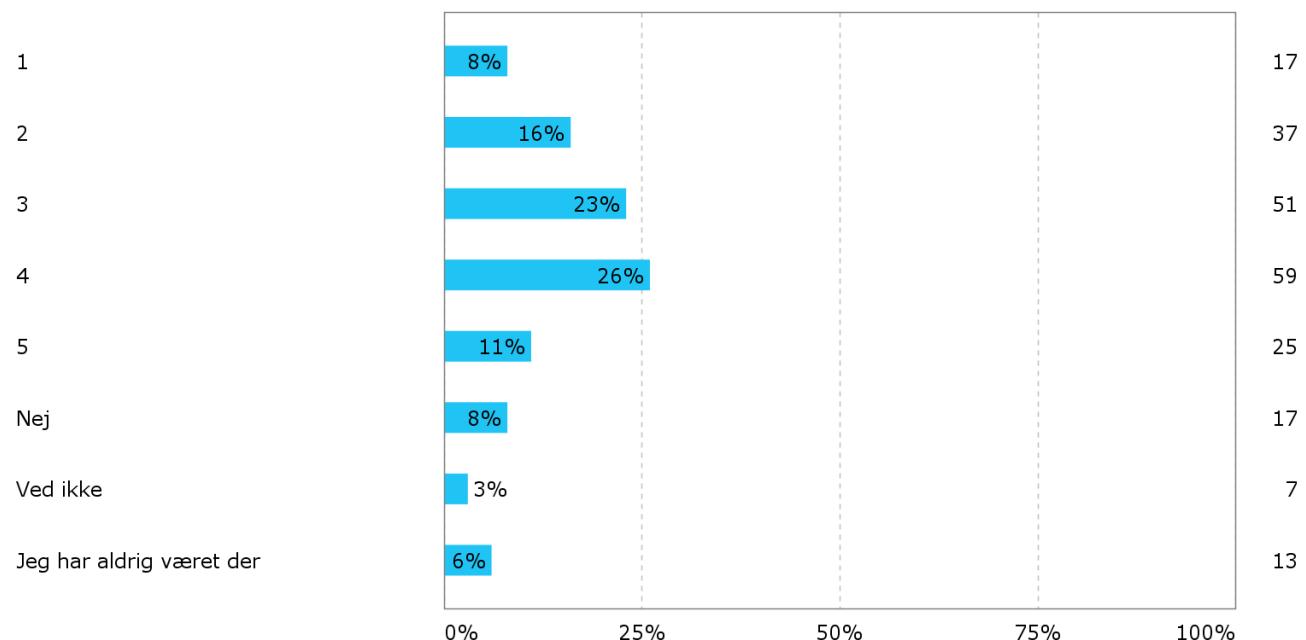
### 1) Har du besøgt Experimentarium som barn/ung?

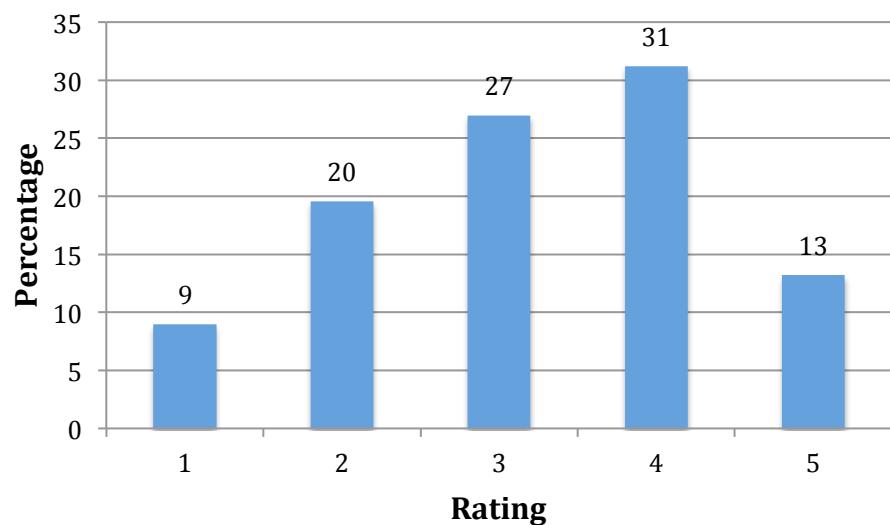


### 2) Hvor mange gange har du været på Experimentarium?

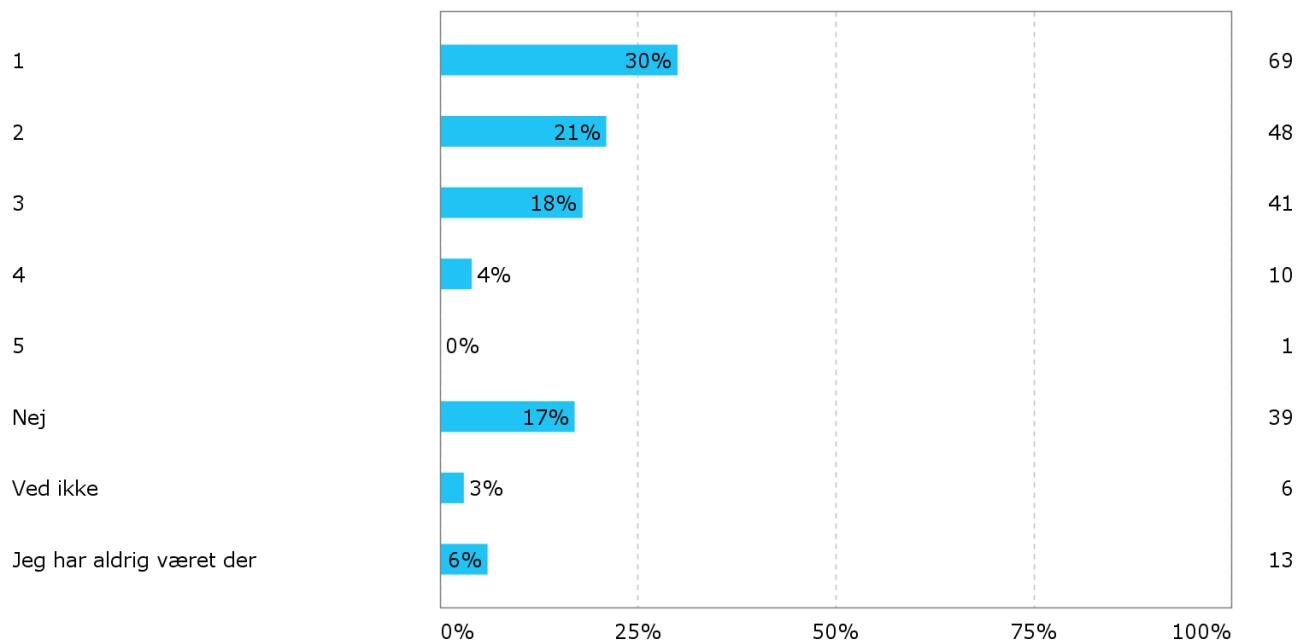


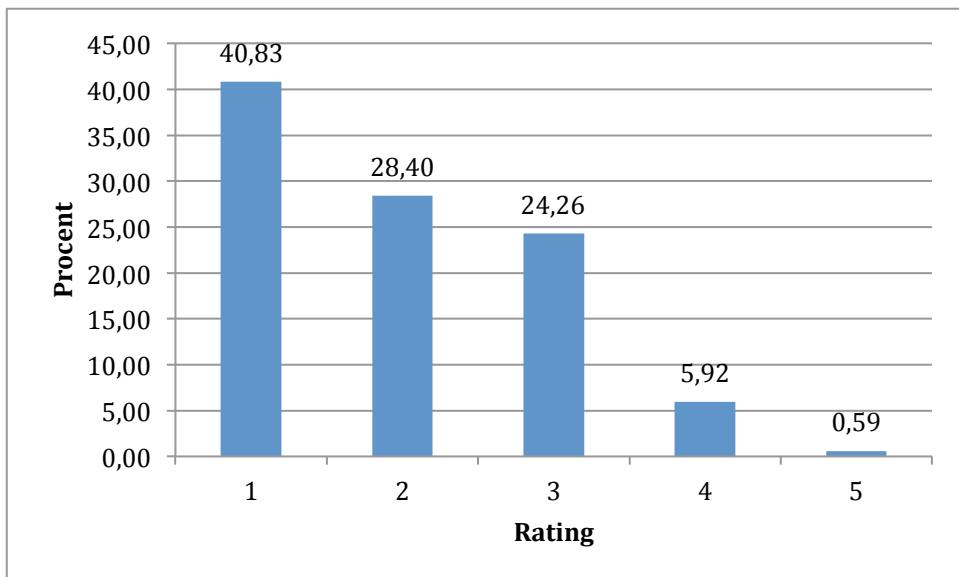
### 3) Tror du at dine besøg på Experimentarium har øget din interesse for det naturvidenskabelige? Markér i nedenstående skala: 1 = I lav grad 5 = I høj grad - Vælg





**4) Tror du dine besøg på Experimentarium har påvirket dig i dit valg af studie? Markér på nedenstående skala: 1 = I lav grad 5 = I høj grad - Vælg**





## 5) Kommentarer

Hvordan har Experimentarium påvirket eller inspireret dig til at læse fysik?

Det har ikke haft nogen inspirerende virkning.

Slet ikke - jeg kommer fra Aalborg og har kun besøgt Experimentarium i forbindelse med en ferie på Sjælland. På dette tidspunkt har jeg været opklaret med hvad jeg ville læse (altså fysik :))

Det tror jeg ikke det har. Så meget har jeg heller ikke været der.

Har ikke været der

Ved deres fysikforsøg på scenerne.

Min inspiration kommer mest fra min far, men det har da været sjovt at kunne undersøge de ting man hørte om i praksis og på den måde har det da øget min interesse.

Jeg har tilsyneladende villet læse fysik siden jeg som 2-årig (før jeg har været på eksperimentariet) blev spurt af en pædagog hvad jeg ville være og svarede: "Atomfysisser", formodentligt inspireret af at min far havde fortalt mig om big bang og sorte huller.

Jeg kan ikke huske om jeg har været der som lille, men hvis jeg har, er det i hvert fald ikke det som har inspireret mig til at læse fysik. Men et besøg kunne have bekræftet mig i, at jeg synes naturvidenskab var interessant.

Det har det ikke..

Et besøg på eksperimentarium i folkeskolen øgede min interesse for Geologi/palæontologi. Senere påvirkede dette mit valg af linie-fag i gymnasiet, hvor jeg endelig besluttede mig for at læse fysik på universitetet.

Været med til at skabe interesse for naturen på en sjov og lærerig måde.

Ved ikke

Det har det ikke.

Det har det ikke, jeg vidste allerede jeg var interesseret i naturvidenskab siden 1. klasse.

Hvordan har Experimentarium påvirket eller inspireret dig til at læse fysik?

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Vækket interesse for naturvidenskab

Ved at gøre fysik mere tilgængeligt og mindre abstrakt

Det tror jeg på ingen måde det har. Jeg besøgte experimentarium for første gange i gymnasiet, og på det tidspunkt var jeg allerede godt på vej til en naturvidenskabelig uddannelse.

Det skal siges, at jeg altid har haft stor interesse for fysik og videnskab. Om jeg så havde besøgt Experimentarium eller ej, ville jeg stadig have valgt fysik som studie. Det er mere et tilfælde af, at Experimentarium bekræftede min interesse.

Ikke rigtigt. Tilgengæld er det sjovt.

Det visualiserede en del fysik, og gjorde det mere håndgribeligt og sjovt at lege med. Ikke at jeg havde den store forhåndsviden som lille, men det vakte klart interesse for mig, at kunne se og lege med ting, og få en egentlig forklaring på hvad der foregik

Ikke så meget.

Ikke ret meget jeg er bevist om, men kan være det som alt andet her i verden har været en ubevist inspiration.

Når jeg tænker tilbage på mine besøg på Experimentarium, så tænker jeg slet ikke på fysik. Det har handlet om biologi, sanser og sæbebobler. Det har været nogle inspirerende besøg, hvor jeg har lært om dele af naturvidenskaben, men jeg husker ikke noget om fysik. Experimentarium har derfor ikke som sådan inspireret mig til at læse netop fysik. Men måske hjulpet mig på vej.

Ubevidst.

De har været med til at virkeligøre astronomi for mig da jeg var barn og startede min interesse armatørastronomi.

Synes ikke rigtigt experimentaraiet har inspireret mig da jeg synes der er forholds lavt niveau. Den eneste udstilling jeg synes var på ok niveau var en udstilling om cern og universet mener jeg det var. det var en fysik studerende der var guide og det gjorde rigtigt meget. ellers synes jeg experimentariet er meget barnligt med vand, sæbebobler og "kan du råbe lige så højt som en løve". Der kunne sagtens komme nogle lidt mere udfordrende udstillinger og derved tror jeg der vil komme flere fra gymnasiet og universitetet og vække naturvidenskabelig interesse hos dem

Har vakt en generel interessere for naturvidenskab

Det har den ikke Jeg har ikke været der i mange år

Det har det egentlig ikke i stor grad. Den fysik der er på udstillingen er mest rettet mod så små børn, at de ikke kan kende forskel på kemi og fysik (hvilket også er det samme fag i skolen). Ergo er det bare 'spændende', men ikke noget der ligefrem opfordrer til at læse fysik.

Det har det ikke :)

Har det ikke

Har kun været der som voksen, så tingene er desværre ikke så inspirerende

Grundlagt en naturlig nysgerrighed

Det har det ikke, tror jeg. Men jeg kan huske at jeg elskede det, og valgte at tage derover, en gang da jeg havde fødselsdag... Yes, allerede nørd som barn!

Har vist mig, hvilke spændende ting, man kan lave, når man forstår naturlovene

## Hvordan har Experimentarium påvirket eller inspireret dig til at læse fysik?

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Det har altid været sjovt at regne ud hvordan verden hang sammen. Det gav Eksperimentarium mig muligheden for at give mig i kast med allerede som ganske lille.

Det har det ikke

Der er en masse vildt fede forsøg som man røre og lege med. Det er ligesom en kæmpe legeplads, hvor man samtidig lærer lidt om alt muligt. Som barn er det svært at skælne fysik, men gennem leg og eksperimenter har det fået mig til at lære mere om hvordan verdenen virker og hvorfor - Så generelt naturvidenskabeligt.

Jeg vil tro, at experimentariet har været 0.05% af grunden til jeg læser fysik.

Ved at gøre mig opmærksom på og vække min fascination for fantastiske fænomener, som jeg gerne vil kunne forklare. Jeg lærer når jeg leger og husker det der gjorde mig glad, hvilket er til menneskets fordel i evolutionen.

Det giver et godt indblik i, at den eksperimentelle fysik kan være sjov og spændende

Overhovedet ikke, beklager :)

Experimentarium har ikke påvirket mig til at læse fysik. Jeg var ikke så gammel de gange jeg var på Experimentarium og dengang vidste jeg ikke at jeg ville læse fysik.

Det har det ikke. (ihvertfald ikke hvad jeg er bevidst om)

Det har gjort fysik (og anden videnskab) interaktivt og legbart, samtidig med at man fik stillet sin videnslyst, hvilket tiltalte mig meget som barn. Samtidig var det en ting jeg tog på som familieudflugt, hvilket var med til at sætte det i et positivt lys (leg og videnskab var noget man gjorde for at have det sjovt ~). Det har primært inspireret en nysgerrighed som barn, men jeg ved ikke hvor meget det reelt har betydet, idet jeg tror fx mine lærere og mine forældres indstilling til videnskab har haft meget større betydning..

på ingen måde.

Nok ikke det helt vilde, som barn var det svært at se sammenhængen mellem de ellers meget sjove ting der var at se på/lege med...etc, og reel videnskab. Videnskab og i særdeleshed fysik er meget sejt, men jeg følte ikke den vilde tiltrækning som barn, men det kan jo have påvirket mig på mere komplekse måder fx. podet ideen om at undersøre...

Man fik set, at fysik er spændende, og at det ikke bare er tør teori

Under mine besøg der har jeg oplevet ting jeg ikke synes jeg fik en fyldestgørende forklaring på, og som jeg gerne ville forstå bedre.

Det har ikke inspireret mig. Men givet mig interesse inden for kroppens funktioner osv.

Jeg har ikke været der

Jeg føler faktisk ikke at Experimentarium har inspireret mig i mit valg af studie.

Mit valg af studie har haft intet med Experimentarium at gøre.

Da jeg kun var et barn under mine besøg, har det først og fremmest øget min interesse for naturvidenskab generelt. Jeg vil ikke mene at mine oplevelser ved Experimentarium har haft indflydelse på at jeg valgte at studere netop fysik, idet jeg var så ung.

Det har vagt en interesse for naturen, som siden har udviklet sig til en passion for de allermest fundamentale sammenhænge i universet.

## Hvordan har Experimentarium påvirket eller inspireret dig til at læse fysik?

---

Det har det ikke

Eksperimentariet har præsenteret interessante fysiske fænomener, som man normalt ikke tænker videre over, men som man gør på der, hvilket i til fysik.

Ikke specielt meget. jeg har altid syntes at naturvidenskab var spændende og haft det enormt sjovt på Experimentarium, men det var først da jeg begyndte at få indblik i dybere teoretiske emner som kvantemekanik og relativitetsteori at jeg valgte mit studium. Jeg er ikke SÅ vild med eksperimenter.

Det har ikke inspireret mig på nogen måde fordi jeg var meget ung da jeg var der sidst og der var dinosaur-udstilling hvis jeg husker rigtigt.

Experimentarium har påvirket min interesse for naturvidenskab og formidling. Det, at det blev lige præcis fysik og ikke et andet naturvidenskabeligt fag, skyldes nok andre faktorer.

Det har altid været en sjov oplevelse at komme på Experimentariumet, men der er så mange andre ting der afgør valget af uddannelse, så i den sammenhæng har det kun betydet meget lidt.

Det har åbnet øjnene op for nogle imponerende og overraskende forsøg

Kun indirekte

Fordi man ser/oplever/prøver sjove og anderledes ting som jeg (går jeg ud fra) vidste kom fra naturvidenskaben. Og når man så går derfra efter at have haft massere af sjov, tænker man "Sådan noget vil jeg også lave/opfinde!"

Det har det ikke

På ingen måde.

Mit valg af fysik som studie var ikke påvirket af Experimentarium, men det er et fedt sted, og jeg kunne godt lide det som barn, og stadig lidt som "voksen".

Jeg vidste ikke at jeg ville læse fysik før et par år efter gymnasiet, så der er for mit vedkommende ikke rigtig nogen sammenhæng.

Generelt har Experimentarium været et inspirerende udfugtsmål, og hvert besøg har bekraeftet mig i min interesse for fysik og naturvidenskab, men det har ikke været en faktor af betydning i mit valg af studie.

Experimentarium har muligvis påvirket mig til at interessere mig mere for fysik/kemi i folkeskolen. Dermed kunne det indirekte have været en del af årsagen til at jeg valgte fysik på A-niveau i gymnasiet (hvis jeg altså havde haft et valg). Jeg mener dog at undervisningen på gymnasiet har haft klart den største betydning for mit valg af studie.

Det har det ikke

Jeg er sikker på, at jeg ville have læst fysik selv om experimentariet ikke havde været der.

Det har det ikke, men det skaber en generel øget interesse for naturvidenskab. Dog ikke specifikt fysik.

Jeg tror ikke det har påvirket mig synderligt.

overhovedet ikke -- interessen for fysik var der før interessen for experimentarium

Det har ikke inspireret mig særligt. Var meget lille da jeg var derude, men de havde sjove sæbebobler

## Hvordan har Experimentarium påvirket eller inspireret dig til at læse fysik?

---

Experimentarium har sammen med en masse andre naturvidenskabelig leg (især fritidstilbud i folkeskole og gymnasium) øget min interesse for naturvidenskab generelt. Min specifikke interesse for fysik kom først i forbindelse med en fysikkonkurrence i gymnasiet.

Experimentariet er fantastisk til at formidle naturvidenskaben for børn, og voksne, og for mig var det især den nysgerrighed besøget vakte, som kan have haft indflydelse på mit valg af studie. Det er stadigvæk den samme barnlige nysgerrighed, forundren og glæde, der holder mig fast på mit studievalg

Det har det ikke.

Nogle opstillinger på eksperimentariet kan få een til at tænke "gad vide hvordan dét virker?" Hvilket kan virke inspirerende. Dog er jeg senere blevet lettere skuffet. De har ikke ændret sig særligt meget gennem årene og deres lydmåler som burde måle i decibel måler ikke decibel, men derimod en arbitrer ikke-logaritmisk scala, hvilket jeg er graven over >(

Ikke specifikt fysik, men bare naturvidenskabeligt generelt.

Jeg tror ikke, at det har påvirket mit valg særlig meget.

ikke

Det har øget min medfødte nysgerrighed for naturvidenskab

Det tror jeg bestemt ikke det har. Eksperimentariet er jo en leje plads for børn der syntes sanse oplevelser er sjove.

Jeg har ærlig talt aldrig hørt om det, men det virker som nogle af de steder jeg ellers har været der vækkede den fysiske nyskærighed.

Lyder som et rigtig godt sted, selvom jeg ikke har været der. Men det lyder som steder jeg ellers har været der var med til at vække den fysiske nyskærighed

I form af det har øget min interesse for naturvidenskab, har det nok også øget min interesse for fysik. Men det er ikke sådan at 'det lige nøjagtig var derfor'.

At lære gennem leg. :)

Jeg har først været der efter jeg begyndte at studere.

Den stjernehimmel de viser efter forestillinger er noget jeg husker i høj grad, siger en kommende astrofysiker ;-)

Der blev min nysgerrighed for fysiske fænomener større (som barn), fordi jeg 'opdagede' og så fænomenerne gennem leg.

Eksperimentariet var slet ikke noget jeg tænkte på dig jeg søgte studiet, eller årene optil. Dog har det nok i sin tid lagt en bund for min interesse for fysik. Men i hvor stor grad det har haft indflydelse er svært at sige.

Det har ikke påvirket mig

Skabt interesse for at undersøg og udforske fysiske fænomener.

Det har det ikke.

Ikke det fjerneste. Jeg havde i forvejen i gymnasiet matematik og fysik på højeste niveau ...

## Hvordan har Experimentarium påvirket eller inspireret dig til at læse fysik?

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Jeg har, som barn, altid syntes experimentariet var sjovtog elskede at komme derind. Det har nok været med til at øge min interesse for naturvidenskaben. Specifikt for fysik tror jeg ikke det har gjort nogen forskel, men generelt i forhold til interesse i videnskab er det bestemt muligt

Det at kunne forklare forskellige fænomener i verden synes jeg er spændende! som barn oplevede jeg experimentariet som en god formidling til børn/unge

Det er fascinerende at undersøge fysikkens sjove fænomener i Experimentarium. Der sker noget kontraintuitivt, som man er nødt til at reflektere over.

Det har ikke på virket mig, så vidt jeg ved.

Det har det ikke...

Det har det ikke

overhoved ingen forskel

Det har langt fra været den mest afgørende faktor, men Experimentariets måde at gøre leg til den måde man interagerer med naturen på, har selvfølgelig gjort mig positivt stemt overfor naturvidenskab fra barnsben af.

Dejligt med et sted man kan lege og lære (men det har vist ikke været en direkte inspirationskilde)

Det viser alle de finurlige ting man kan, hvis man har lidt indsigt i hvordan verden fungerer. Det får fysik til at virke lidt som magi.

For et par år siden var der en udstilling om partikelfysik og universets udvikling, hvor vi som gymnasieelever fik en rundvisning af en phd studerende fra NBI, hvilket var godt, primært på grund af samarbejdet med universitetet.

Jeg tror det har øget min interesse for fysik som barn, men tror ikke det har været så gældende for mit studievalg senere i livet.

Det er svært at sige hvad der kommer først, hønen eller ægget. Jeg morede mig altid over at komme der, men jeg har også altid været interesseret mig for naturvidenskab. Experimentarium har primært bekræftet mig i mine interesser.

Det har det ikke rigtigt. Jeg besøgte det som 17-årig og havde allerede en interesse for fysik fra gymnasiet.

Ved at opretholde min nysgerrighed for verden omkring mig.

Ikke direkte i hvert fald. Det er svært at sige hvor interessen kommer fra, men jeg har altid været mere interesseret i at vide, om ikke andet så i hvert fald have en illusion af viden, reelt set kan man ikke komme tættere på viden en gode estimerter :), men jeg tror ikke at en enkelt faktor kan tage æren. Mit studievalg har også mere været et logisk valg baseret på hvordan jeg er end et egentligt drive.

Mest af alt været med til at inspirere min grundlæggende fascination af naturvidenskab. Hvilket kombineret med at jeg senere finder at fysikken er det der interesserer mig mest, har gjort at jeg valgte dette

"Bølgeeksperimentet"/kæmpefjeder, og forskellige eksperimenter med sæbebobler, etc.

## Hvordan har Experimentarium påvirket eller inspireret dig til at læse fysik?

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Fascinationen som barn, der gør en nysgerrig på verden, gør at man stiller spørgsmål til man får svar fordi man ved de er derude. Svar, der lærer en at man kan regne nogle af tingene ud selv, der giver en selvtillid og mod til at give sig i kast med det umulige; i håb om at ved ihærdigt slid og hårdt arbejde at muliggøre det umulige og afdække det ukendelige.

Slet ikke. Experimentarium øgede primært min interesse for kemi.

Fordi der er så mange eksempler på det mystiske i naturvidenskab. Og ens logik bliver udfordret :P

Jeg tror ikke rigtig experimentariet har påvirket mig til at læse fysik. Men det er sjovt at lege :)

Mine besøg til Experimentarium var som helt lille så jeg vurderer at det ikke har haft nogen direkte indvirkning på mit studievalg så mange år efter.

det har vist en legende tilgang til fysikkens mange emner.

Jeg tror at Experimentarium har haft lidt til ingen indflydelse på mit valg af studie. Det er dog alligevel en sjov oplevelse.

Tror ikke det har drejet mig i den retning. har altid været god og interesseret i at udforske ting også før jeg var på eksperimentariet .

Det har nok ikke sådan direkte, hele min familie er fysikere. Interessen om fysik er opstået rundt om middagsbordet. Experimentariumet har tilgengæld givet mig interesse for mange andre aspekter af naturvidenskaben, f.eks biologi.

Søgen efter svar på ting som ikke så ud til at have en ligetil løsning.

Hele ideen om at kunne tænke ud af boksen som naturvidenskabsinteresseret har nok tiltrukket min opmærksomhed. Selvom jeg er meget matematisk og nørdet tror jeg aldrig jeg ville vælge at læse fysik hvis det bare var at studere andres arbejde og kigge i bøger.

Jeg er noget ældre end de andre studerende - men min søn på 12 er blevet meget inspireret!

Da jeg var der, var jeg allerede for gammel til at synes det var interessant. Det er for meget små børn, det var ikke rigtig udfordrende, og udstillingerne da jeg var der, var biologisk orienterede. Det mest fysiske var en bølgegenerator (en stor spatel i et akvarium) og en ryste-platform hvor du kunne mærke jordskælvstyrker. Forholdsvis standard og kedeligt.

Jeg var kun en lille dreng, da jeg besøgte Eksperimentarium, så jeg tør ikke sige, hvordan det påvirkede mig. Jeg kan sagtens huske det som rigtig spændende, og jeg kan huske, at det var en rigtig god oplevelse, men jeg kan virkelig ikke sige, hvorvidt mit besøg har påvirket mine handlinger og valg så langt ind i fremtiden som til mit studievalg. Jeg kan kun huske besøget som en horisontudvidende kæmpelegeplads:) For folk, der har været udsat for flere besøg, er det nok lidt nemmere at vide, om stedet satte sine spor. For en jyde som mig, kun med 1 besøg på bagen, er det nok mere sandsynligt, at andre påvirkninger har haft indflydelse på mit valg. Jeg kan dog huske, at jeg ofte har haft lyst til at se stedet og steder som Eksperimentariet igen, men det var jo et større projekt for en ung knøs, der bor for langt væk. Selvom jeg læser i Kbh nu, har jeg desværre ikke fået besøgt stedet.

Som sagt øget interesse for naturvidenskaben, gjort det mere let tilgængeligt. Men ved nu ikke om det har haft direkte indflydelse på mit valg af studie.

## Hvordan har Experimentarium påvirket eller inspireret dig til at læse fysik?

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Eksperimentariet åbner for lysten til at forstå verden omkring os. Eksperimentariet er perfekt til at vække nysgerrighed for den naturvidenskabelige verden og give inspiration til at søge forståelse for naturlige fænomener. Det giver børn (og unge) mulighed for at eksperimentere og opdage med fokus på, at der kan ligge viden gemt i legen. Fx deres sæbebobleshows - der ligger er en verden af fysik gemt i forklaringen på, hvorfor det aldrig lykkedes ham showmanden at gøre dem firkantede :)

Det er mange år siden jeg har været der. Men husker det som nogle spændende og udfordrende ting man kunne lave og at naturvidenskaben fangede mig.

Jeg har besøgt det da jeg var meget lille, der gjorde det ikke den store indvirkning og så har jeg besøgt det mens jeg studerede, og der var det kanon sejt.

Mange af de eksperimenter man kan udføre på Experimentarium virkede meget spændende da jeg var lille. Jeg har altid haft en trang til at undersøge hvad og hvorfor spørgsmål om de ting jeg mødte i hverdagen. Experimentariumet var derfor en invitation til at forøge min nysgerrighed og give en del svar. Plus hvis man var god til det, så kunne man brillere over for sine venner. Hvilket gjorde det endnu mere positivt at læse fysik :)

Experimentarium har øget min interesse for naturvidenskab generelt, og jeg vidste meget tidligt at det var dét jeg ville beskæftige mig med. At det netop blev fysik har næppe noget med Experimentarium at gøre.

Jeg havde læst fysik med eller uden Experimentarium.

Gennem deres spændende opstillinger om vedvarende energi og mulighed for at afprøve hvor krævende det engentlig er at få energi til hjemmet

Det har det ikke

Jeg tror ikke, at Experimentarium har påvirket mig eller inspireret mig til at læse fysik - i så fald har det været underbevidst.

Jeg var så lille da jeg besøgte Experimentariet at det godt kan have inspireret en generel naturvidenskabelig interesse, men nok ikke nogen interesse specifikt for fysik

Experimentariet hjælp min interesse for naturvidenskab, som barn(7-14år), ved at fremvise naturvidenskabelige fænomener på en spændende og "legeagtig" måde, der viste mig at naturvidenskab ikke bare er tøre og lange bøger, men faktisk er spændende, mystisk og fuld af overaskelser.

villev have læst fysik alligevel

Eksperimentariet er nok det første sted, hvor jeg virkelig opdagede, at altting ikke bare uden videre kunne forklares, og man måtte tænke sig grundigt om for rigtigt at forstå selv de mest hverdagsagtige ting.

Ikke på nogen speciel måde

Har ikke inspireret. Det er andre ting der har gjort at jeg har valgt fysik. Men eksperimentariet er sjovt og interessant, men tror det er mere en nysgerrighed og programmer i tv der har gjort mig interesseret i fysik

Det er en inspirerende, interessant og alternativ måde de formår at formidle naturvidenskab på og kommer rundt i alle aldersgrænser. Man får en ide om hvad al det teoretiske fysik man terper på studiet kan bruges/anvendes i den virkelige verden (:

Hvordan har Experimentarium påvirket eller inspireret dig til at læse fysik?

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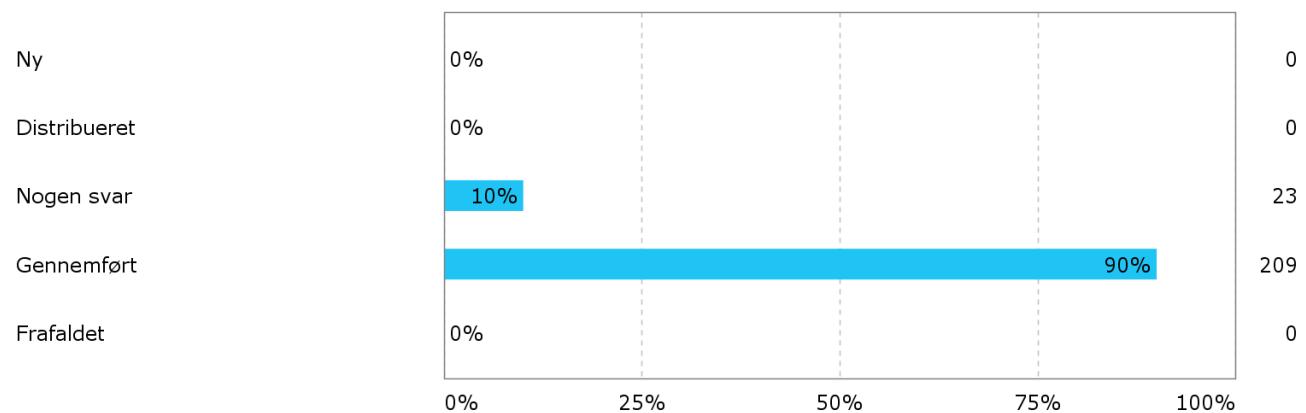
En nysgerrighed omkring hvordan verden hænger sammen.

Det ved jeg ikke. Det er for mange år siden jeg ar været der.

Det gav mulighed for at lege med naturidenskab, og skabte interesse for læring gennem leg. Det var befriende at blive udfordret intellektuelt, og bagefter kunne genkende de resultater man fandt i virkeligheden. Fokus på grundprincipper og simple opstillinger var de mest inspirerende.

Det har ikke påvirket mit valg

## 6) Samlet status



## **Appendix 6: Extra Material**

### **Appendix 6.1: Survey on which qualities the pilots contribute with to family visits**

Semikvalitativ undersøgelse foretaget maj 2009 af  
Anders Søndergaard, Nynne Christiansen & Karina Goyle (Projektleder).  
Extract page 4-6

# **UNDERSØGELSE AF DE KVALITETER PILOTERNE BIDRAGER MED VED FAMILIEBESØG**

## **OM RESPONDENT GRUPPEN**

Gruppen af respondenter udgøres hovedsageligt af børnefamilie samt bedsteforældre med børnebørn. Langt de fleste er på Experimentarium i mindre grupper begrænset til en enkel husstand (eller tilsvarende). Alderen på børnene varierer fra ca. 3 år til 18 år, med hovedvægten omkring 5-11 år.

## **PILOTENS KVALITETER**

Helt overordnet virker familiebesøg (med børn) på Experimentarium at ske for børnene skyld og med dem som omdrejningspunkt for besøget. Forældrenes holdninger til besøget er derfor hovedsageligt baseret på hvad deres børn får ud af besøget. Dette lader til at være en særdeles kraftig tendens for familie med mindre børn og til dels at være aftagende med børnenes alder. Familie med helt små børn lader til hovedsageligt at opfatte Experimentarium som en legeplads for deres børn. Piloter virker i den forbindelse mindre aktuelle for dem.

Generelt virker familiepublikummet ikke til at have reflekteret specielt over hvad piloterne på Experimentarium eller hvordan disse kan bidrage til et bedre besøg.

Der synes at være stor forskel på hvor vigtig en rolle piloterne spiller. Nogle er meget bevidste om piloterne mens andre ikke har bemærket piloter, eller overhovedet at der fandtes noget sådan på Experimentarium (selv efter de har besøgt Experimentarium flere gange).

Der været enkelte respondenter som har givet udtryk for at de ikke ønsker at snakke med en pilot under deres besøg og har ikke kunne se formålet med disse.

Det er værd at bemærke at respondenter, der havde haft kontakt med en pilot udelukkende beskrev oplevelsen positivt og at de der ikke har været i kontakt med en pilot, hovedsagelig ikke har givet udtryk for at savne det.

Demoer er der også enten gode erfaringer med eller ønsker om. Men der er ikke så mange, der har haft konkrete oplevelser ved den demo. Demoer kan dog for børn virke for lange og for yngre børn svært at se op på rullebordet.

Der er dog en bemærkelsesværdig kraftig tendens til respondenter, der enten har haft rigtig god erfaring med gulvpiloter ved opstillingerne, eller kunne forestille sig, at det ville have kunnet bidrage positivt til deres oplevelse.

Nedenfor er beskrevet de generelle kvaliteter piloter kan bidrage med for familier.

### **Skabe tryghed ved teknik**

Der kan hos nogen være en reservation overfor Experimentariums opstillinger som kan opfattes som noget relativt teknisk. Spørgsmålet for den besøgende er således hvorvidt det er muligt at få opstillingen til at virke på en fornuftig måde. Piloten kan med sin ekspertviden om opstillingerne og disses emner hjælpe med brugen og derved skabe en tryghed for at man som gæst kan bruge opstillingerne. De kan skabe gå-på-mod ved opstillingerne. ”Det er rart af få hjælp, når der er noget man ikke kan finde ud af”, udtaler én. Der hentydes til, hvordan opstillingen virker.

### **Fastholde børn ved opstillinger**

Børn løber hvileløst fra opstilling til opstilling inden de finder noget de synes er sjovt. Børnene zapper rundt. Sådan er den generelle opfattelse hos familiepublikummet. For nogle gæster opfattes Experimentarium som et stort sted hvor man næppe kan nå at prøve det hele. I de tilfælde accepteres børnenes zappen fra opstilling til opstilling. Generelt er der dog et ønske om at fastholde børnene ved opstillingerne. Dette kan piloten hjælpe med, ved at vise hvordan opstillingen virker og fortælle relevante historier om disse.

### **Bidrage til indlæring**

Dialog med piloter virker generelt for familiepublikummet kun relevant i forbindelse med læring. Piloten kan være med til at sørge for at børnene lærer noget mens de har det sjovt. Piloten er således til dels påkrævet for at barnet får et fagligt udbytte, hvilket ikke nødvendigvis er tilfældet ved blot at besøge udstillingen.

### **Noget nyt og noget ekstra**

For familie der ofte besøger Experimentarium lægges vægten på at det er noget nyt og noget de ikke har oplevet før. Inddragelse og kommunikation direkte med børnene er altafgørende.

### **Skabe intimitet**

Piloterne kan i deres dialog med publikum bidrage med en ny og mere intim oplevelse. Med nøgleord som nærværd, se noget tæt på og uformelle rammer, fremhæver respondenterne den intime dialog der kan foregå i mindre grupper.

### **Vejvisning og information**

Det lader til at være de færreste der bruger det, men piloten kan skabe en vis tryghed. Flere nævner, at det er rart, hvis der hele tiden er nogen i nærheden, som man ved, man kan spørge om hvad som helst.

## **Appendix 6.2.: Strategic Plan for the Experimentarium 2013-15**

“Fra Succesfuld til Betydningsfuld – Experimentariums Strategiplan 2013-15”, November 2012  
Extract, page 1, 2, 4, 5, 9

Hellerup, den 15. november 2012. Version 5.0

# Fra succesfuld til betydningsfuld

## Experimentariums strategiplan 2013 – 2015

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## 1. Indledning.

Experimentarium gennemløber i de kommende tre år – fra 2013 til 2015 - en bevægelse fra det bestående til noget helt nyt.

Det strategiske omdrejningspunkt er i den sammenhæng bevægelsen fra et **succesfuldt** science center med det nuværende indhold af formidlingsaktiviteter i 2013 til et **betydningsfuldt** science center med et nyt indhold af aktiviteter i 2015.

Experimentariums betydning skal manifestere sig som en målrettet indsats for at få interessen for naturvidenskab, teknik, sundhed og innovation til at spire og gro hos den enkelte. Vi vil formidle faglige budskaber på en måde, alle kan forstå og lære af.

For at styrke bevægelsen fra succesfuld til betydningsfuld er det Experimentariums ambition, at vi samtidig bevæger os fra at være et Naturvidenskabeligt Formidlingscenter til at blive et Naturvidenskabeligt Forskning-, Innovations- og Formidlingscenter.

Strategiplanen skal understøtte Experimentariums fem overordnede mål: At skabe transformationer, levere helhedsoplevelser, udvikle Experimentarium som en lærende organisation, forbedre fondens driftsøkonomi og styrke Experimentariums brand som en samfundsnyttig virksomhed.

Strategiplanen skal endvidere sikre, at Experimentarium styrker og udnytter sit særkende - at vi er specialister i at omsætte svært tilgængeligt naturvidenskabeligt stof til letforståelige budskaber gennem involverende formidling. Vores faglighed skal udnyttes til at brande Experimentarium som en seriøs og betydningsfuld formidler af naturvidenskab, teknologi, sundhed og innovation.

Strategiplanen omfatter perioden fra 1. januar 2013 til 31. december 2015.

### 1.1 Strategiplanens to spor

Experimentariums strategiplan 2013 - 2015 omfatter to hovedspor.

Det første spor er *Fremtidsprojektet*, som omfatter en stor ud- og ombygning af ejendommen på Tuborg Havnevej 7. Bygningen skal renoveres, de fysiske rammer for centrets aktiviteter skal forbedres, og centrets drift skal styrkes bl.a. med et udendørs udstillingsområde, der skal gøre Experimentarium mindre vejrafhængig. Dette spor har sit eget arbejdsprogram, som præsenteres under pkt. 6.

Det andet spor er *Masterplanen*, som omfatter en detaljeret beskrivelse, fundraising, udvikling og implementering af de formidlingstilbud. Det Ny Experimentarium skal rumme - udstillinger, værksteder, supplerende aktiviteter, kurser, uddannelser, kommercielle aktiviteter m. v. Derudover omfatter Masterplanen en række indsatser, der skal støtte op om Masterplanen og ruste Experimentarium til fremtiden. Dette spor har sit eget arbejdsprogram, som præsenteres under pkt. 7.

## 2. Formål.

Experimentariums formål er beskrevet i §3 i fondens vedtægter: "Institutionen er en almennyttig fond, hvis formål er – i befolkningen og især den yngre del af denne – at øge interessen for naturvidenskab og teknik og at fremme kendskabet til metoder og resultater inden for naturvidenskab og teknik."



Derfor er der tale om mål, som vi alle sammen skal lære at kende og anvende, uanset hvilken funktion vi udfylder i organisationen.

De kommende tre år skal vi fokusere på, at alle medarbejdere:

- lærer de fem mål så godt at kende, at vi kan anvende dem i vores arbejde på Experimentarium,
- udvikler systemer og god praksis, der understøtter målene og
- skaber og iværksætter nye formidlingsaktiviteter, der forfølger de fem mål.

I det følgende beskrives de fem overordnede mål:

### **5.1 Vi vil skabe transformationer**

Experimentarium er specialister i formidling og i at omsætte svært tilgængeligt naturvidenskabeligt stof til letforståelige budskaber. Vi vil udvikle og styrke vores formidlingsform, så vi fastholder ekspertrollen. Og vi vil udvikle os som leverandør af transformerende oplevelser hos de, som kommer i berøring med Experimentarium. Det betyder, at vi vil fokusere på alle fire dimensioner i oplevelsesøkonomien: Underholdning, læring, æstetik og fordybelse ("flow").

### **5.2 Vi vil levere helhedsoplevelser**

Experimentarium er specialister i interaktive oplevelser, der involverer og sætter sangerne i spil. Vi vil udvikle vores faglighed, inddrage nye medier og nye fagområder og skabe tilbud til alle tænkelige besøgsgrupper, således at huset udnyttes optimalt. Det betyder, at områder såsom astronomi, zoologi, arkæologi, kunst, teknologi m.v. vil indgå i vores formidling, såvel på Experimentarium som eksternt. Vi vil forene mange forskellige fagfelter og skabe helhedsoplevelser.

### **5.3 Vi vil udvikle os som lærende organisation**

Experimentarium har mange års erfaring med formidling af naturvidenskab, teknik og sundhed. Vi vil eksperimentere med nye tankegange og nye metoder til at bygge ovenpå den viden og de erfaringer, vi selv og andre har samlet. Vi vil udvikle vore evner til at lære gennem øget fokus på forskning i - og evaluering af - formidling og gennem effekten af formidlingen. Vi vil dokumentere bedste praksis og holde fokus på at sprede viden hurtigt og effektivt i hele organisation. Og vi vil deltag i den offentlige debat.

### **5.4 Vi vil forbedre vores driftsøkonomi**

Experimentarium skal styrke sit driftsøkonomiske grundlag for at sikre en fortsat bæredygtig fremtidig. Vi vil styrke den økonomiske sikkerhed og gennemsigtighed i vores aktiviteter. Vi vil udvikle bedre redskaber til at vurdere både vores projektøkonomi og vores driftsøkonomi. Og vi vil intensivere den kommersielle udnyttelse af vores kompetencer og stræbe efter øget offentlig støtte.

### **5.5 Vi vil styrke Experimentariums corporate brand som en samfundsnyttig virksomhed**

Experimentariums har et stærkt brand, som er præget af begreber som leg og læring. Det skal vi fastholde. Experimentarium har været i forandring over de seneste år, og den proces fortsætter med strategien for 2013-2015. Det betyder en ændring i vores identitet, som hidtil ikke er blevet tilstrækkeligt formidlet til befolkningen og samfundets ledende kredse. Det skal vi fremover gøre målrettet. Vores corporate brand skal fornyes, så det afspejler vores nye identitet og kan være med til at sikre, at Staten, virksomheder, organisationer, fonde og enkeltpersoner vil være mere villig til at støtte Experimentarium.



## 6. Arbejdsprogram 2013 – 2015: Fremtidsprojektet

Ved købet af bygningen i 2008 fik Experimentarium mulighed for at foretage en gennemgribende om- og udbygning af ejendommen.

Udbygningen er først og fremmest begrundet i ønsket om at gøre Experimentarium mindre vejafhængigt. Science centret lider under lave besøgstal på dage med godt vejr. På en regnvejrsdag i juli måned kan der komme 4.000 besøgende. Dagen efter, hvor Solen skinner, kommer der måske kun 1.000 besøgende.

Det centrale element i udbygningsprojektet har derfor været at skabe et aktivt tag med en stor udendørs udstilling med en pragtfuld udsigt indover København og ud mod Øresund. På det aktive tag skal der også indrettes tagcafé med en botanisk taghave samt skaffes plads til vedvarende energikilder, således at bygningen bliver energineutral. Endelig er planen også at indrettet et motionsområde på taget.

Det næste element i Fremtsprojektet har været ønsket om et større udstillingsareal for at skabe bedre plads til de mange besøgende. Der indrettes således en ny udstillingshal på 2.800 m<sup>2</sup>., som både skal rumme faste udstillinger og særudstillinger. I alt kommer Det Ny Experimentarium til at råde over 10.000 m<sup>2</sup>. udstillingsareal mod i dag ca. 6.000 m<sup>2</sup>.

Af nye faciliteter ønsker Experimentarium at råde over en Flexscene med plads til 400 personer samt en Multihal, der kan bruges til udstillinger og andre aktiviteter. Desuden ønskes der skabt bygningsmæssige rammer til Forskningscentret, Uddannelses- og Undervisningscentret, Innovationscentret samt til et Konferencecenter. Endelig ønsker Experimentarium at indrette et topmoderne multimedieværksted, flere publikumsværksteder samt større café og butik.

I sin egenskab af naturvidenskabeligt og teknisk videncenter bør Experimentariums bygning – som et demonstrationsprojekt - være energineutral og udvikles til at være Danmarks mest intelligente hus, hvor husets forsyning og drift – i videst muligt omfang – styres af IT.

Bygningen ønskes indpasset arkitektonisk i den bydel, der siden 1991 er vokset op omkring Experimentarium. Bygningen ønskes givet et nyt arkitektonisk udtryk, så bygningens ydre signalerer, at den rummer Danmarks Science Center.

Experimentarium ønsker at blive lokalt kulturhus for Tuborgområdet og åbne bygningen mod det lokale bymiljø.

Udbygningsplanen omfatter forbedring af personalefaciliteterne i form af et bedre kontormiljø med indkig til udstillingerne, diverse mødelokaler og inspirationsrum, moderne personalekantine, fitness rum m. v.

## 7. Arbejdsprogram 2013 – 2015: Masterplanen

Masterplanen omfatter alle de formidlingsaktiviteter, som vi vil tilbyde publikum i Det Ny Experimentarium i 2015. Masterplanen omfatter endvidere en række indsatser, som skal støtte op om Masterplanen og ruste Experimentarium til fremtiden. Arbejdet med Masterplanen omfatter tre faser: 7.1: Forberedelse af Masterplanen. 7.2: Realisering af Masterplanen. 7.3 Support af Masterplanen.



- Vi skal tydeliggøre Experimentariums beslutningshierarki.
- Vi skal øge fokus på styregruppens funktion og de faste leverancer fra projekt til styregruppe.
- Vi skal forenkle Experimentariums projektmodel.

### 7.3.2 Brande Experimentarium

Experimentariums corporate branding strategi og kampagne skal sikre, at kendskabet til og forståelsen af Experimentariums betydning for den enkelte og for samfundet øges markant. Arbejdet med fornyelse af corporate brand omfatter udvikling af strategi, gennemførelse af indsatser som bidrager til Experimentariums ønskede identitet, sikring af fælles forståelse af corporate brand i ledelsen og blandt medarbejderne samt gennemførelse af kampagne.

I arbejdet med fornyelse af corporate brand vil Experimentarium bl.a.:

- Styrke sin nyhedsformidling og derigennem brande centret som en seriøs formidler af naturvidenskab og teknik.
- Publicere sine forskningsresultater i offentlige medier.
- Bidrage til den stedse eksisterende debat om naturvidenskabens og teknikkens betydning for Danmarks velfærd på kort og på lang sigt.
- Etablere Experimentariums Akademi, som skal samle en række af vores formidlingsaktiviteter af høj faglig karakter og fungere som en paraply, der kan rumme faglige aktiviteter og produkter målrettet forskellige aldersgrupper.

I arbejdet med kampagnen vil vi bl.a.

- Etablere et corporate site, der belyser alle centrets samfundsgavnlige aktiviteter.
- Sikre høj grad af interaktivitet på experimentarium.dk
- Starte formidlingen af naturvidenskab i markedsføringen. Vi skal dygtiggøre os i at skabe kampagner, som inddrager formidlingen og samtidig skaber salg.
- Starte samtaler mellem mennesker med markedsføringen. Med fokus på Facebook og Twitter skal vi eksperimentere med samtaleskabende formidling og markedsføring. Vores strategi for sociale medier skal fornyes.
- Deltage i Folkemødet 2013.

### 7.3.3 Indføre nyt økonomisystem.

Vi skal indføre nyt økonomisystem for at effektivisere vores rapportering, således at økonomistyringen bliver bedre og regnskaber og budgetter lettere at forstå i projekter og regnskaber.

- I 2013 vil vi undersøge markedet for at finde et økonomisystem, der kan gøre hverdagen lettere for alle ansatte. Timeregistrering skal være brugervenlig og integreres i bl.a. projektregnskaber og lønningsregnskab. De økonomiske systemer skal køre på samme platform (måske browserbaseret) og dermed være lettere at bruge.
- I 2014 skal økonomisystemet indkøbes, testes og implementeres, så det fungerer optimalt fra 2015.

### **Appendix 6.3: Diploma Thesis of Kristine Klinkhammer Adler-Nissen**

“Transformation as motivator for new segmentation”, August 2012  
Extract page 1, 5, 6, 18, 27, 28, 30, 31, 45

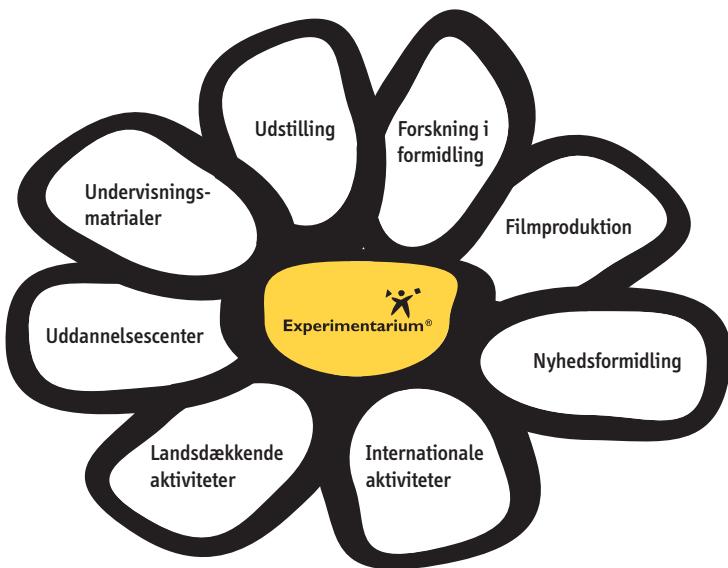
# Transformation som motivation for ny segmentering

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*Skrevet af Kristine Klinkhammer Adler-Nissen  
August 2012*

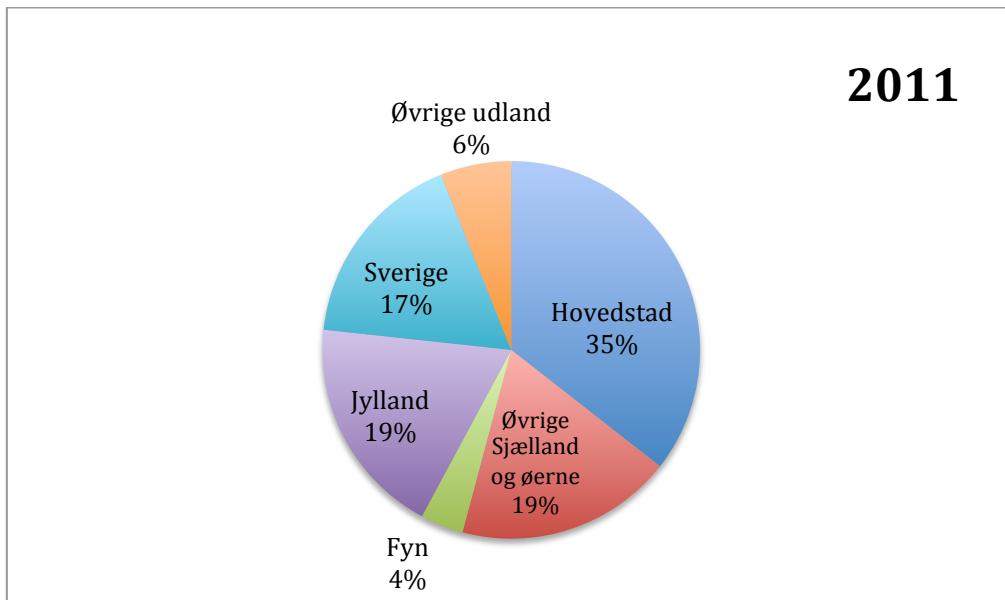
*Vejleder: Ann Hartl  
Antal anslag: 121.031  
Antal normalsider: 50*



**Figur 1 - Blomsten - visualisering af Experimentariums formidlingsplatforme**

Min plads i organisationen, er i formidlingssektionen, som er én af 5 sektioner i en samlet driftafdeling. Denne sektion indeholder bl.a. livredderne og piloterne, som er vores formidlere, en række faste medarbejdere samt en gruppe medarbejdere med cerebral parese. Driftafdelingen har fokus på udstillingerne, at holde dem rene og funktionelle, samt at formidle udstillingerne til gæsterne. Driftafdelingen har ca. 100 ansatte hvoraf ca. 70 er ansat i formidlingssektionen.

Experimentarium har ca. 350.000 besøgende pr. år fordelt på 34% skoleelever, 23% andre børn og 43% voksne. De besøgende kommer fra stort set hele Danmark og fra udlandet – primært Sverige.



**Figur 2 - Experimentariums gæsters geografiske fordeling i 2011**

Bygningskultur Danmark lavede i 2008 en bæredygtighedsvurdering for fremtidens Experimentarium hvori de vurderede Experimentariums besøgspotentiale til 450.000 gæster/år. Der er dermed mulighed for at øge besøgstallet med ca. 100.000 gæster/år.

Ca. 80% af Experimentariums gæster er genbesøgende og den gode oplevelse er dermed en vigtig del, af Experimentariums markedsføring. Vi kører en kontinuerlig publikumsundersøgelse med spørgeskemaer, som gæsterne udfylder hver dag. I den har gæsterne de sidste 2 år svaret 5,8 i snit (ud af 7) til spørgsmålet om, hvorvidt besøget på Experimentarium har levet op til deres forventninger. Ca. 85% svarer at de gerne vil besøge Experimentarium igen. Dette er i sig selv nogle rigtig pæne tal, men når 80% af de besøgende kommer som genbesøgende, og kun 85% af dem efter besøget angiver at de vil komme igen, så vil Experimentariums besøgstal langsomt falde, hvis ikke vi gør noget, for at tiltrække nye kunder eller for at tiltrække nogle af de kunder, der har svaret at de ikke vil komme igen.

Vi går en fremtid i møde hvor konkurrencen fra andre oplevelsescentre bliver meget større end den hidtil har været i og med, at "Den blå Planet"<sup>1</sup> åbner i 2013, det nye naturhistoriske museum<sup>2</sup> sandsynligvis åbner i 2017 og Carlsberg også brygger på at lave et nyt oplevelsescenter<sup>3</sup>. En af de ting vi gør for at kunne matche de nye tilbud er, at vi planlægger en stor ombygning således at det nye, større Experimentarium åbner i 2015. Men derudover, er vi også nødt til at finde ud af hvordan vi forbedrer oplevelsen på Experimentarium, så vi sikrer at gæsterne gerne vil komme igen, og får en oplevelse af, at de oplever noget nyt hver gang de kommer.

Undersøgelsen som Bygningskultur Danmark lavede anbefaler, at vi bevæger os længere ind på oplevelsesmarkedet og stiler efter at tilbyde transformerende oplevelser:

*"Den moderne forbruger er presset på tid og kan vælge mellem mange oplevelser. For at vinde den travle forbrugers tid i det store udbud af oplevelser, er det således vigtigt at tilbyde oplevelser, der tager skridtet fra oplevelsesøkonomi til transformationsøkonomi, og som skaber refleksion, forandring og effekt hos individet. Oplevelser, der desuden både rummer fællesskab og mulighed for selv at være medskaber, kan bidrage til dette. Samtidig er det vigtigt at tilbyde oplevelser, der imødekommer de forskellige situationsbestemte typer af forbrug"*(Bæredygtighedsvurdering – fremtidens Experimentarium 2008:18)

Denne anbefaling ligger blandt andet til grund for formålet om, at vi skal skabe transformationer som jeg præsenterede i indledningen. Måden vi vil opnå disse transformerende oplevelser er bl.a. ved at følge Pine og Gilmore's oplevelsesmodel

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<sup>1</sup> Den blå planet er det nye Danmarks akvarium der bygges ved Kastrup havn og åbnes i marts 2013 (<http://www.denblaaplanet.dk>)

<sup>2</sup> Det nye naturhistoriske museum er en sammenlægning af Zoologisk museum, Geologisk museum og Botanisk have, der hvor Botanisk have ligger nu. Hvis projektet bliver finansieret forventes det at åbne i 2017 (<http://nyt.snm.ku.dk/om/>)

<sup>3</sup> Carlsberg vil lave et oplevelsescenter i den nye bydel Carlsberg bydelen, og har netop valgt vinderen af arkitektkonkurrencen. De forventer 400.000 gæster årligt.

(<http://www.carlsbergbyen.dk/nyheder/222/nyt-oplevelsescenter-i-ny-carlsberg-bryghus/>)

undersøgelse: "Mor, far, børn – roller og ønsker i forbindelse med familieferien 2004" (s. 12) har børnene i 50% af de danske familier stor indflydelse på beslutningerne omkring, hvilke ferieoplevelser familien skal have. Familien vil altså ofte snakke sammen og blive enige om hvor de skal hen og hvilken oplevelse de gerne vil have. Og deres fælles oplevelse, vil være afhængig af, om de efter besøget kan blive enige om, hvorvidt besøget har opfyldt deres forventninger. Hvis børnene ikke har været med i beslutningsprocessen, vil det med stor sandsynlighed være den forældre/bedsteforælder der har taget beslutningen om oplevelsen, der også afgør om familien skal besøge Experimentarium igen eller ej. Og der vil dermed stadig være én motivation, der er afgørende for C2C-markedsføringen. Jeg vil derfor i denne opgave arbejde ud fra den antagelse at en familiegruppe, inden deres besøg, har dannet sig en vis enighed om deres motivation for besøget. Og at det i høj grad er opfyldelsen af deres fælles forventninger, der afgør om de har haft en god eller dårlig oplevelse.

Jeg vil som sagt bruge British museums og Falks segmentinddelinger som inspiration og derudover bruge de erfaringer jeg selv har med de familietyper, der kommer på Experimentarium. Hvis jeg havde haft tid og spalteplads til det, ville jeg have lavet en kvalitativ undersøgelse først, for at finde frem til hvilke segmenter, jeg skulle opdele gæsterne i og hvad de ville svare hver især, på de spørgsmål, jeg ville stille i den kvantitative spørgeskemaundersøgelse. Da det ikke har været muligt har jeg ud fra de informationer jeg har fået fra spørgeskemaet, grupperet gæsterne i 5 segmenter. I og med at vi bruger Falks museumstyper i vores formidlingsuddannelse og jeg mener, at hans undersøgelse godt kan overføres til Experimentariums publikum<sup>4</sup>, har jeg valgt at inddæle segmenterne på en måde der ligner hans meget. Jeg vil derfor herunder beskrive, hvordan jeg definerer de enkelte segmenter. Jeg vil i Data afsnittet forklare hvilke kriterier jeg har brugt, til at placere gæsterne i de enkelte segmenter.

### **Oplevelsesjægere**

Dette segment svarer til British museums sightseers, og Falks Experience seekers. Det er f.eks. de gæster der aftaler om morgenens hvor de skal tage hen ud fra hvordan vejret ser ud. De kommer for at have en hyggelig dag sammen og for at blive underholdt og læring er dermed ikke deres primære besøgsmotivation.

### **Hyggegæster**

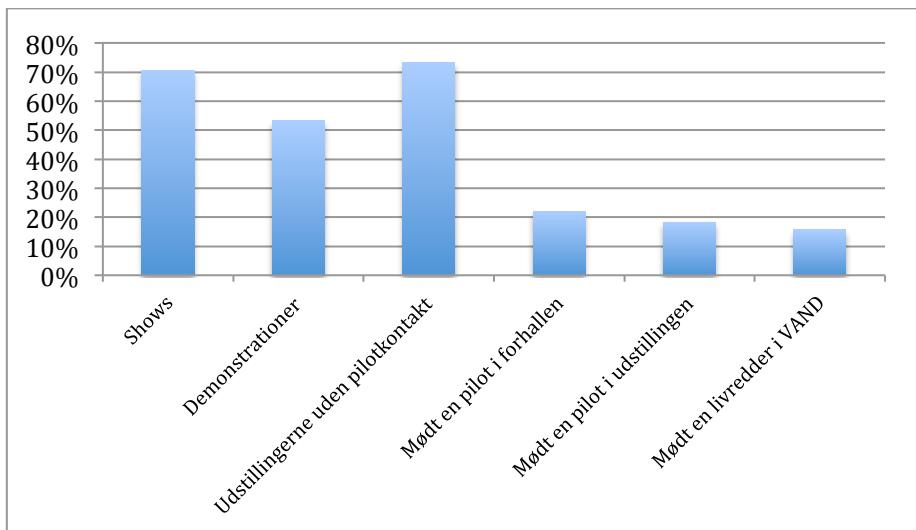
Dette segment svarer til British museums repeat social visitors og til Falks facilitators. Det er typisk de familier der gerne vil have en hyggelig dag sammen og som gerne vil have at børnene lærer noget samtidig. En stor del af dette segment vil have årskort til Experimentarium eller være genbesøgende.

### **Fagnørder**

Dette segment svarer til British museums Experts og til Falks Hobbyists. Det er de familier der kommer med læring som det primære formål. Både forældre og børn kommer for at lære noget og de kommer gerne, for at se en særudstilling, der f.eks. passer til mor eller fars profession. De har planlagt besøget i forvejen og kommer uanset hvordan vejret er den dag.

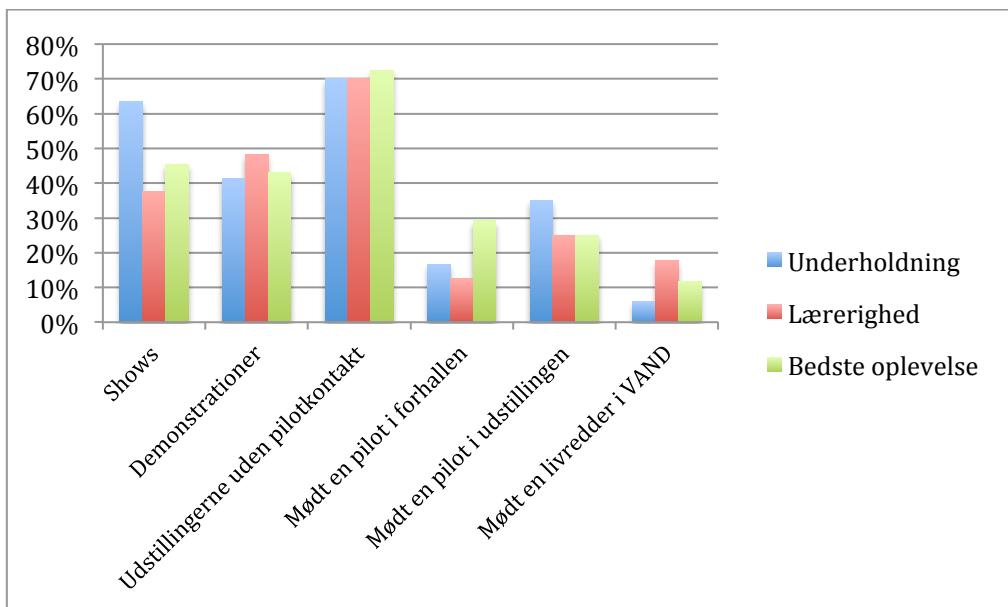
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<sup>4</sup> Falks undersøgelser er blandt andet gennemført på akvarier og science centre i USA.



**Figur 13 – Svar på spørgsmålet: "Hvilke af Experimentariums aktiviteter har du/I benyttet i løbet af besøget?"**

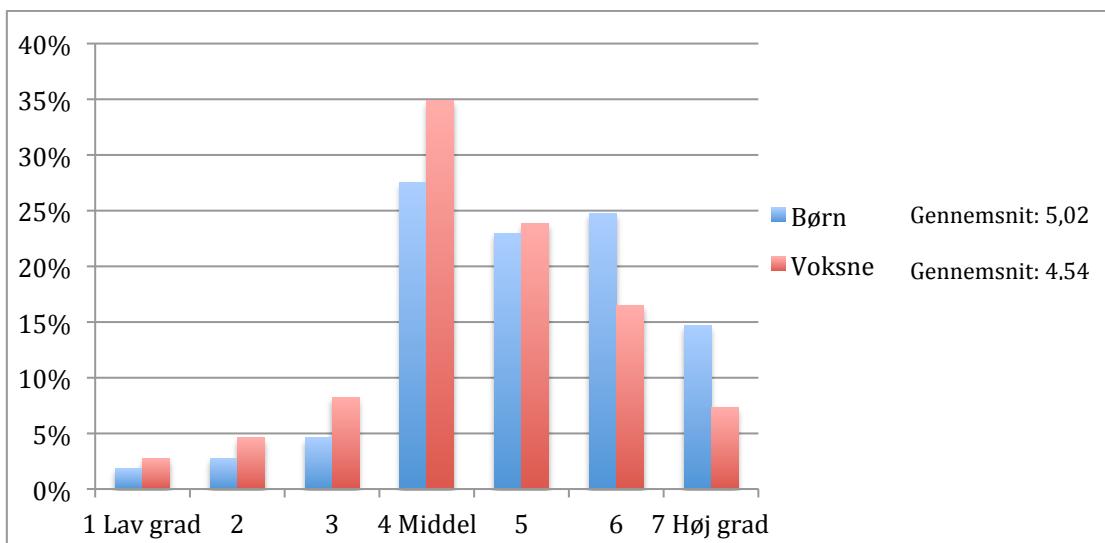
Denne oversigt afspejler meget godt, at denne periode har været en periode, hvor vi har prioriteret at lave mange shows for at få gæsterne væk fra udstillingsområderne, og dermed ikke har haft så mange piloter i udstillerne. Jeg betvivler dog validiteten lidt, idet kun 73% angiver at de har besøgt udstillerne uden pilotkontakt. Dette kan skyldes at de, der har mødt en pilot i udstillerne, mener at det udelukker at de har besøgt udstillerne uden pilotkontakt. Men jeg kan ikke forestille mig, at der er nogen af gæsterne der udelukkende har besøgt udstillerne sammen med en pilot.



**Figur 14 - Viser procentdelen af de der har benyttet den enkelte aktivitet der har angivet at aktiviteten var den mest hhv. underholdende, lærerige og bedste oplevelse.**

I figur 14 har jeg beregnet hvor mange af de, der har benyttet f.eks. shows, der har angivet shows som mest hhv. underholdende, lærerige og bedste oplevelse. Idet tallene er angivet som den procentvise andel, af de der har benyttet den enkelte

aktivitet, kan de godt sammenlignes på tværs. De viser dermed at gæsterne klart angiver besøget i udstillingerne uden kontakt som både mest lærerigt og den bedste oplevelse. Med hensyn til underholdning så tangerer showene næsten besøget i udstillingen uden pilotkontakt. Ingen ved disse spørgsmål, må jeg sætte spørgsmålstegn ved validiteten, fordi der er flere der har svaret f.eks. både shows og udstillingerne uden pilotkontakt som det mest underholdende/lærerige/bedste oplevelse. Dette er dog mest et problem hvis man holder dem op imod hinanden – idet man ud af tallene ikke med sikkerhed kan konkludere at gæsterne synes at besøget i udstillingen uden pilot var mere underholdende end shows. Men man kan godt konkludere at 64% af de der så shows, syntes at den aktivitet var lige så, eller mere underholdende end de andre aktiviteter.



**Figur 15 - Svar på spørgsmålet: "I hvor høj grad mener du at du/dine børn har lært noget nyt i dag?"**

Gæsterne angiver at børnene har lært lidt mere i løbet af besøget, end deres forældre. Hvis man skal bruge dette svar til også at sige noget om forventningsopfyldelsen, så var der i del 1 63% der angav, at motivationen for at besøge Experimentarium var at deres børn skulle lære noget. Og der er i del 2 90% der har svaret mellem 4 (har lært noget) og 7 (har lært meget), så det må betyde at deres forventninger på det punkt er blevet opfyldt. I forhold til de voksne så var der 34% der kom for selv at lære noget og hele 84% der svarer mellem 4 og 7 til dette spørgsmål! Mht. validiteten af dette spørgsmål så mener jeg ikke umiddelbart, at det er svært for gæsterne at forstå hvad de skal svare på. Men validiteten bliver påvirket af, at jeg ikke kan vide hvordan de vurderer om de har lært noget, og om den læring skyldes Experimentariums aktiviteter. De kunne jo også bare have lært noget om dem selv, eller deres børn som egentlig ikke havde nogen sammenhæng med Experimentarium.

## Analyse

Jeg vil starte analysen med at vælge hvilke af de 5 segmenter jeg har fundet i min undersøgelse, som jeg vil vælge at fokusere på.

### Valg af segmenter

Jeg har nu gennemført min segmentering og har fået opdelt gæsterne fra uge 28-30 i 5 segmenter. For at finde ud af, hvilke segmenter det vil kunne betale sig at tilpasse vores produkt til, skal jeg analysere de 5 segmenter ud fra forskellige kriterier. Der er flere måder at gøre dette på. Freytag et al (2009:49) præsenterer en metode hvor man vurderer segmenterne ud fra:

- Om segmentet er lønsomt
- Om segmentet er identificerbart/ måleligt
- Om det er muligt at nå segmentet
- Om segmentet er homogent og adskiller sig fra resten af markedet.

Christensen og Jespersen (2007:70) anbefaler en SMOK-analyse hvor man vurderer segmenterne ud fra:

- Størrelse og vækst
- Muligheder
- Omkostninger
- Konkurrence

Begge modeller er primært lavet til segmenteringsprocesser, der skal bruges til positionering, men jeg mener dog at jeg godt kan bruge dele af SMOK-analysen til at vurdere mine segmenter ud fra.

#### Størrelse og vækst:

Som jeg præsenterede i dataafsnittet, har jeg inddelt gæsterne i 5 segmenter hvoraf 2 er meget små: æstetikerne og kulturisterne, mens de 3 sidste oplevelsesjægerne, hyggegæsterne og fagnørderne er næsten lige store. Hvis man går ud fra størrelsen vil det derfor være mest rentabelt, at fokusere på de sidste 3 segmenter i denne omgang. Hvis mit formål blot havde været, at få flere gæster ind i huset, havde jeg måske valgt at fokusere på kulturisterne og æstetikerne, fordi det er der hvor der er en stor mulighed for vækst. Men det ville kræve meget mere, end blot at tilpasse det produkt vi har nu. Jeg har dog en forestilling om, at når vi får lavet vores nye tilbygning og vi begynder at tænke mere i helhedsorienterede oplevelser, hvor kunst også er en del af udstillingerne og får sat fokus på æstetikken vil der komme flere kulturister og æstetikere. Og så vil det være relevant, at lave en målrettet markedsføring, over for de segmenter.

#### Muligheder:

Dette punkt dækker over, hvorvidt det er muligt at nå segmentet, om man har kapacitet til at betjene det, samt om det er muligt at tiltrække segmentet, ved at tilpasse produktet eller om det kræver et helt nyt produkt. Jeg vil mene at vi har mulighed for at nå alle 5 segmenter og også kapacitet til at rumme dem alle. Men det

vil som sagt kræve udvikling af et nyt produkt at nå æstetikerne og kulturisterne. Mens vi kan nå oplevelsesjægerne, hyggegæsterne og fagnørderne, ved at tilpasse de produkter vi allerede har.

#### **Omkostninger:**

Det vil oftest koste mere, at udvikle nye produkter, frem for at tilpasse dem vi har. Så omkostningerne vil umiddelbart være højere hvis jeg vælger æstetikerne og kulturisterne end oplevelsesjægerne, hyggegæsterne og fagnørderne.

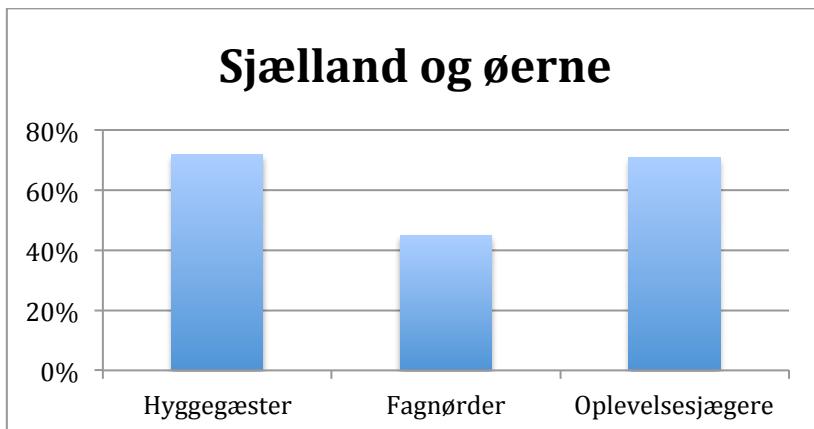
#### **Konkurrence:**

Spørgsmålet er, om der er forskel på hvor mange konkurrerende oplevelsestilbuder der er, der retter sig mod de enkelte segmenter. Det er altid svært at fastslå præcis hvem vores konkurrenter er. I og med at vi er i oplevelsesindustrien, konkurrerer vi mod alle de andre oplevelser, man kan vælge i hovedstadsområdet. Både Tivoli, Zoo og de andre museer, men også resten af leisureindustrien, såsom biografer, teatre, og restauranter, samt naturoplevelser såsom skoven og stranden. De segmenter, der kommer med læring som primær motivation, kulturisterne, hyggegæsterne og fagnørderne, er dem vi oplever mindst konkurrence omkring, da det ikke er alle de ovenstående konkurrenter, der tilbyder læring i så høj grad som os. Æstetikerne og oplevelsesjægerne er der derimod meget stor konkurrence omkring, da der er rigtig mange oplevelser der retter sig mod dem. I figur 17, som er en undersøgelse Nationalmuseet har bedt Gallup om at lave, kan man se hvordan Experimentarium vurderes i forhold til Nationalmuseet, Zoo og SMK. Her vurderes vi rigtig højt især som værende lærerigt, spændende og oplevelsesrigt. Og man kan se at nationalmuseet og zoo er nogle af vores konkurrenter mht. lærerigheden.



**Figur 17 - Museumsgæstens syn på attraktionen. Fra Imageundersøgelse lavet af Gallup for Nationalmuseet i 2004.**

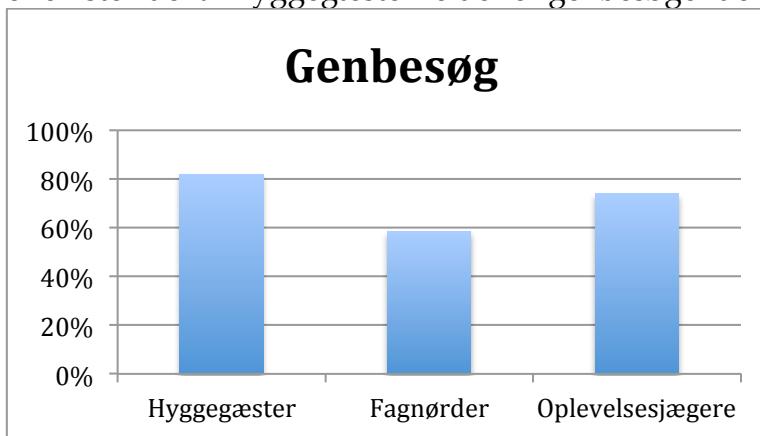
Ud fra det ovenstående vil jeg vælge at fokusere primært på segmenterne: hyggegæsterne og fagnørderne da det er dem der er flest af og som søger lige præcis



**Figur 25 - antal af gæsterne i de 3 valgte segmenter der kommer fra Sjælland og øerne**

Vi har forsøgt at lave vores åbningstider, så de passer til både børnefamilierne og skolerne. Vi har åbent fra 9.30-17.00 på hverdage, dog til kl. 21.00 om tirsdagen. samt fra 11-17 i weekenderne. Desværre har vi, udenfor ferierne, ikke ret mange besøgende om eftermiddagen, og tirsdag aften bliver heller ikke benyttet særlig meget. Vi arbejder derfor på, at markedsføre eftermiddage og tirsdage aftener mere, samt at gøre dem mere attraktive via flere aktiviteter. Jeg mener ikke, at en ændring af vores åbningstider, vil have nogen indflydelse på muligheden for transformerende oplevelser hos de 3 valgte segmenter.

Med hensyn til forbrugsraten så bekræftede undersøgelsen min antagelse om, at der er en stor del af hyggegæsterne der er genbesøgende.



**Figur 26 - Procentdelen af de 3 valgte segmenter der er genbesøgende**

Der er 82% af hyggegæsterne, der er genbesøgende og jeg har derfor en forestilling om, at der er en del af dem der har årskort til Experimentarium. En stor del af oplevelsesjægerne, er ligeledes genbesøgende mens kun 60% af fagnørderne er genbesøgende. Dette hænger nok sammen med fagnørdernes geografiske ophav. I Pine og Gilmore's model over udviklingen i den økonomiske værdi (Figur 6), viser de hvordan man både kan bevæge sig op og ned af den økonomiske stige. De mener altså, at hvis man ikke udvikler sig og blot tilbyder den samme service hver gang kunden kommer, så vil servicen blive "commoditized" (vareliggjort) og vil på et tidspunkt blot blive opfattet, som en del af varen. På lige vis kan oplevelser blive vareliggjort til en del af den forventede service, hvis ikke de udvikles. Pine og