“You just get sucked into it”
The Immersion Process in Managed Visitor Attractions

by

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“Per aspera ad meliora”

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Summary

The purpose of this thesis is to examine the nature of the immersion process, the process through which consumers become immersed, in the context of managed visitor attractions. This is a nascent research topic that has received limited attention from tourism scholars and this thesis is, therefore, explorative in nature, seeking to pursue the following overarching research aims:

> *Aim 1: Explore the underlying structures and mechanisms of the process leading to the state of immersion in the context of managed visitor attractions*
>
> *Aim 2: Explore how context and contextual conditions might influence the immersion process*

These aims are explored through the three papers which constitute this thesis. Each paper presents an empirical case study based on the procedures of grounded theory (Strauss & Corbin, 1990) conducted in the context of experience products offered within managed visitor attractions. Each of the three case studies employed a qualitative approach to the data collection, utilizing a combination of semi-structured in-depth interviews and observations. In line with the grounded theory logic, the findings generated in each study were expanded on and further developed through each consecutive case study, turning this thesis into a multiple-case study.

Through this multiple-case study, an empirically grounded, contextually bound model of the immersion process gradually emerged. The model demonstrates that, in the context of managed visitor attractions, the immersion process consists of three stages: involvement triggers, involvement worlds, and the state of immersion. Each stage was connected to increasingly higher levels of involvement (engagement, engrossment, and transcending involvement respectively) and visitors

were found to fluctuate between them in a dynamic fashion. Combined, this can be described as the underlying structure of the immersion process. The structure appeared to be held together by four mechanisms, as the findings showed that the visitors played an important role as co-creators of stimuli, that involvement was a key force driving the immersion process forward, and that the visitors' progression through the process was moderated by the visitors' individual (cognitive, behavioral, and affective) responses, which were in turn influenced by several antecedent factors including experience design factors, social factors, personal factors, and the visitors' appraisals.

These core characteristics of the immersion process (structure and mechanisms) were consistently identified across each of the three case studies. This does not, however, imply that contextual differences were irrelevant to the immersion process, instead, contextual conditions influenced which "involvement triggers" and "involvement worlds" the visitors could access, the type of individual responses that were recorded, and which antecedents influenced these responses.

The findings provide novel insights into the nature of the immersion process in the context of experience products offered within managed visitor attractions. Thus, contributing to expand the limited body of research that exists on the immersion process in tourism-related visitation contexts.

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Part 1

1 Introduction

Experiences as a research topic have received increased attention from scholars across a wide variety of disciplines over the last few decades (Becker & Jaakkola, 2020). As a result, our understanding of the diversity of human experiences has expanded, and a range of experience related concepts have been introduced. One such concept, which over the last few years has become popular within the tourism industry, is immersion. In the literature, immersion has been defined in a variety of ways, and according to Carr (2006), these definitions can be divided into two main groups: psychological definitions and perceptual definitions. In the latter type of definitions, immersion is understood as a perceptual phenomenon and is used as a descriptor of certain types of technologies, of certain elements in the experience design, or as a description of the experience environment. The definition applied by Slater and Wilbur (1997, p. 604) is an excellent example of a perceptual definition: "Immersion is a description of a technology, and describes the extent to which the computer displays are capable of delivering an inclusive, extensive, surrounding, and vivid illusion of reality to the senses of a human participant." In the psychological definitions of immersion, however, immersion is understood as a psychological phenomenon or state, and the focus is on the cognitive features of the experience. Mainemelis (2001, p. 557), for example, uses a psychological definition of immersion when he defines immersion as "the feeling of being fully absorbed, surrendered to, or consumed by an activity, to the point of forgetting one's self and one's surroundings". The perceptual and psychological definitions of immersion hence refer to different, but related concepts: Immersion as a psychological state (psychological definitions) and immersion as a feature of a technology (perceptual definitions).

In the tourism literature, it is the psychological definitions of immersion that dominate, as exemplified by Hansen and Mossberg's (2013, p. 212)

definition of immersion as: "a form of spatio-temporal belonging in the world that is characterized by deep involvement in the present moment. Immersion involves a lack of awareness of time and loss of self-consciousness." Pine and Gilmore (1999, p. 31), who was the first to introduce the concept of immersion to the domain of tourist experiences, also used a psychological definition of immersion, defining it as the feeling of "becoming physically (or virtually) a part of the experience itself." While this definition is rather simplistic, it is one of the few definitions of immersion from the tourism literature that takes into account that immersion can also occur in virtual environments. While it is the psychological definitions that dominate the tourism literature, there are also examples of tourism studies that employ perceptual definitions of immersion. Examples include Pullman and Gross (2004) who used immersion as a descriptor of elements in the experiencescape, Bec et al. (2019) who used it to describe experiences that utilize "immersive technology" (Bec et al., 2019), and Sobitan and Vlachos (2020) who used it to describe "immersive events" that involve a high level of visitor participation, such as participatory theater or dress-up cinema.

In line with the majority of tourism studies, this thesis adheres to the understanding of immersion as a psychological state, following Mainemelis' (2001, p. 557) definition of immersion as "the feeling of being fully absorbed, surrendered to, or consumed by an activity, to the point of forgetting one's self and one's surroundings". Literature addressing immersion as a perceptual phenomenon will therefore not be included in this thesis, as they focus on a different phenomenon and therefore lay beyond the focus of this thesis.

Despite the recent surge in interest in immersive experiences among tourism experience providers, research on immersion as an independent experience concept has remained scarce (Lunardo & Ponsignon, 2019). It is, however, often included as an important dimension in more established experience concepts such as flow, peak, and extraordinary experiences. Flow is particularly closely connected to immersion and is

in the literature sometimes even used interchangeably or overlapping with immersion (Brown & Cairns, 2004; Calleja, 2011; Hansen & Mossberg, 2013). Ellis, Freeman, Jamal, and Jiang (2017) for example, uses the term immersion to describe what they call "micro-flow", the "daily experience counterpart" (p.102) of flow. However, while there is some overlap between immersion and the above-mentioned experience construct, immersion differs conceptually from each of them.

The concept of flow was first introduced by Csikszentmihalyi (1990, p. 4) who described it as "The state in which people are so involved in an activity that nothing else matter." A description that is similar to immersion, which has been described as the deepest form of involvement (Brown & Cairns, 2004). The difference between immersion and flow, however, lay in the eight components that flow has been described to consist of: clear goals, intrinsically rewarding, a high degree of concentration, loss of self-consciousness, distorted sense of time, direct and immediate feedback, balance between ability level and challenge, and a sense of personal control (Csikszentmihalyi, 1990). While some of these components, such as a distorted sense of time and loss of self-consciousness, are also part of immersion, other components, such as challenge and clear goals, are not. Challenge has been considered to be particularly essential to flow, as flow can only be experienced when there is a balance between challenge and skills and the consumer uses their skills optimally. Immersion, however, does not require the consumers use their skills optimally nor does it require a balance between challenge and skills, as research has showed that it is possible to become immersed even when the challenge exceeds the consumer's capabilities (Jennett et al., 2008). Or when there is no challenge present, for example when enjoying the sunset from a sundeck (Hansen & Mossberg, 2013; Pine & Gilmore, 1999). Flow is furthermore considered to involve a serene mindset (Csikszentmihalyi, 1990), which is not necessarily the case for immersion, where emotions and anxiety can run high (Jennett et al., 2008). In other words, although immersion and flow share some

commonalities and immersion can be experienced as *a part of* the flow experience (Arnould & Price, 1993), immersion and flow are two separate, albeit closely related experience constructs.

Another experience construct immersion has been linked to is peak experiences. Peak experiences are described as "Moments of great awe, intense happiness, even rapture, ecstasy and bliss – moments of pure, positive happiness, when all doubts, all fears, all inhibitions, all weakness were left behind." (Maslow, 1964, p. 9). These experiences take the individual to unexpected emotional highs and make them feel connected to a larger phenomenon; to something external to, and larger than themselves (Schouten, McAlexander, & Koenig, 2007). Peak experiences do to some extent also overlap with immersion, as they involve lack of self-awareness, absence of time-consciousness, and total attention (Hansen & Mossberg, 2013). The same can be said for extraordinary experiences (Arnould & Price, 1993; Privette, 1983) which similarly to immersion is characterized by a sense of absorption, attention, and a "spontaneous letting-be" (Arnould & Price, 1993, p. 25). As the name implies, however, extraordinary experiences are experiences that are out of the ordinary - that go beyond the realm of everyday life (Bhattacharjee & Mogilner, 2014). This is not necessarily the case for immersion, which can also be experienced in relation to more mundane daily life experiences, such as work (Mainemelis, 2001).

The significant degree of overlap between immersion and peak, flow, and extraordinary experiences indicate that immersion is an important component in these types of hedonic experience constructs. This does not however imply that immersion can be equated with these experience concepts, as immersion is distinct from each of them in that it can also arise in "ordinary" experiences (in contrast to extraordinary experiences), do not require the presence of a challenge (flow), or that the consumer feels connected to a larger whole outside of themselves (peak experiences). Immersion can instead be understood as one of the core components or building blocks shared by these higher-order

experience constructs (Arnould & Price, 1993; Hansen & Mossberg, 2013). (See Figure 1).

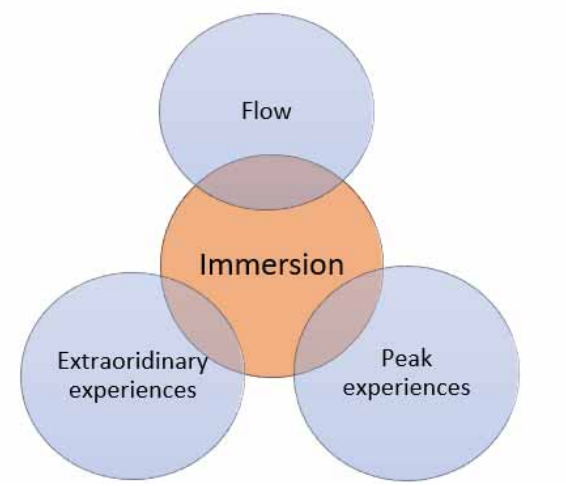

Figure 1 Immersion as a component of flow, peak, and extraordinary experiences

This understanding has two important implications. Firstly, it implies that immersion is a separate experience construct that can be experienced independently of flow, peak, and extraordinary experiences, which also implies that it can be studied as a separate experience construct. There are already some examples in the literature of studies examining immersion as an independent experience construct (see for example Carù & Cova, 2005, 2006, 2007; Frochot, Elliot, & Kreziak, 2017; Hansen & Mossberg, 2013, 2016; Lunardo & Ponsignon, 2019; Mossberg, Hanefors, & Hansen, 2014). Their scope has, however, remained limited and more research is needed to gain a better understanding of the factors and processes involved in producing the state of immersion.

Secondly, this understanding suggests that a better comprehension of immersion and the factors that facilitate it can generate insights that can be valuable to our understanding of higher-order experience constructs such as peak, flow, and extraordinary experiences. Research on

immersion is therefore particularly relevant in tourism, which represents a type of peak consumption (Wang, 2002) where these types of hedonic experience concepts are highly coveted. However, as Hansen and Mossberg (2013) argued, understanding immersion can also be important to our understanding of experiences in general, as it gives insights into the processes involved in creating engaging, powerful, and memorable experiences.

The awareness of the importance of facilitating memorable experiences has increased in the tourism industry as the focus has shifted from service-delivery to experience creation (Tung & Ritchie, 2011), where the focus is on creating value-in-memory by facilitating the co-creation of memorable experiences through activation of emotional arousal and reflective observations (Harrington, Hammond, Ottenbacher, Chathoth, & Marlowe, 2019). In an industry such as tourism, where organizations are constantly competing with each other to facilitate high-quality experiences, the ability to provide visitors with memorable experiences is crucial for their ability to remain profitable (Tussyadiah, 2014), as memorable experiences give rise to positive emotions, which fosters intentions to revisit and increase the spread of positive word of mouth (Kim, Ritchie, & Tung, 2010; Slåtten et al., 2011). This increased interest in memorable experiences is also reflected in the considerable growth in scholarly enquires into memorable experiences witness over the last decade (see for example Kim and Jang, 2016; Kim, Ritchie, and McCormick, 2012; Servidio and Ruffolo, 2016; Slåtten, Krogh, and Connolley, 2011; Zatori, Smith, and Puczko, 2018; Coelho, Gosling, and Almeida, 2018).

Several scholars have linked immersion to the creation of memorable tourism experiences (Campos, Mendes, Do Valle, & Scott, 2016; Chandralal & Valenzuela, 2013; Hansen, 2014; Åstrøm, 2019) and previous studies have shown that immersion is connected to emotional engagement (Brown & Cairns, 2004; Jennett et al., 2008), which is key in the creation of memorable tourism experiences (Johnston & Clark,

2001; Kim, 2014; Servidio & Ruffolo, 2016). A better understanding of the process leading to the state of immersion can, therefore, have important practical implications for tourism providers seeking to use immersion to facilitate memorable experiences for their customers.

Despite the important theoretical and practical implications of a better understanding of the state of immersion and the process leading up to it, it has remained an underexplored topic in the tourism literature. As Hansen and Mossberg (2013, p. 224) argued: "further research is needed to properly develop the theory on immersion". The purpose of this thesis is therefore to address this issue, by deepening our understanding of the process leading to the state of immersion in the context of tourism. To this end, this thesis begins with a review of the existing literature that has examined immersion as an independent experience construct. Beginning with theories on the nature of the immersion process, before concluding with a presentation of important research gaps identified in the immersion literature.

Note that this literature review does not include literature where the term immersion is used interchangeably or synonymously with experience constructs such as peak, flow, and extraordinary experiences. Since immersion is in this thesis understood to be an independent experience construct that has distinct characteristics that separate it from the above-mentioned experience constructs. Note also that while the term immersion process is used throughout this thesis, it does not imply that immersion is understood to be a process. Instead, immersion is understood to be a psychological state and the term *immersion process* is used to refer to the process through which visitors become immersed.

1.1 The immersion process

Due to the scarcity of studies on immersion as a psychological state (Chandralal & Valenzuela, 2013; Cheng & Cairns, 2005; Hansen, 2014; Hansen & Mossberg, 2016; Lunardo & Ponsignon, 2019), our

understanding of the process through which consumers become immersed, has remained limited and contested. The human-computer interaction researchers Brown and Cairns (2004) were the first to develop a theory of the immersion process. Proposing a model of the immersion process as a progressive and sequential, where consumer progresses through degrees of involvement, ranging from engagement to engrossment before finally reaching a state of total immersion (illustrated in Figure 2). Involvement is seen as the driving force driving the immersion process forwards, but the consumers' progression through the process is restricted by a series of barriers. These barriers were closely connected to the context in which the model was developed, which was computer games. The first barrier the consumers needed to overcome is mastering the controllers to get access to the experience. To overcome this barrier, the player has to invest time, effort, and attention to "get into" the game. The second barrier, the barrier to reach the stage of engrossment, is emotional involvement. To overcome this barrier, the player has to experience a level of emotional attachment and involvement with the game, which, according to Brown and Cairns, is achieved through game design. The final barrier, the barrier to reaching the state of total immersion is empathy for the character(s) in the game. Once a barrier has been overcome, the visitor cannot go back to an earlier stage of the immersion process, as the barrier has already been overcome and cannot be reversed. I.e. once a player has invested time and effort to learn the controllers, they cannot unlearn them. Thus, Brown and Cairns' (2004) model of the immersion process can be described as progressive and one-directional, as stages cannot be reversed and the model does not take into account what happens after the consumer has reached the state of total immersion.

Another theory about the nature of the processes through which consumers become immersed was later developed by Carù and Cova (2005), in the context of consumer behavior and classical music concerts. Their model accounts for the processes that follow after the consumer

has reached the state of immersion, and also suggests that there are two different routes leading to the state of immersion (see Figure 2). Based on appropriation theory, they argue that the immersion process is either immediate or cyclical, depending on the visitors' prior experience with the activity or activity context. Suggesting that experienced visitors can become immersed instantly, while inexperienced consumers go through a gradual process of familiarization, progressing through the stages of nesting and investigating before reaching the stamping stage, where they are at a level of familiarity that puts them in a position to become immersed. The state of immersion may however only be experienced momentarily before the visitor returns to the nesting stage and the whole process restarts. Thus, in Carù and Cova's (2005) model, it is the consumer's gradual familiarization with the experience and the experience setting that drives the immersion process forward, rather than increasing levels of involvement as suggested by Brown and Cairns (2004).

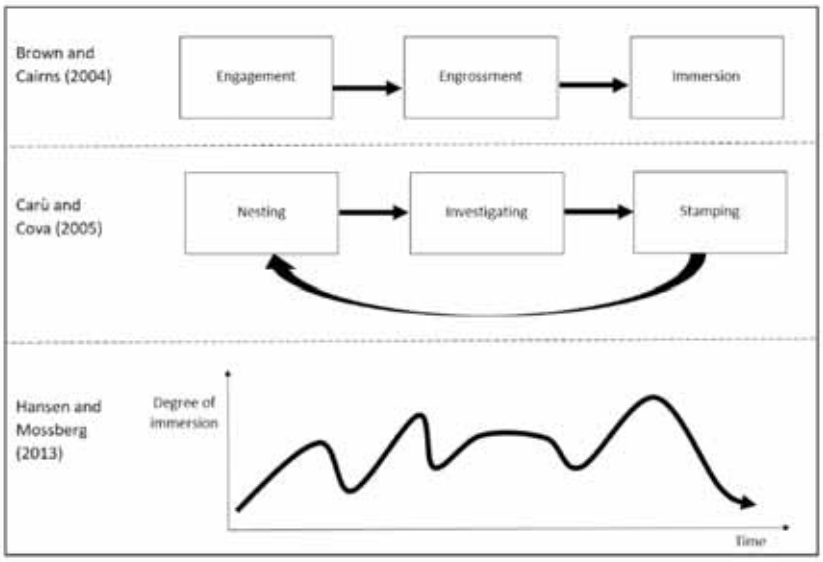

Figure 2 Illustration of the three theories on the nature of the immersion process (Blumenthal & Jensen, 2019, p. 161)

A third model of the immersion process was proposed by Hansen and Mossberg (2013), who argued that, in the context of nature-based adventure tourism, the immersion process appeared to be dynamic in nature. With visitors fluctuating in and out of different levels or degrees of immersion throughout the course of the experience (see Figure 2).

The three theories described above presents three rather different models of the process through which consumers become immersed: as a progressive process (Brown & Cairns, 2004), as an immediate or cyclical process (Carù & Cova, 2005), and as a dynamic process (Hansen & Mossberg, 2013). Each of these models was also developed in three rather different experience contexts: computer games, classical music concerts, and nature-based adventure tourism. It could, therefore, hypothesized that the differences between the three models might be due to contextual differences. The process of becoming immersed in a nature-based tourism context could presumably be quite different from the process of becoming immersed in a virtual computer game or a classical music concert. To the best of my knowledge, however, the applicability of three models in different experience contexts, has yet to be tested. Their contextual dependency is therefore yet to be determined. Contextual conditions have however been found to be influential in relation to other types of transcendent experiences such as extraordinary experiences, peak experiences, and flow (Arnould & Price, 1993; Lindberg & Østergaard, 2015; Schouten et al., 2007). Several scholars have therefore called for more research on immersion across different experiential contexts, in order to get a better understanding of the nature of the immersion process and how contextual conditions influence the process (Carù & Cova, 2005; Hansen & Mossberg, 2013, 2016; Mossberg et al., 2014).

1.2 Research gaps and shortcomings in the immersion literature

The review of the existing literature on immersion conducted for this thesis showed that immersion has largely been studied within two separate streams of research. Tourism & consumer behavior on one side and human-computer interaction research (HCI) on the other. Despite the shared interest in immersive experiences across the two fields, research in each stream has remained siloed, as findings from HCI have largely been overlooked by tourism scholars and vice versa. With the studies of Brown and Cairns (2004) and Jennett et al. (2008) (both HCI studies) as notable exceptions, that have both been cited in the tourism literature.

In HCI, research on immersion has increased rapidly over the last decade and has developed into a consistent body of research, offering insights into a wide range of factors and processes found to influence the immersion process. Immersion research in tourism, however, is in its infancy and has remained limited and exploratory. Tourism scholars have also yet to take advantage of the potential that lay in bridging immersion research in tourism with that of HCI, which at this early stage could be of great benefit to the field. Tourism research has been known to lend itself particularly to bridging with other fields (Kock, Assaf, & Tsionas, 2020) and as Becker and Jaakkola (2020) argue, in order to establish a comprehensive understanding of a phenomenon, researchers need to build bridges across research traditions. So why has the number of cross-references between tourism and HCI in terms of immersion research remained so low?

There can be multiple reasons for the lack of cross-referencing between the two fields, but the literature review conducted for this thesis indicate that there are two main barriers: conceptual confusion caused by the mix of concepts ascribed to the term immersion (immersion as a psychological state versus immersion as a technological feature), and the lack of a shared understanding of the nature of the immersion process.

As previously mentioned, psychological definitions of immersion dominate the tourism literature. In HCI, however, it is the perceptional definitions that dominate. This division is not however clear cut, as there are also examples of tourism studies utilizing perceptual definitions, and HCI studies using psychological definitions of immersion (see for example Jennett et al. (2008) and Cairns, Cox, and Nordin (2014)). To complicate matters further, it is not always stated explicitly which definition of immersion a given study is based on (Cheng & Cairns, 2005). Thus, making it difficult for the reader to interpret the findings, as they cannot be sure whether the study is based on an understanding of immersion as a perceptual phenomenon or as a psychological state (Brown & Cairns, 2004). Combined, this mixed use of definitions and lack of clarity creates conceptual confusion and represents a barrier to progress in immersion research in both fields.

Another barrier is the mentioned lack of a shared understanding of the nature of the immersion process. In HCI, Brown and Cairns' (2004) theories of immersion as a progressive process has gained widespread acceptance. In tourism, however, the nature of the immersion process is more contested, with contention between the proposed sequential and cyclical model proposed by Carù and Cova (2005) and the dynamic fluctuating model proposed by Hansen and Mossberg (2013). This lack of shared understanding of the immersion process across the two fields might, as already mentioned, be due to contextual differences between the immersion process in virtual consumer experiences and in "real world", in vivo experiences. As Hansen and Mossberg (2013, p. 224) argued, calling for more research in different experiential contexts: "There may also be examples of alternative processes of immersion within other consumption contexts". To this date, it has, to the best of my knowledge, not been conducted any empirical studies comparing the immersion process in virtual and "real world" experiences contexts, and the comparability of the immersion process across the two experience contexts is therefore yet to be determined. Making it clear that there is a

need for more research on how and to what extent contextual conditions influence the immersion process.

In addition to the above-mentioned barriers, there is also a gap in the immersion literature in terms of research on the factors that influence the immersion process. Both on factors that can hinder it and on factors that can encourage it. Fifteen years ago, Cheng and Cairns (2005, p. 1275) stated that "Achieving immersion and understanding the depths of what creates an immersive experience is still difficult to determine." Although this statement was made more than a decade ago, we still, to this day, have limited insights into the factors that facilitate immersion in the context of tourism. As St-James, Darveau, and Fortin (2018, p. 273) recently argued: "…the mechanisms underlying immersion in the tourist experience at the destination remain largely unexplored". This speaks to the need for more research on the factors that are involved in and influence the immersion process. Understanding these factors can have important theoretical, as well as practical implications, as understanding the factors that influence the immersion process and how to manipulate them could be used by experience providers to improve their experience offerings. Potentially enabling them to design experience products that facilitate engaging, highly involving, immersive experiences (Brown & Cairns, 2004; Hansen & Mossberg, 2013).

The identified gaps in the literature: 1) lack of a unified conceptualization of immersion, 2) lack of a shared understanding of the immersion process, 3) limited understanding of the influence of contextual conditions and other factors that can hinder or facilitate the immersion process, points to a need for more research on the immersion process to facilitate the develop a more coherent theory on the nature of the immersion process. This thesis seeks to contribute to this end by addressing the three research gaps through exploring the nature of the immersion process in Study 1, expanding on the factors that hinder and facilitate immersion in Study 2, and exploring the influence of contextual

conditions by comparing the immersion process in conventional and technology-empowered experiences in Study 3.

In the following chapter, the overarching purpose of this thesis is described in more detail, along with a presentation of the research design employed to fulfill this purpose.

2 Overreaching purpose, philosophical underpinnings, and research design

In an attempt to address the above-mentioned gaps in the literature, this thesis seeks to improve and expand our understanding of the process through which consumers become immersed - the immersion process - by conducting an empirical investigation for the purpose of generating new insights into the nature of the immersion process and the underlying structures and mechanisms that influence it. To achieve this goal, two broad research aims were developed:

Aim 1: Explore the underlying structures and mechanisms of the process leading to the state of immersion in the context of managed visitor attractions

Aim 2: Explore how context and contextual conditions might influence the immersion process

2.1 Philosophical underpinnings and overarching purpose

When conducting social science research, it is important that the researcher discloses their philosophical worldview, as it influences, not only the questions they ask but also which methods they use to answer these questions (Rosenberg, 2012). This thesis is based on the post-positivist philosophical worldview of critical realism (CR), which influenced the overarching purpose of this thesis and how immersion and the immersion process was studied. CR is a perspective that originates from the writings of Roy Bhaskar and was developed as a response to the discourse between positivists and constructionists that dominated the social sciences for decades (Alvesson & Sköldberg, 2018). The strength of critical realism, as argued by its proponents, is that it is a perspective that "is able to accommodate the strengths of both the positivist and

constructionist positions while avoiding their weaknesses" (Owens, 2011, p. 2). What characterizes critical realism is that reality is understood to be multi-layered. Consisting of three ontological "domains": the empirical, the actual, and the real. The *empirical* domain is the reality that exists according to our immediate experience - that which we can record and observe using our senses. The *actual* domain consists of events that transpire independent of any observer and occurs as a result of underlying mechanisms. These events are what lead to the experiences we have within the empirical domain. Finally, the *real* domain is the underlying structures and mechanisms that produce the different events and "surface phenomenon" within the actual and the empirical domain (Bhaskar, 2008). The relationship between experiences, events, mechanisms, and the different domains of reality is presented in Table 1.

	Domain of real	Domain of actual	Domain of empirical
Mechanisms	✓		
Events	✓	✓	
Experiences	✓	✓	✓

Table 1 Experiences, events, mechanisms, and the domains of reality they constitute (Bhaskar, 2008, p. 56).

The task of science, in the critical realist perspective, is to explore the real domain and how it relates to the two remaining domains (Alvesson & Sköldberg, 2018; Neuman, 2011). Or put differently, to "identify relationships and non-relationships, respectively, between what we experience, what actually happens and the underlying mechanisms that produce the events in the world" (Danermark, Ekström, Jakobsen, & Karlsson, 2002, p. 21).

The relationship between the experiences we perceive (domain of the empirical) and the underlying mechanisms and events that lay beyond

our perception, in the domain of the actual and the real, can be illustrated with the analogy of a book in a bookcase. The bookcase is the underlying mechanism that stops the book from falling to the ground, thereby counteracting the effects of gravity (another underlying mechanism). While the bookshelf (as a mechanism) counteracts the effects of gravity, it does not turn gravity off. Gravity is still at play, but the bookshelf prevents the actualization of an event gravity would otherwise have caused (the book falling to the ground). A mechanism can thereby be at play in a given situation, even if its effects might not be actualized, as other mechanisms can counteract or suppress the effect of the mechanism. We can expand this analogy by assuming that the bookcase is unstable and that someone in the neighboring room bumps into the wall (an event the person sitting next to the bookshelf might not perceive). This event however causes the book to fall down (a surface phenomenon this person is sure to perceive). The individual thus has an empirical experience of the book falling (the surface phenomenon), but do not consciously perceive the underlying mechanisms and events that cause the surface phenomenon they experience.

Drawing a parallel to this thesis, when investigating the immersion process, the "empirical domain" consists of what the informants experience, and what I as a researcher can observe and record. The "actual domain" consists of the events that actually transpire, regardless of whether they are observed by the informants or captured by the researcher (e.g. physiological and psychological processes that goes on inside the minds and bodies of the visitors). The "real domain" refers to the underlying mechanisms and structure of the immersion process that *can* result in the actualization of the state of immersion (an experience). The emphasis on *can* is important here, as the underlying mechanisms from the domain of the real do not necessarily produce direct and immediate surface phenomenon at the empirical level (as illustrated by the bookcase analogy). Nor are these structures isolated from one another. Counteracting mechanism may suppress or alter the surface

appearance of other structures, as different structures influence each other and combine in a multitude of different ways. Similarly, different mechanisms may be at play at different times and in different contexts (Neuman, 2011). Critical realism thus emphasizes the situational dependency of the identified underlying mechanisms and does not share the positivist interest in finding all-encompassing universal "laws" that can be applied to all instances of a phenomenon (Alvesson & Sköldberg, 2018). The underlying mechanisms behind the immersion process identified in this thesis might therefore not be transferable to experience contexts beyond the substantive experience context examined in this thesis. As there might be other mechanisms at play in different experience contexts that might suppress, enhance, disable, or in other ways affect the underlying mechanisms identified in this thesis. The ambition of this thesis is therefore not to identify lawlike conceptions of the underlying mechanisms and structures that influence the immersion process in a general sense, but rather to explore and understand the underlying mechanisms and structures involved in the process leading to the state of immersion in the substantive context of interactive experience products offered within managed visitor attractions. (The substantive context examined in this thesis is further specified in section 4.1).

This thesis seeks to uncover the underlying structure of the immersion process and the mechanisms that influence the process, including those involved in facilitating the actualization of the state of immersion and those that hinder it by counteracting or suppressing the former (Aim 1). It also seeks to explore how context and contextual conditions influence which mechanisms, events, and experiences are actualized in the immersion process in different types of experience products (Aim 2). Aim 1 is achieved by examining the visitors' experiences and mapping out the events (observable and non-observable) that influence the visitors' progression towards the state of immersion and then trying to analytically identify the underlying mechanisms causing these events

and surface experiences. Aim 2, is achieved by comparing the findings generated from each of the three case studies, seeking to uncover differences between experiences, events, and mechanisms actualized in the different case contexts. What this thesis seeks to explore within the different domains of reality is illustrated in Table 2, where Aim 1 is broken down into more concrete research questions.

	Domain of real	**Domain of actual**	**Domain of empirical**
Mechanisms	What is the underlying structure of the immersion process? What are the mechanisms that facilitate the actualization of the state of immersion and what are the mechanisms that counteract or suppress these mechanisms?		
Events		What are the events (observable and non-observable) that influence the visitors' progression through the immersion process?	
Experiences			What are the visitors' experience of the process leading up to the state of immersion?

Table 2 What this thesis seeks to uncover within the different domains of reality.

2.2 Research design

In the critical realism perspective, context is assigned great importance, since it is considered to influence which underlying structures and mechanisms are actualized, as well as which surface events and experiences these underlying structures cause. This contextual focus is also reflected in the overarching aims of this thesis, which express an interest in exploring how contextual conditions influence the immersion process. The contextual focus of this thesis is indicative of the type of theory it seeks to develop. The ambition is not to develop a broad formal theory with wide applicability, but rather to develop a context-specific substantive theory (Strauss & Corbin, 1990) that can contribute to generate a deeper understanding of the immersion process in tourism experiences. To this end, one particular experience context that is of high importance to the tourism sector was chosen: managed visitor attractions. Or more specifically, experience products offered within managed visitor attractions.

To enable the development of an emergent substantive theory, a comparative multiple-case study design (Miles, Huberman, & Saldaña, 2014; Yin, 2003) paired with a grounded theory approach (Strauss & Corbin, 1990) was employed. This design was chosen as case studies enable the in-depth exploration of underlying structures and social phenomena within their real-life context (Yin, 1989), which was crucial, given the assumed relationship between context and underlying mechanisms. Case studies are furthermore considered to be particularly well-suited for studies seeking to develop new theories, refine existing theories, and uncover nuances of a phenomenon (Eisenhardt, 1989; Flyvbjerg, 2004) which coincide with this thesis' ambition of developing a substantive theory of the underlying structures and mechanisms of the immersion process in the context of managed visitor attractions. The choice of using a comparative approach, based on multiple cases, was made because it facilitated comparisons of manifestations of the immersion process across several different experience contexts, enabling

me to study the influence of contextual differences. For the purpose of this thesis, three consecutive, explorative case studies (Miles et al., 2014; Yin, 2003) were therefore conducted in the context of managed visitor attractions.

The case-study design was paired with a grounded theory (GT) based approach as described by Strauss and Corbin (1990). This approach was chosen based on the purpose of this thesis, which was theory generation, rather than theory verification (Glaser & Strauss, 1967) and because GT is considered ideal for studies seeking to expand on existing knowledge about a phenomenon of which our understanding is limited, where little research has been done, and where existing theories converge (Gibson & Hartman, 2014). GT is considered ideal for this type of studies, as it enables the researcher to develop new theories based on codes, categories, and relationships identified in the empirical data, rather than in the existing literature (Strauss & Corbin, 1990).

One of the hallmarks of grounded theory is that it is based on a constant comparative approach, where the researcher moves back and forth between data collection and analysis and where initial analysis influence the direction of future data collection (Strauss & Corbin, 1990). This approach is built on what is referred to as abductive reasoning, which stands in contrast to deductive and inductive reasoning.

Deductive reasoning is typically associated with quantitative methods, where the researcher starts with a hypothesis derived from existing theories, deduces consequences, and then gather data to test if those consequences emerge. In inductive reasoning, the starting point is empirical data, which is used to develop a hypothesis, which is then verified by collecting more data. If the same observation is found across all the different instances studied, it is assumed that the observation must also be generally valid. In the abductive approach, empirical data is also the starting point, but rather than being one-directional, the abductive approach is circular, as the researcher moves constantly back and forth

between data collection and theory development (Alvesson & Sköldberg, 2018; Gibson & Hartman, 2014). As the theory emerges, it is continuously confronted with the empirical data in order to refine, adapt, and develop the theory into a consistent, dense theory that is thoroughly grounded in the data (Gibson & Hartman, 2014; Strauss & Corbin, 1990). Although empirical data is the starting point in abductive reasoning, it does not reject the use of theoretical preconceptions (unlike inductive reasoning). Existing literature can be used both prior to, or during the abductive analysis, not as something that is mechanically applied to explain single cases, but as a source of inspiration that can contribute to the discovery of patterns that increases the understanding of a phenomenon (Alvesson & Sköldberg, 2018). This last point is however a point of contention within the grounded theory community, as different strains of GT hold different views on what role existing literature should play in the grounded theory process.

Grounded theory was first developed by Glaser and Strauss who published their seminal book "The discovery of grounded theory: strategies for qualitative research" in 1967. The pair later went separate ways, with Strauss going on to develop a more moderate, procedure focused, grounded theory with Corbin (Strauss & Corbin, 1990). Whereas Glaser continued to propagate for the original more conservative version of GT through several publications (see for example Glaser, 1978, 1992, 1998, 2006). While there are several differences between the "Straussian" (Strauss & Corbin, 1990) and the "Glaserian" (Glaser & Holton, 2004; Glaser & Strauss, 1967) approach to grounded theory, one of the key points of departure is the differing view on the role existing literature should play in the grounded theory process (Kenny & Fourie, 2015). In the Glaserian approach to GT, it is considered essential that the researcher do not consult relevant academic literature prior to, or during, the grounded theory study. As they contend that conducting a literature review "runs the risk of clouding the researcher's ability to remain open" (Glaser & Holton, 2004, p. 46).

Strauss and Corbin (1990) on the other hand encourage the appropriate use of a wide range of literature at every stage of a GT study. They consider prior and on-going consultation with relevant literature valuable because it can be used to identify gaps, inspire questions, and guide theoretical sampling of cases. Straussian grounded theory is thereby arguably more thoroughly grounded in abduction, while the Glaserian GT bears a closer resemblance to induction.

The main point of departure between the Glaserian and the Straussian approach to GT is however the epistemological and ontological assumptions upon which they are built. The Glaserian (Glaser & Holton, 2004; Glaser & Strauss, 1967) approach has a strong positivist leaning, where the researcher is seen as an objective instrument separated from the research process, who's task it is to simply uncover a theory that explains an objective, measurable reality (Kenny & Fourie, 2015). Strauss and Corbin's (1990) post-positivistic version of GT however, recognizes the role of the researcher as a subject that inevitably influences the research process.

Critical realism is sometimes referred to as the "middle ground" between positivism and constructionism (Neuman, 2011), as it upholds the positivistic idea of an objective reality that exists "out there", independent of our conception of it. While also agreeing with the constructionist notion that we construct what we take to be reality from our subjective experiences, cultural background, past experiences, religious beliefs, and social interactions (Giddings & Grant, 2006; Neuman, 2011). This ontological understanding also influences how the role of the researcher is viewed. Where positivists uphold the ideal of an objective, unbiased researcher, the post-positivist critical realists, acknowledge that how we as researchers observe and experience the empirical reality is influenced by our beliefs, ideas, and interpretations (Bhaskar, 2008). Our observations of reality are not unmediated, objective, or "pure", rather, they are influenced by theories, beliefs, ideas, and concepts, which influence what we recognize to be relevant,

sensitize us to certain aspects of the empirical reality, and influence how we categorize reality (Neuman, 2011). This understanding of the role of the researcher, combined with the understanding of the role of theoretical sensitivity in the grounded theory process, makes the Straussian version of grounded theory more compatible with the critical realist perspective than the Glaserian version.

While only the Glaserian and the Straussian approach to GT are discussed here, there are also other strands of GT, including constructivist grounded theory (Charmaz, 2000, 2006) and feminist GT (Wuest, 1995). Each strand of GT is built on a different set of epistemological and ontological positions and which strand of GT is applied to a given study hinges largely upon the philosophical position of the researcher. As the author adheres to the post-positivist philosophical tradition of critical realism this thesis follows the Straussian approach to grounded theory.

2.1 Purpose of the three case studies

In this section, the research questions that guided each of the three case studies are presented. Since this thesis did not set out with strict pre-defined research questions, but rather let them develop gradually as the developing theory emerged, they are presented together with a short description of how the questions developed as preliminary data collection and analysis pointed to new directions worth pursuing.

Study 1

In line with the overarching aims of this thesis, Study 1 sought to explore the nature of the immersion process (its underlying structures and mechanisms) in the context of managed visitor attractions. Focusing specifically on the role of the visitors' interactions with the different elements of the experiencescape, by exploring the following research question:

> *Q1: What is the nature of the immersion process in managed visitor attractions and what role does the visitors' interactions with the different elements of the experiencescape play in this process?*

The decision to focus on the role of the visitors' interactions with the experiencescape was made based on the understanding of visitors as co-creators of their experiences through their interactions with the experiencescape and the circumstances provided by the experience provider (Campos et al., 2016; Jantzen, 2013; Larsen, 2007; Walls, Okumus, Wang, & Kwun, 2011). Previous research has also pointed to the experiencescape and the visitors' interactions with its different elements as an influential factor in the process leading to the state of immersion (Cairns, Cox, Day, Martin, & Perryman, 2013; Carù & Cova, 2007; Hansen, 2014; Hansen & Mossberg, 2013; Mossberg et al., 2014; Sanders & Cairns, 2010). Understanding the connection between the experiencescape and the immersion process can also have important practical implications for experience providers seeking to facilitate immersive experiences for their visitors. Since such an understanding might offer insights into how they can design experiencescapes that facilitate immersion. The experiencescape and visitors' interactions with it were therefore considered an appropriate starting point for an exploration of the structures, mechanisms, and events that underly the immersion process.

Study 2

Study 1 had a somewhat limited focus, honing in on the role of the visitors' interactions with the experiencescape in the immersion process. In line with the grounded theory approach, it did, however, remain open to new directions worth pursuing. One such new direction that emerged through Study 1 was that of individual responses, which findings indicated might play an influential role in the immersion process. What type of responses seemed to influence the process and which factors

influenced these responses was however not clear. Based on the findings of Study 1, two new research questions were therefore developed:

> *Q2 A: What are the individual responses that influence visitor progression through the immersion process?*
>
> *Q2 B: What are the underlying factors influencing these responses?*

Individual responses are important to the immersion process, as both the experience of immersion and the process leading up to it are considered to be subjective and individual in nature (Mainemelis, 2001). The effect of different events on the individual visitor's immersion process is therefore likely to be influenced by their subjective responses, as well as by their personal predispositions and mental frameworks. There has been a lack of research on the subjective and personal nature of experiences (Knobloch, Robertson, & Aitken, 2017) and scholars such as Carù and Cova (2006, p. 12) have argued that "it is of major importance to conduct research that is able to take into account the subjective operations that occur during the process of immersion in the consumption experience." Since individual responses were indeed found to play an influential role in the immersion process in Study 1, Study 2 sought to further expand the emergent theory by exploring the influence of individual responses and incorporating the findings into the emerging theory.

In line with the overarching aim of this thesis (exploring the underlying mechanisms and structures of the immersion process), it was also considered essential to explore the underlying factors influencing the individual responses that influence the immersion process. Previous research has shown that personal and situational factors, such as personality traits, purpose of visit, expectations, prior experience, attitudes, and mood can influence how visitors respond to their environment (Bitner, 1992; Ryan, 2010; Verhoef et al., 2009). And as Hansen and Mossberg (2013, p. 218) stated: "The consumer experience must be understood holistically and in relation to the lived life of the

consumer." It was therefore considered important not just to identify the responses that influence the immersion process, but to also understand the underlying personal and situational factors that influence these individual responses.

Study 3

Throughout Study 1 and 2, a theory, in the form of a model of the nature of the immersion process, gradually emerged. In line with the GT-logic (Strauss & Corbin, 1990), Study 3 sought to refine this emergent theory and test its contextual limits by applying it to an extreme or deviant case context (Gobo, 2004; Silverman, 2014; Strauss & Corbin, 1990). For this purpose, and to enable the exploration of the influence of contextual conditions (Aim 2), a technology-empowered virtual experience context was selected. To influence of contextual conditions was explored through the following research questions:

> *Q3 A: What are the similarities and differences between the immersion process in "real world" tourism experiences and in virtual technology-empowered experiences?*
>
> *Q3 B: To what extent is the immersion process model developed in the context of "real world" tourism experiences applicable to the immersion process in virtual technology-empowered experiences?*

By conducting the study in a technology-empowered virtual experience context, Study 3 answers the call from Hansen and Mossberg (2013) for studies looking at the facilitators of immersion from different experimental contexts within the experience economy. This includes conventional tourism experience products, but also computer games and other technology-based experiences (Sundbo & Sørensen, 2013). Technology-empowered experiences are on the rise in tourism (Burt & Louw, 2019; Errichiello, Micera, Atzeni, & Del Chiappa, 2019; Tussyadiah, Jung, & Tom Dieck, 2018; Yung & Khoo-Lattimore, 2019),

and being able to understand the immersion process in virtual visitor experiences are therefore going to be increasingly important in the future. Currently, however, the theoretical implications of increased technology integration, from the perspective of tourist experiences is underexplored (Yung & Khoo-Lattimore, 2019). Exploring the immersion process in a completely technology-empowered visitor experience context thus have the potential to generate novel insights into contextual differences between the immersion process in "real world" and virtual experiences.

As the above description implies, the three case studies on which this thesis is built are closely connected to one another. Their interrelationship is illustrated in Figure 3.

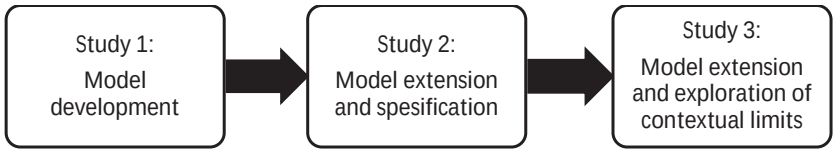

Figure 3 The interrelationship between the three case studies.

2.2 Thesis structure

This thesis consists of two parts. Part 1 begins with the introduction that presents a review of the existing research on immersion, pointing to important research gaps identified in the literature. This is followed by an introduction to the purpose and overall research design (Chapter 2) and a presentation of the core theoretical concepts on which this thesis is based (Chapter 3). This is followed by a methodology chapter where methodological considerations and the methods applied are discussed (Chapter 4). Chapter 4 is succeeded by a brief presentation of the main findings from each of the three papers (Chapter 5). This is followed by a detailed discussion of how these findings contribute to fulfill the

overarching purpose of this thesis (Chapter 6). Part 1 is rounded off with a conclusion chapter, where the theoretical, as well as practical, implications of this thesis, are discussed (Chapter 7). Part 2 consists of the full version of the three research articles on which this thesis is built, presented in chronological order.

3 Theory

In accordance with the critical realist understanding that beliefs and theories inform how we interpret the world, I will use this theory chapter to present the philosophical and theoretical concepts that have influenced my approach to the study of the immersion process and my understanding of the state of immersion as a social phenomenon. This thesis has largely been informed by three sensitizing concepts: (1) The critical realist perspective on what constitutes an experience, (2) immersion as the deepest form of involvement, and (3) the experiencescape model as a theoretical framework for studying the influence of context and experience design on the immersion process. In this chapter each of these sensitizing concepts will be discussed in detail, beginning with how experiences can be understood.

3.1 What is an experience?

In the English language, there are two different meanings attached to the word "experience", which can refer to both a verb and a noun. The Cambridge Dictionary defines the noun experience as: "(the process of getting) knowledge or skill from doing, seeing, or feeling things", while the verb experience is described as: "If you experience something, it happens to you, or you feel it" (Cambridge Dictionary, 2020). The noun and the verb are closely related and are both relevant to the study of tourism experiences. For analytical purposes, it can therefore be useful to look to the Germanic languages which use two separate words for the two meanings of the word "experience". In Norwegian and Danish for example, the term "opplevelse" ("erlebnis" in German) refers to specific situations and an immediate consciousness of it, the equivalent of the verb experience. While "erfaring" ("erfahrung" in German) refers to the noun experience, referring to tacit knowledge related to a topic or an activity (Jantzen, 2013), something one gain as a result of an accumulation of previous experiences (opplevelser) (Jantzen, 2013;

Larsen, 2007). Experience (erfaring) is something we gain when we translate what happened into knowledge. Without this translation, the experience will simply remain a lived occurrence, an “opplevelse” (Carù & Cova, 2003). This distinction is important to keep in mind throughout this discussion, as the focus will be on the verb experience (opplevelse), although we will also touch upon the noun experience (erfaring).

There are multiple theoretical as well as philosophical perspectives on what constitutes an experience and how experiences are formed or created. In this chapter, I do not seek to present a complete typology of different ontological and theoretical understandings of what constitutes an experience. Instead, the focus will be on a few central perspectives on experiences within the tourism and consumer behavior literature.

3.1.1 Experiences from the positivist, constructivist and phenomenological perspective

In the positivist perspective, which is based on an understanding of reality as that which can be observed and measured, experiences are understood as automatic or behavioral responses to stimuli. Aspects that cannot be quantified are incidental and therefore of little interest (Thompson, Locander, & Pollio, 1989). In this perspective, experiences arise mainly as a result of external stimuli and the (rational) response to this stimulus. Because humans are seen as rational, pleasure-seeking, pain-avoiding creatures, individual motivations do not influence the experience, as we are all motivated by the same rational desires (Neuman, 2011). The S-O-R model (Stimuli – Organism – Response), which has been a popular theoretical framework for studies focusing on visitors' responses to the consumption environment (Forrest, 2013), is built on this positivistic understanding of experiences. The model, which was developed by Mehrabian and Russell (1974), asserts that sensory inputs from the environment (stimuli) combine with factors related to the individuals' personality to trigger an internal, primarily emotional reaction within the individual (organism), which subsequently result in

behavioral outcomes (responses). The model presents a duality in that the individual (the organism) is seen as being separate from the environment. Indicating a separation between the external and the internal in experience formation. Where external events are considered to be objective, while internal events, those occurring inside the body, are subjective. As the subjective experience is separate from the objective environment, the context in which experience arises (the personal and social context), beyond the stimuli the environment represent, is therefore beyond the interest of positivists (Thompson et al., 1989).

This dualism, in which the individual is seen as being separate from the environment in which the experience takes place has been challenged by phenomenologists. Who instead argue that experiences emerge “in a contextual setting and, therefore, cannot be located "inside" the person as a complete subjectivity nor "outside" the person as a subject-free objectivity.” (Thompson et al., 1989, p. 136). Phenomenologists hence reject the notion that there is a separation between the external world and the internal world of the individual. They are both part of the totality of human-being-in-the-world, and context and situational factors must therefore be taken into account. Scholars such as Holbrook and Hirschman (1982) have also argued against the positivist assumption that humans are rational, cost-benefit optimizing creatures who are only concerned with maximizing pleasure and minimizing pain. Arguing instead that humans are irrational, incoherent creatures who are influenced by a number of factors such as mood, expectations, motivation, prior experiences, emotions, and unconscious desires (Bitner, 1992; Elliott, 1997; Holbrook & Hirschman, 1982; Jantzen, 2013).

The S-O-R model has also been criticized for implying a one-directional, direct relationship between environmental stimuli and emotional responses (Forrest, 2013; Liu & Jang, 2009). This understanding is

challenged by cognitive appraisal theory (as well as others), which suggests that rather than being a direct result of environmental stimuli, affective responses are elicited through individual, cognitive evaluations or appraisals of stimuli, which mediates the individual's affective responses to the stimulus they are exposed to (L. Watson & Spence, 2007).

Scholars subscribing to the constructivist school of thought have also made the argument that experiencing consists of more than just a simple response to stimulus (Jantzen, 2013). Rather than being passive organisms that simply react to stimuli, consumers are active agents that construct their own experiences, as they attach subjective, personal meaning to different objects and incidents (Carù & Cova, 2007; Creswell, 2014; Elliott, 1997). Where positivists contend that experiences occur largely as a result of external stimuli, constructivists argue that it is through the assignment of meaning that an incident or event becomes an experience (Neuman, 2011). The external stimuli we are exposed to are merely the raw material, we interpret subjectively based on our personal, social, and cultural background (Jantzen, 2013). Having an experience, therefore require some level of involvement from the individual, as they "construct" their own experience through a highly subjective interpretive process (Creswell, 2014; Larsen, 2007; Mossberg, 2007; Walls et al., 2011).

Scholars adhering to *social* constructivism furthermore stress that while meanings are constructed by the individual, these constructions are forged through interactions with others (Creswell, 2014). This view is promoted particularly by Dewey (1929) who sees experiences as more than a cognitive process inside the individual. As a process that extends across individuals in the course of temporally unfolding social transactions. Experiences are not just individual phenomena; they are socially constructed phenomena that are influenced by the social and

cultural background of the individual, as well as by the social reality in which they operate (Creswell, 2014; Neuman, 2011).

In line with the constructivist perspective, phenomenologists also consider the act of experiencing to be an interpretive process. How this interpretative process of experiencing progress has however been the topic of much debate. James (1911, 1912 referenced in Jantzen, 2013), asserted that the process consists of two consecutive steps. The first step is the immediate flow of feelings and sensations that arise from the stimulus – which he termed "pure experiences". These are experiences that are "pure" in the sense that they have not yet been tainted by our reflections and interpretations of those experiences. This interpretation only happens in retrospect, in the second phase in the experience process. The immediate, unreflected experiences we have are simply the raw material from which reflected meanings emerge during the second stage of the experiencing process; retrospective reflections. The stage where we interpret our immediate experiences based on past experiences and future prospects (Jantzen, 2013; Thompson et al., 1989). The basic tenet of the phenomenological understanding of experiences is thus the view that there is a lived immediacy of experience that comes before any reflection on it. "Everyday experiences thus consist of a realm of undifferentiated, not yet fully conscious experiencing and a realm of conscious, but no longer immediate experiences." (Jantzen, 2013, p. 148).

This view of the process of experiencing has however contested by scholars such as Krueger (1924, 1928, referenced in Jantzen, 2013), who argued that, while experiences consist of both an immediate flow of feelings, thought and sensations, and an internal interpretation of those thoughts and feelings, the process is not sequential. The interpretation happens both at the same time as those sensations arise and afterward when we in retrospect interpret what we experienced. Because experiences can never be pure, the stream of thoughts and feelings that run through our minds will always be influenced by prior memories and

experiences (Jantzen, 2013). In this sense, only newborn babies would be able to have "pure experiences" as they are the only ones without any prior memories or experiences. James and his phenomenological understanding of experiences do however make an important contribution in pointing out the tension between our immediate experiences, and the experiences we construct retrospectively based on our reflections.

Scholars such as Thrift (2007) have however criticized constructivists and phenomenologists for putting too much emphasis on the cognitive, the intentional, and the aspects of the experience that can be articulated. According to Thrift (2007, p. 7), there isn't always an intention or will behind our actions. He argues instead that "intensions or decisions are made before the conscious self is even aware of them". An argument that originates from a set of renowned experiments conducted by the neuroscientist Benjamin Libet in 1985. Where participants were asked to flip a switch and notify the researcher when they first had the conscious intention to flip it. He then compared this moment in time, with when the moment in time when the participants' brain scans first indicated that the action of flipping a switch was about to take place. The results showed that the brain consistently got ready before participants had any conscious awareness of a decision to act. Libet thus concluded that conscious thought could not be the cause of our actions and that our conscious thoughts are merely registering an action which the brain has already started carrying out (Libet, 1985). Libet's work sparked a push for understanding experiences not only through the cognitive meanings (representational) we can reflectively articulate or consciously formulate within our mind, but also through precognitive (nonrepresentational) sensations we subconsciously experience or pick up on (Hill, Canniford, & Mol, 2014; Ringmar, 2017; Spackman & Yanchar, 2014; Thrift, 2007).

3.1.2 Experiences from a critical realist perspective and how they are understood in this thesis

The above-described focus on aspects of the experience that we as experiencers ourselves do not consciously pick up on is to some extent also a part of the critical realist understanding of how experiences are formed. In the critical realist perspective, which this thesis adheres to, experiences are seen as a perceivable surface phenomenon that occurs as a consequence of events caused by underlying structures and mechanisms that lay beyond the perception of the individual (Bhaskar, 2008). This understanding is based on a worldview where there is a deeper pre-structured reality that exists independently of our perception of it. This reality has real effects on us, but our *experience* of this reality is subjective, as we construct what we take to be reality based on past experiences, social interactions, religious beliefs, socio-cultural background, and mental frameworks (Bhaskar, 2008; Giddings & Grant, 2006; Neuman, 2011). Between the empirical experience of the individual and the underlying mechanisms and structures that affect them, lays the events that are caused by underlying mechanisms and lead to the surface phenomenon experienced by individuals (through interpretation). These events and momentary states are categorically independent of experiences and sense-perception, but they are not freed from perception. Meaning that while they do occur independently of perception and *can* be unpreceptable, they can also be precepted and thus (empirically) experienced by the individual. Bhaskar (2008) does however not consider events likely to be the primary objects of people's perception, if anything, he considers processes and things to be the likely primary focus of perception, out of which events and states can be reconstructed. In other words, most of the time we do not perceive events, we perceive processes and things and based on our perception of these things and processes, we can reconstruct the events and states that have occurred. Hence critical realists make a separation between the immediate experience and the reflected experience (where events and

states can be reconstructed), similar to that of phenomenologists. The difference, however, is that critical realists do not contend that our immediate experiences are unmediated or "pure", as even these immediate experiences are experienced through an individual lens, colored by our mental frameworks, that influence how we see and experience the world. This understanding of how experiences are formed is illustrated in Figure 4.

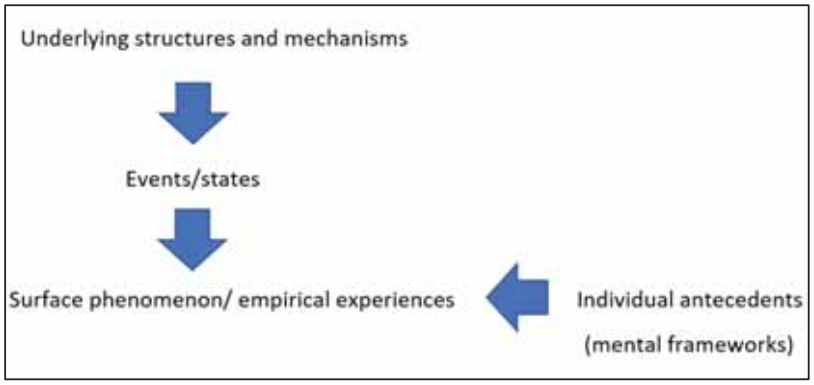

Figure 4 The formation of experiences from the perspective of critical realism

The stimuli that contribute to the formation of the subjective, individual experience is divided between the domain of the empirical and the domain of the actual. The stimuli that visitors consciously experience and observe belong to the domain of the empirical, while the stimuli they do not perceive, but subconsciously respond to, belong to the domain of the actual. The mechanisms that lead to the actualization of these stimuli belong to the domain of the real. These mechanisms are in this thesis not seen as separate from the individual, as it does not subscribe to the duality of positivism postulating that the internal is separated from the external. The individual is a part of these mechanisms, and stimuli are not something that arises only externally and separately from the individual. In this thesis, visitors are seen as active agents who co-create

their own experience, playing an active role in the creation of stimuli through engaging and interacting with their physical and social surroundings, using their personal resources, capabilities, and strategies while partaking in physical and cognitive activity (Campos, Mendes, Valle, & Scott, 2018).

The role of consumers as co-creators of their own experiences has gradually been recognized by the tourism industry together with the rise of the customer-dominant business logic, where company offerings are understood to be co-created dynamically between the company, the consumer, and other actors (Harrington et al., 2019; Oertzen, Odekerken-Schröder, Brax Saara, & Mager, 2018; Prahalad & Ramaswamy, 2004). As Campos et al. (2018, p. 23) described it: "A co-creation tourism experience is the sum of the psychological events a tourist goes through when contributing actively through physical and/or mental participation in activities and interacting with other subjects in the experience environment." (Campos et al., 2018, p. 23) Co-creation thus requires tourists to participate actively and interact with elements in their surroundings, including objects, the physical landscape, other consumers, and personnel. The focus on interactions, not just between people, but also between people landscape and inanimate objects and products, to some extent, align with the actor network theory. That argues that the role of inanimate objects and things should be seen as equal to that of human actors in terms of their influence on the formation of experiences (Alvesson & Sköldberg, 2018).

What follows from the above-described understanding of consumers as co-creators and experiences as a subjective, individually constructed phenomenon, is that experience product providers themselves cannot produce experiences for their customers. They can only facilitate experiences by creating circumstances and environments with which consumers can interact, in order to co-create their own experiences (Campos et al., 2016; Gupta & Vajic, 2000; Walls et al., 2011). Experience providers can invite visitors to engage in activities through

staged encounters, but they do not have control over the individual visitors' subjective experience (Bhaskar, 2008; Ellis et al., 2017).

Note that while it is recognized in this thesis that experiences are not produced by suppliers, experience product providers will occasionally be referred to as experience providers, to increase readability and limit overcomplicated sentences.

3.2 Experience involvement

Involvement is considered a prerequisite for co-creation (Campos et al., 2018; Oertzen et al., 2018) and has been identified as an important component in the immersion process (Brown & Cairns, 2004; Hansen & Mossberg, 2013). It has also been found to facilitate memorability (Kim, 2010; Kim et al., 2012; Wikström, 2008) and is considered to be an important part of tourism experiences in general (Andrades & Dimanche, 2014). But what is involvement?

Generally, involvement is considered to consist of two components: enduring involvement and situational involvement. Enduring involvement is relatively stable over time and can refer to involvement in an activity or product over a longer period of time (e.g. enduring involvement in the fan club of a football team). Whereas situational involvement is more dynamic and transitory and can refer to involvement in the present activity or situation (e.g. involvement in the football game currently unfolding) (Andrades & Dimanche, 2014; Havitz & Mannell, 2005; Kyle & Chick, 2004). Research on involvement has been criticized for focusing mainly on the enduring aspects of involvement and in an attempt to direct focus towards situational involvement in the co-creation of experiences Zatori et al. (2018, p. 112) introduced the concept of experience-involvement. Defined as "personal, realtime involvement in the consumption of a given experience". This concept bears some similarities with what Abuhamdeh and Csikszentmihalyi (2012, p. 258)

describe as attentional involvement, which "represents the degree to which one's attention is devoted to the activity at hand".

Involvement is an important concept in this thesis, particularly situational involvement, as immersion is understood to be the deepest form of involvement in an experience (Brown & Cairns, 2004). Informed by the definitions of both Abuhamdeh and Csikszentmihalyi (2012) and Zatori et al. (2018), involvement is in this thesis understood to be personal, real-time involvement in the consumption of an experience product and the degree to which one's attention is devoted to the experience at hand.

Prior research on the facilitators of involvement has shown that the visitors level of involvement with a situation is determined by the degree to which they perceive it to be personally relevant (Prebensen, Woo, Chen, & Uysal, 2013) and can help them achieve their personal goals (Celsi & Olson, 1988). Situational involvement has also been found to be affected by the visitors' personal resources (Prebensen et al., 2013; Tung & Ritchie, 2011). Prior research has furthermore shown that experience providers seeking to involve consumers in their experiential offerings should seek to stimulate a variety of the consumers' senses (Mossberg, 2007). Social aspects such as group atmosphere, perception of fellow visitors' company, and level of interaction within a visitor group have also been found to play a key role in the visitors' involvement in an experience (Zatori et al., 2018). While these are factors found to influence the level of involvement and not immersion per se, the close connection between involvement and immersion could indicate that these factors might also be influential to the immersion process.

3.3 The experiencescape

As described in section 3.1, this thesis adheres to an understanding of experiences which presupposes that experience providers cannot *create* experiences for their customers. They can, however, seek to *facilitate*

experiences by creating circumstances and environments with which consumers can interact, in order to co-create their own experiences (Campos et al., 2016; Prahalad & Ramaswamy, 2004; Tussyadiah, 2014; Walls et al., 2011). In the context of experience products, the environment in which experiences are created is referred to as "experiencescapes". The term was first coined by Mossberg (2007) as an extension of Bitner's (1992) previously developed "servicescape" model, which mainly focused on how ambiance and physical surroundings affected consumer and employee behavior. The experiencescape model (Figure 5), however, takes a wider, more holistic approach to the consumption environment, incorporating both physical (the physical environment, products, and objects) and social factors (personnel and other visitors) into the model (Mossberg, 2007). Each of these factors represents features experience providers can manipulate to facilitate experiences for their visitors since each of them has been found to influence the visitor's experience through the visitors' interaction with them (Arnould & Price, 1993; Mossberg, 2007; Silkapit & Fisk, 1985; Wakefield & Blodgett, 1996). Experience design through careful planning of tangible and intangible aspects of the experiencescape, including physical and social elements have therefore gained popularity among tourism providers (Ponsignon, Durrieu, & Bouzdine-Chameeva, 2017).

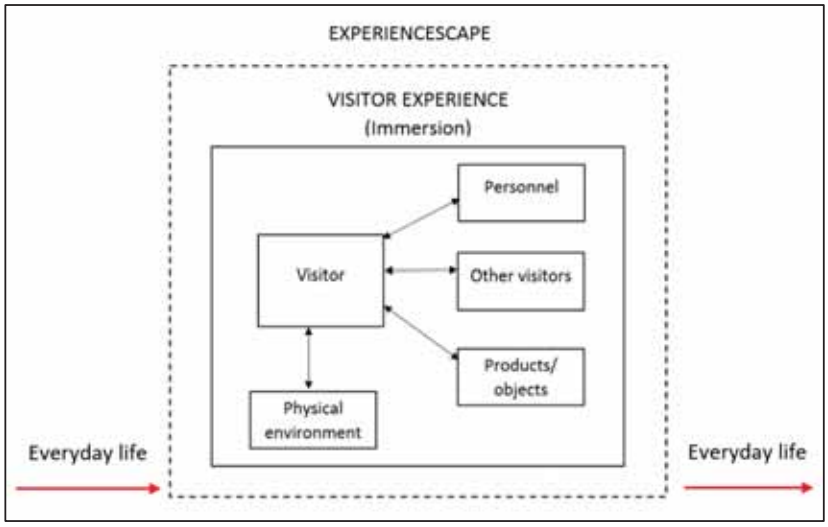

Figure 5 The experiencescape, it's components, and liminal character (adapted from Hansen and Mossberg (2013, p. 224) and Mossberg (2007, p. 65)).

The notion that experience providers can manipulate and design the experiencescape to facilitate certain experiences does not, however, imply that the experiencescape is entirely under the control of the experience provider (Campos et al., 2018). On the contrary, several of the components of the experiencescape lay beyond their control (Fossgard & Fredman, 2019). The physical environment can, for example, be influenced by contingent factors such as changing weather conditions. And while experience providers can seek to influence the visitors' interactions with the different elements of the experiencescape (facilitating, mediating, or restricting interactions) by for example maximizing opportunities for visitors to visitor interaction, or by discouraging certain types of behavior (e.g. by displaying "do not touch" signs) they can never fully control how the visitors interact with the experiencescape (Pullman & Gross, 2004; Tussyadiah, 2014). Hence, it is not just experiences that are co-created between the consumer, the producer, and other agents, but also the experiencescape in itself. Robust

experiencescape design is therefore concerned with "facilitating the frames, develop objects, plan situations and the steps in events" (Eide & Mossberg, 2013, p. 251), rather than with *creating* certain types of interactions.

The experiencescape is one of the factors that have consistently been identified as a facilitator of immersion in the literature (Carù & Cova, 2007; Hansen, 2014; Hansen & Mossberg, 2013). Carù and Cova (2007) identified three distinct characteristics of experiencescapes that can facilitate immersive experiences: they should be themed, enclaved, and be perceived by visitors as safe. Safety is important as the feeling of being safe is essential for the consumer to feel free to let themselves go, get carried away by the experience, and become immersed. Whereas worrying about one's health, belongings, etc. depletes the consumer's concentration and distracts them from becoming immersed (Carù & Cova, 2007; Hansen & Mossberg, 2013). Similarly, it is also important that the consumer feels socially secure, as fear of negative social reactions can impede their immersion process (Carù & Cova, 2006).

That the experiencescape should be perceived as being enclaved, entails that it should have a clear begging and end, and be limited in both time and space. Thus representing a clear contrast from the visitors' daily lives (Carù & Cova, 2007; Quan & Wang, 2004), a sort of liminal space where the rules, norms, and worries of everyday life are temporarily lifted (Lindberg & Østergaard, 2015), as the visitors step into a separate world of enhancement (Carù & Cova, 2007). Liminality can be described through the metaphor of a springboard. Where the visitor is springboarded out of their ordinary world and temporarily becomes a part of an extraordinary liminal world before they again "fall down" into the real world (Jafari, 1987). Such liminal, enclaved contexts can enhance the intensity of the experience (Firat & Dholakia, 1998) and encourage consumers to leave their self-awareness behind, let themselves go, and become completely immersed in the experience (Carù & Cova, 2007). Being in an enclaved space also enhances the

visitors' perception of safety, even when they find themselves in new and unfamiliar surroundings (Hansen & Mossberg, 2013).

Theming can also be used as a tool in the facilitation of visitor immersion. Theming adds meaning to the experience (Edensor, 2000), which stimulates emotional involvement (Mossberg et al., 2014), which has previously been found to be a key factor in the immersion process (Brown & Cairns, 2004; Jennett et al., 2008). The theme, in combination with rites of passage, can also be used to enhance the visitors feeling of being in a liminal space that is distinctly different from their everyday life, as it can function as a symbolic packaging of the experience context (Arnould & Price, 1993; Carù & Cova, 2007; Hansen & Mossberg, 2013). Finally, experiencescapes that offer opportunities for active participation have also been found to have a positive influence on immersion in previous studies (Hansen & Mossberg, 2013).

In Chapter 4, I will get back to how the experiencescape model and these previously identified facilitators of immersion played a role as sensitizing concepts influencing the data collection procedures applied in this thesis. First, however, we shall have a look at the substantive context this thesis is focused on; managed visitor attractions.

3.4 Managed visitor attractions

Visitor attractions are one of the core pillars of the tourism industry and are key motivating factors when tourists choose what destination they want to visit (Flognfeldt, 2005; Gunn, 1988; Leask, 2010; Navarro-Ruiz & McKercher, 2020). As Hu and Wall (2005, p. 617) put it, "tourist attractions are an essential ingredient for successful tourism destination development". Despite its vital importance in the tourism industry, there is no universally accepted definition of managed visitor attractions. Definitions do, however, generally include criteria related to the attractions' ability to attract visitors and to their ability to serve recreational needs (Leask, Fyall, & Garrod, 2013). Hu and Wall's (2005,

p. 619) rather broad definition is an example of a definition largely built on the attraction's ability to attract visitors: "a permanent resource, either natural or human-made, which is developed and managed for the primary purpose of attracting visitors". While the frequently cited (see for example Swarbrooke (2002) and Leask (2010)) definition proposed by the English Tourism Council (2000, p. 11), is based on both the criteria of attracting visitors and serving recreational needs: "A permanently established excursion destination, a primary purpose of which is to allow public access for entertainment, interest or education. Open to the public for published periods each year and should be capable of attracting tourists or day visitors as well as local residents". Other definitions of managed visitor attractions are based on the attraction having a feature or presenting a theme or phenomenon that is the focus of visitor and management attention (Leask et al., 2013). This can be exemplified through Jensen's (2015) definition of a managed visitor attractions as: «a phenomenon and/or theme in a presented form, with the purpose of creating specific types of experiences for visitors. It will also offer supplementary services and service systems that support and expands the total visitor experience." (Translated from Jensen (2015, p. 274)). A phenomenon is here understood as a phenomenon in nature or society that is perceived as real and that will therefore to a certain degree be bound to time and place (e.g. a Viking ship). A theme, however, is more abstract, representing a more overarching categorization of different types of phenomenon and is therefore not bound to time and place in the same way (e.g. the Viking Age).

While the definitions presented above offer varying degrees of specificity, they can all be said to be rather broad, encapsulating a wide variety of attractions. This could be a reflection of the diversity of attractions that exists within the tourism industry. According to Leask et al. (2013, p. 241) "Attractions are diverse in terms of their products, facilities, purposes, philosophies and missions, which may range from focusing on conservation to providing an entertainment experience", and

can include a variety of sites ranging from theme parks, museums and galleries to monuments, aquariums, visitor centers, and natural sights. Visitor attractions can also exist in the virtual world, where visitors can "travel" from the real world into the virtual world to experience virtual attractions such as Jurassic Park or Pandora from the Avatar universe. These "visits" are aided by technology that enables visitors to feel as though they are actually present in the virtual attraction (Cairns et al., 2014; Sanchez-Vives & Slater, 2005; Slater, Usoh, & Steed, 1994).

The discussion above shows that there is a broad diversity of sites that can be classified as managed visitor attractions, but what they have in common is that they are managed with a clear intention of facilitating certain types of experiences for their visitors. It this "managed" aspect that makes MVAs an interesting context for this thesis, as they represent a contextualization of an experiencescape that is intentionally managed for the purpose of facilitating certain types of experiences for visitors. Where there is an intent behind the (experience provider provided) experiential stimuli the visitors are exposed to, and where the experience provider has some level of control over the experiencescape in which the experiences take place (although they can never fully control it) (Pullman & Gross, 2004; Tussyadiah, 2014). Previous research has also shown that there is a correspondence between the kinds of stimuli presented in an attraction and the affective responses of the visitors (Vittersø, Vorkinn, Vistad, & Vaagland, 2000). It has also been argued that attraction activities, events, and environments can be intentionally designed to facilitate particular on-site visitor experiences by applying different types of management and design techniques (Jensen, Li, & Uysal, 2017; Packer & Ballantyne, 2016).

The choice of limiting the focus to the substantive context of experience products offered within MVAs set some limitations for the processes that could be studied in this thesis, but also offered opportunities to explore how experience providers can design activities and experiencescapes to facilitate immersion. Thus, enhancing the potential for generating

findings that have practical implications for experience providers seeking to facilitate immersive experiences for their visitors.

3.4.1 Technology integration in MVAs

Managed visitor attractions can be classified based on different parameters, such as ownership structure (e.g. public versus private), the resources upon which it is built (e.g. natural vs. man-made), and the theme it is built around (e.g. historic vs. fictional) (Leask et al., 2013). Attractions can also be classified according to degree of technology integration, which in this thesis is a particularly relevant classification, as previous research has indicated that the immersion process in technology-empowered experiences differs significantly from the immersion process in conventional tourism experiences (Brown & Cairns, 2004; Hansen & Mossberg, 2013). Neuhofer, Buhalis, and Ladkin (2014) offer one such classification through their "technology adaption hierarchy" consisting of four levels: (1) conventional tourism experiences, (2) technology-assisted experiences, (3) technology-enhanced experiences, and (4) technology-empowered experiences. At the lowest level of technology integration, we find conventional tourism experiences, where the adoption and integration of technology are non-existent or very limited. At the second level, we find the experience products that integrate technology to a somewhat larger extent but where technology mainly plays a facilitating role, assisting the consumer in accessing the experience through websites and booking systems. At the third level, we find experience products that integrate technology into the experience itself, enabling visitors to interact with the technology and using technology to enhance the visitors' experience. Finally, at the highest level of technology integration (level 4), we find the experience products that are 100% dependent on the existence of a given technology for the experience to happen (e.g. travel to virtual attractions such as Jurassic Park through VR technology). Without the given technology, these types of experience products cannot exist, and they are therefore

labeled technology-empowered experiences. This latter type of experience products are on the rise in tourism (Burt & Louw, 2019; Errichiello et al., 2019; Tussyadiah et al., 2018; Yung & Khoo-Lattimore, 2019), and understanding the differences and similarities between conventional tourism experiences and technology-empowered tourism experiences is therefore becoming be increasingly more important (Yung & Khoo-Lattimore, 2019).

4 Methodology

As described in Chapter 2, this thesis is built on a multiple case-study design paired with a grounded theory based approach (Strauss & Corbin, 1990). Case studies can be classified as either holistic or embedded. Holistic case studies focus on the case as a whole, while embedded case studies focus on certain aspects or sub-units of a case (Rowley, 2002). Each of the case studies included in this thesis was designed as embedded case studies, focusing on only one experience product (Study 1 and 2) or one experience product type (Study 3) offered within each of the selected case attractions. According to Strauss and Corbin (1990), one of the key criteria of a good grounded theory is control, and the embedded case design was chosen to ensure such control by limiting the contextual differences within each case context and facilitating controlled within-case comparisons.

Since this thesis adheres to the Straussian version of grounded theory, which encourages the use of existing literature, a broad range of literature was consulted at various stages of the research process. Particularly in the early stages of the research, where existing literature was used to identify gaps in our collective understanding of immersion and the immersion process. This provided initial direction for the first of the three case studies included in this thesis. Following the logic of grounded theory, this thesis set out with two broad research aims that gradually developed into more specific research questions as the emergent theory evolved. So, while it was the literature that provided initial direction for Study 1, it was the findings from the preceding case study/studies that provided direction for Study 2 and 3. The literature was also consulted during the development of the case selection criteria (described in section 4.1) which laid the basis for the purposive sampling strategy (Creswell, 2014) employed in this thesis. Lastly, the literature was consulted during the final stages of the analysis of each case study, as findings were compared with the existing literature to identify potential parallels and

to harvest the explanatory power of prior research. It is however important to highlight that while literature was consulted at different stages of the research process, the emergent theory that was consistently developed throughout this thesis was informed by what can be referred to as within-study abduction. That is, by data collected for the purpose of this thesis, rather than by existing theories and constructs found in the literature (Strauss & Corbin, 1990). This grounded, data-driven theory development strategy is one of the core characteristics of the grounded theory (Kenny & Fourie, 2015) and was fundamental to theory development in this thesis.

This methodology chapter is divided into four sections. In the first section, the case-selection criteria are presented together with a presentation of each of the selected cases. This is followed by a presentation of the employed data collection methods and analytical procedures before the chapter is rounded off with a discussion on measures of quality.

4.1 Case selection

The cases selected for this thesis were chosen through a theoretical sampling strategy (Creswell, 2014) based on two sets of selection criteria. A general set of criteria applied to all three studies and a set of study-specific criteria developed to enable the identification of the cases most suited to answer the research questions posed in each sub-study. To enable the study of the process leading to the state of immersion, it was essential to identify case contexts that had the potential to facilitate immersive experiences. Based on previous research on the facilitators of immersion, it was therefore determined that all the selected cases should offer experiencescapes that were themed, enclaved, and perceived as safe by their visitors (Carù & Cova, 2007). The cases selected should also offer visitors opportunities for active participation, in line with the assumption that active experiences facilitate immersion to a greater extent than passive experiences (Hansen & Mossberg, 2013). It was also

decided that the selected experience products should be offered in the context of managed visitor attractions (MVAs), because it is a context that is of high importance to the tourism sector (Flognfeldt, 2005; Gunn, 1988; Leask, 2010; Navarro-Ruiz & McKercher, 2020) and that enables the study of the immersion process in a context that is managed for the purpose of facilitating certain types of experiences. They provide what Duerden, Ward, and Freeman (2015, p. 160) refer to as structured experiences; "experiences in which an individual or organization intentionally designs an encounter with the hopes of producing desired outcomes". Managed visitor attractions furthermore offered a more stable experience context than that of a purely natural, unmanaged visitor attraction, which are typically more prone to contingencies (Cohen, 1995; Fossgard & Fredman, 2019). The stability offered by MVAs was considered important, as it could facilitate within-case comparisons.

In this thesis, managed visitor attractions are understood as "a phenomenon and/or theme in a presented form with the purpose of creating specific types of experiences for visitors. That also offer supplementary services and service systems that supports and expands the total visitor experience." (Translated from Jensen (2015, p. 274)). With the added criterion that the attraction "should be capable of attracting tourists or day visitors as well as local residents" (English Tourism Council, 2000, p. 11). The choice of conducting all three case studies in managed visitor attractions brought with it certain advantages in terms within- and across case comparisons, as well as in terms of practical implications. It did however also set some limitations for the processes, mechanisms, and structures that could be explored through this thesis. It could for example be hypothesized that in experience contexts that are not managed by a commercial experience provider, one might see different mechanisms and events being actualized. Such potential differences could however not be explored in this thesis given the relative uniformity of the selected case context. The findings of this thesis are hence bound to the substantive context of MVAs as the

findings might not be transferable to the immersion process in other experience contexts. The specific characteristics of the type of MVAs the findings might be transferred to are presented in more detail in section 4.1.4.

4.1.1 Case Study 1: Sailing at the Roskilde Viking Ship Museum

The first case chosen for this thesis was a sailing experience product offered at The Roskilde Viking Ship Museum in Denmark. Research on visitor experiences in museums have shown that museums can be a source of different types of experiences, including learning experiences, social experiences, aesthetic experiences, restorative experiences, transcendent experiences and awe (Packer & Ballantyne, 2016). The sailing experience product chosen for this study involves visitors sailing out from the Roskilde Viking Ship Museum and out into the Roskilde fjord in a replica of an old Norse ship together with 8–16 fellow visitors and two crewmembers. The group composition varies from trip to trip and can consist of both pre-formed groups visiting the attraction together (e.g. company groups visiting the attraction as a part of a company outing) and mixed groups formed randomly on sight (consisting mainly of a combination of several small groups of travel companions). Before embarking onto the ship, participants are gathered in a small shed, where the captain introduces themselves and their crewmate and provides basic information about the reconstructed ship, wind & weather conditions, or the route they intend to sail. Visitors are then provided with safety instructions and fitted with life vests before they proceed down to the boat. Once at the boat, they are thought basic commands and shown how to handle the oars. The experience products require visitors to participate actively, as they partake in the rowing, steering, and sailing of the boat. To successfully sail the boat, visitors must work together (passing around oars, coordinate rowing, hoist the sail together, etc.) which requires communication (non-verbal or verbal) between the visitors as well as

between the visitors and the crew. Teamwork, interactivity, and mastery are central to the experience. The sailing trip thus represents an active, interactive, and social experience product, that involves interactions between visitors and different components of the experiencescape, including physical objects (ropes, oars, sail, etc.) the landscape (water, wind, landmarks, etc.), other visitors, and employees (crewmembers). This was important for Study 1, as it set out with the intention of exploring the role of the visitors' interactions with different elements of the experiencescape (Mossberg, 2007) in the immersion process.

The sailing trip had a duration of approximately 50 minutes and the experience product can be described as loosely scripted, dynamic, and flexible, as crew members are free to adapt the content of the experience product based on weather conditions and other contingent factors (such as the presence of wildlife), the interest of the visitors (i.e. expressed through questions asked) and the performance and skills of the visitors. The visitors thus have some influence on the content of the experience product (both directly and indirectly), but it is still classified as a provider/employee lead, structured experience as it is the crew members that ultimately control the direction of the experience product.

The sailing trip experience product is offered within the context of a popular tourist attraction, The Roskilde Viking Ship Museum, which is visited by both tourists and local residents alike (Bærenholdt & Haldrup, 2006). The Roskilde Viking Ship Museum has a clear historically based theme (traditional boatbuilding and Viking ships) that is visible and present throughout the attraction. The sailing trip experience product is thereby offered in a distinctly themed experience context that is clearly limited in time and space. And while being out on a boat might be perceived as unsafe by some visitors, the museum tries to mitigate this by providing safety instructions and equipment, and by emphasizing the skills and expertise of the crewmembers. A small pre-study of the attraction also indicated that visitors who participated in the activity tended to perceive the experience product as safe. The selected case thus

represents a social, interactive, loosely scripted, employee steered, structured experience product based on the active participation of the visitors. Finally, the experience product can be classified as a conventional tourism experience product according to Neuhofer et al. (2014) information & communication technology adaption hierarchy, as no such technology was incorporated into the experience product.

4.1.2 Case Study 2: Completing "The Heist" at Escape Reality Trondheim

The second case selected for this thesis was the escape room experience product "The Heist" offered at the managed visitor attraction Escape Reality Trondheim. An escape room is an experience product where a small group of visitors are locked inside a room and have to find a way to "escape" the room by solving a number of puzzles with the help of clues and hints hidden inside the room (Dilek & Dilek, 2018). One of the characteristics of an escape room it therefore that a visitor can only experience an individual escape room once since they upon a second visit would already know how to solve the room. Over the last few years escape rooms have become popular tourist attractions (Pakhalov & Rozhkova, 2020) and previous research has shown that they provide visitors with peak experiences through fun, social, and challenging activities (Kolar, 2017).

Escape Reality Trondheim was visited by both local residents, day-trippers, and tourists, and offered two different escape rooms. "The Heist", which was the particular escape room chosen as the case, was designed to look like the study of a rich aristocrat. Here, the visitors were tasked with locating and "stealing" a large diamond before getting out of the room within a 60-minute timeframe. The visitors were thus cast in the role of thieves and the experience product was centered around the theme of a fictional diamond heist. This theme is conveyed to the visitors through an introduction video which is shown to them once they had entered the escape room. Prior to entering the room, visitors were only

given a brief introduction to the theme by an employee ("the game master"), who gives a short introduction largely focused on practical instructions related to safety and how to handle some of the objects inside the room. During the 60 minutes inside the escape room, participants can contact the game master through a phone and ask for a limited number of hints. If they chose not to use these hints there is no contact between the visitors and the employee until the participants exit the room, upon which the game master does a short "debriefing" with the visitors. Where they discuss the puzzles and the problems they had with solving them. Interactions between visitors and employees are in this experience context thus rather restricted, which stands in contrast to case study 1, where visitors were given ample opportunities to interact with the employees.

The puzzles the visitors needed to solve inside the room required a combination of teamwork and individual effort, as tasks ranged from sudoku, logical puzzles, and text interpretation, to coordination challenges, map reading, and search & find. "The Heist" is hence a highly interactive experience product, but unlike in the previous case, interactions mainly occurred between visitors, between visitors and the physical elements of the experiencescape, and only to a limited extent between visitors and employees. The experience is largely lead by the visitors themselves (as opposed to the employee lead sailing trip), several tasks can be conducted simultaneously, and the employees generally do not provide any direct instruction as to how the visitors should go about solving the room. However, while the experience product might on the surface appear to be rather loosely scripted, there is a clear script underlying the experience, as certain tasks must be completed before the visitors can move on to other tasks. This script is not, however, apparent to the visitors from the beginning. Because, unlike in the sailing trip, the script is not controlled by employees and their instructions, it is built into the physical experiencescape in itself. In part, identifying this script is a part of the challenge.

Escape Reality Trondheim was chosen as a case as it fulfilled the general criteria applied to all three case studies; providing ample opportunities for active visitor participation in a themed, enclaved experiencescape perceived to be safe by the visitors. Measures such as demonstration of the safety features of the room were taken to enhance the visitors' feeling of safety and pre-data collection interviews with employees indicated that the majority of visitors perceived it as safe. "The Heist" was furthermore chosen as it offered contrasting conditions to the case used in Study 1 in terms of technology integration. Where case 1 represented a conventional tourism experience, "The Heist" represents a technology-enhanced experience product (Neuhofer et al., 2014), as it employed communication technology such as audio (e.g. hidden speakers playing the sound of police sirens, dogs barking, etc.) and video (e.g. screens disguised as windows showing videos of guards approaching from outside) to enhance the experience. These differences in technology integration offered the opportunity to explore whether such differences had an influence on the underlying mechanisms and events triggered during the consumption of the experience product.

Like in the sailing trip experience product, teamwork, cooperation, and mastery were central to the escape room experience context. However, the escape room also included a strong element of competition, which was not a central focus in the sailing experience. The two cases also differ in terms of the theme, which in the escape room context was fiction-based and uncoupled from the location rather than historical and location-based, as was the case for the Roskilde Viking Ship Museum. Lastly, "The Heist" differed from the Viking ship sailing experience in terms of within-group familiarity, as the groups in The Heist were exclusively formed by the visitors themselves prior to the visit, whereas in the sailing experience, the groups were largely organizer-formed in situ.

Combined, the contrasting conditions in terms of technology integration, theme, group familiarity, activity script, and employee contact offered

by case 1 and 2 contributed to facilitate the exploration of potential contextual differences in the immersion process across different experience contexts.

The escape room, "The Heist", was furthermore chosen because the purpose of Study 2 was to explore the influence of individual responses on the immersion process and to explore the underlying factors that influence these responses. The escape room context facilitated comparisons between visitors, both within the same group and across different groups, as the experiencescape is relatively stable and unchanging. As both the physical landscape and the objects within it are consistently placed the same way before each group's visit, the employees follow a pre-prepared script and there is no contact with other visitors outside of the group. Making the group itself and its different members the only contingent factor. Being able to interview several informants who had consumed the experience product as a part of the same group, further increased the suitability of the context for the purpose of Study 2, as it made individual differences between visitors stand out more clearly.

4.1.3 Case Study 3: Virtual gaming at House of Nerds

Prior research has shown that virtual games can provide emotionally rewarding, thought-provoking experiences (Bopp, Mekler, & Opwis, 2016) and the final case included in this thesis was virtual gaming experiences offered at House of Nerds (HoN) - a commercial gaming center located in Oslo, Norway. HoN and the virtual gaming experiences they offer was chosen as a case based on the purpose of this study, which was to explore similarities and differences between the immersion process in "real world" tourism experiences and in virtual technology-empowered experiences. HoN can be classified as a MVA according to Jensen's (2015) definition, as it represents a theme (gaming) in a presented form, managed for the purpose of creating specific types of experiences, and offering supplementary services, including a kiosk with

food and snacks, a bar, and a lounge area. Preliminary, informal interviews with employees also revealed that HoN attracted a combination of both local residents, day-trippers, and tourists.

The center consisted of four gaming zones: 1) The main gaming room – a glass room equipped with 24 computer stations (including headphones). Five of the stations are facing the glass wall looking out into the center's lounge area, five are facing the outside and 14 are facing each other in two rows in the middle of the room. 2) The "nostalgia" room - a themed gaming environment equipped with 12 old-fashioned TVs connected to GameCubes. Each TV has space for four players in front of it. 3) The VIP-room - fitted with a small lounge area and 10 computer stations facing each other in two rows of five. And lastly, 4) the lounge area – containing the reception, a bar, supporting services, couches, tables, chairs, and TV screens continually showing live streams of gamers from Twitch and YouTube. This area is also equipped with board games and two old Nintendo SNES gaming consoles that are free to be used by the visitors. HoN has a clear theme (gaming) that is present throughout the attraction, enhanced by elements such as life-sized fiberglass statues of game characters, gaming posters, screens showing live gaming streams, and a "nostalgia" room equipped with old gaming consoles and box TVs.

Unlike the two previous cases where a single experience product offered within the managed visitor attraction was chosen as a case, Study 3 focused on one experience *type* offered at House of Nerds. The chosen experience type was virtual gaming experiences, which HoN offered through a variety of games (including Gradius, Starcraft 2, Super Smash Bros Melee, Super Smash Bros 64, Apex Legends, and Minecraft) and gaming consoles (PC, GameCube, Nintendo SNES, Xbox, etc.). The choice of using an experience type rather than one specific game product or gaming-technology (i.e. only PC games), was made based on the assumption that including a variety of games could provide access to a broader range of virtual gaming experiences, which could potentially

bring out different mechanisms and events relevant to the immersion process.

Since House of Nerds offered a variety of consoles and game types, fulfilled the criteria of a managed visitor attraction, offered a themed experiencescape that was evaluated to be likely to be perceived as safe, and that was clearly limited in time and space, it was considered an appropriate choice for Study 3.

The virtual gaming experiences offered at HoN are visitor lead as the visitors are free to decide which console they want to play on, what game(s) to play, and for how long. They are also free to switch games and consoles during their visit, as they pay for the amount of time they spend at the attraction (typically 2-4 hours), rather than for the type of games they play. In terms of activity script, however, there are varying levels of scriptedness embedded into the different games. With games such as Minecraft, representing one extreme end of the scale. Being almost entirely unscripted, as players are free to roam around in the game's virtual world, free to decide for themselves what they want to do there. Whereas games such as Gradius can be placed on the opposite end of the scale, as it is a game based on a scripted sequence of steps the visitors must take to succeed and progress deeper into the game. As the individual visitors' progression in the game is dependent on their ability to execute these steps, even Gradius cannot be said to be fully scripted as that would entail that the visitors progressed regardless of their performance. This points to mastery as an important component in these virtual gaming experience, not just related to mastering the challenges put forward by the game, but also in terms of mastering the controllers that enable the visitor to interact with the virtual experiencescape they visit through the game.

While mastery was a central component also in this experience context, it did offer contrasting conditions to the two previous case studies, mainly in terms of experiencescape and technology integration. The

main difference from the two previous case contexts was that in the present case context, visitors had to relate to two completely different experiencescapes; the one they are physically present in, and the virtual, in which they might be mentally present. Accessing this second experiencescape requires visitors to virtually "travel" to it through communication technology intermediaries such as screens, various forms of controllers (keyboards, computer mouse, console controllers), and headphones (which were not always used). These experience products are thus 100% dependent on the presence of technology for the experience to happen and can be classified as technology-empowered experiences according to Neuhofer et al.'s (2014) classification hierarchy. The visitors' "travel" into these virtual experiencescapes is sometimes partial and because the visitors' attention alternates between the virtual and the "real world" experiencescape, the players often have to relate to different experiencescapes almost simultaneously. Study 3 can thus be described as a deviant case context compared to the two previous cases, where the visitors only had to relate to the "offline", "real world" experiencescape in which the experience took place.

For the purpose of Study 3, it was important that the virtual gaming experiences were offered in the context of a managed visitor attraction. Not just because it enables cross-case comparisons with the two previous cases, but also because it meant that the experience took place in an experiencescape that was managed for the purpose of facilitating certain types of experiences for the visitors. It was also important because it meant that the experience took place in an experiencescape that also included other social actors (both employees and other visitors), which enabled exploration of the influence of social surroundings. Prior research has shown that the opportunity to socialize and experience a feeling of togetherness is one of the main motivations for visiting gaming centers (Frostling-Henningsson, 2009).

In addition to experiencescape and technology integration, the case context used in Study 3 also offered variation in terms of opportunities

for social interactions. Here, visitors could partake in experiences together with, not just the other visitors that were physically present at the attraction (including travel companions and other visitors), but also with virtual visitors. Visitors who visit and become a part of the same virtual experiencescape as the visitor, but who are not physically present at the attraction. This adds another dimension to the experiencescape in terms of depth and opens opportunities for uncovering mechanisms and events that had not been activated in the two previous case contexts.

While case study 3 offered variety in terms of experiencescape, technology integration, and opportunities for social interaction, it did share several characteristics with the previous two case studies. Just like in Study 1 and 2, the virtual gaming experiences were offered in the context of an MVA, required active participation from the visitors, and were highly interactive in nature. The virtual gaming experiences could also be described as a small group experience as most of the informants (although not all) were playing together with, or against, other people. Some similarities were only shared with study 2, including the strong competitional focus, which was much less dominant in Study 1. Another similarity between the virtual gaming context and the escape room context was the relatively low level of interaction between employees and the visitors, as these interactions were at HoN largely confined to arrival and departure, or when the visitors requested assistance. Lastly, the virtual experience products offered at House of Nerds were fictionally based and uncoupled from the location of the attraction, just like the escape room in Study 2.

4.1.4 The substantive context of this thesis

Combined, the three cases described above represent the substantive context from which the findings of this thesis are derived. All three cases represented interactive experience products that required active participation from the visitors. They were structured experiences of relatively short duration (50 minutes to 2 hours), based on varying

degrees of technology integration. They were all offered within experience contexts managed for the purpose of facilitating certain types of experiences (managed visitor attractions). In experiencescapes that were themed, safe, and enclaved and where there were both employees and other visitors present. All of the three selected MVAs attracted both local visitors, day-trippers, and tourists.

The findings generated through this thesis are bound to this substantive context, as the employed inclusion criteria also involved excluding certain types of experience contexts (such as non-commercial, unscripted experience contexts, multiple-day experience products, experiences that are experienced alone, etc.) that might have generated insight into other aspects of the immersion process, or into mechanisms that were not actualized in the examined substantive context, but that might be actualized in other experience contexts. These limitations are important to keep in mind when discussing the implications and transferability of the findings generated through this thesis.

4.2 Data collection

This thesis is based on the post-positivistic tradition of critical realism, which influenced the research questions that were asked, the underlying understanding of how experiences are formed, and what constitutes an experience. This understanding consequently influenced how the immersion process was studied and the data collection procedures that were employed.

According to Yin (1989), six different data sources can be used when conducting case studies: interviews, direct observations, participant observations, artifacts, archival records, and secondary documents. Which data sources one should use depends on the research questions that are being posed and the phenomenon under study, but to increase the credibility of the study, method triangulation is encouraged (Stake, 2005). For the method triangulation to be effective the methods must

complement and fulfill each other, the weaknesses of one method compensated by the strengths of the other (Johnson, 1997).

Data for this thesis was collected through a combination of in-depth retrospective interviews and observations. These two methods were chosen as they complemented each other. The former, generated insight into the informants' subjective empirical experience, and their thoughts and reflections on this experience (their reflected experience). While the latter provided insight into events that the visitors themselves may or may not have perceived, but that can be captured by a trained observer (Bhaskar, 2008). By combining retrospective interviews with observations, I sought to capture both the visitors' subjective experiences of immersion and the immersion process and the events that caused these experiences.

Ideally, the visitors' experiences would have been captured both in real-time and retrospectively, as this would enable the study of both their immediate experience and their reflected experience. Other approaches such as physiological observations (e.g. EEG, skin conductivity, eye-tracking, etc.) and real-time self-reports was therefore considered. Real-time self-reports do however also involve a certain degree of reflection, as it requires the informants to reflect upon what they report, albeit with less time for reflection and closer in time to their immediate experience. This approach was however considered to be too invasive, as it was considered likely to distract informants from the experience product and interfere with their immersion process. Physiological observations do not require any reflections on the part of the informants but have failed to provide consistent results in terms of their ability to accurately capture the psychological states experienced by the informants (Jennett et al., 2008) and were therefore not considered suitable for this study. Due to the limitations of these alternative approaches and its strength in terms of capturing the reflected experience of the visitors, it was decided that the subjective experience of the visitors would be recorded through the use of retrospective interviews, despite the limitations of the method in

terms of its ability to capture the immediate experience of the visitors. To mitigate the effects of this limitation, the interviews were however conducted directly after the visitors had consumed the experience product, in an attempt to increase the potential for capturing both their reflective experience and *some* of their more immediate perception of the experience.

The interviews were conducted as semi-structured interviews, as this enabled the interviewer to remain open to new and emergent themes and topics of interest that could emerge during the interviews. The interviews were supported by "experience line charts", which are charts drawn by each of the informants, illustrating how involved they felt during the course of the experience (see Figure 8). This tool has previously been applied successfully to the study of immersion in nature-based tourism experiences (Hansen, 2014) and was used to identify changes in the informants' experienced level of involvement. Following the understanding of increasing level of involvement as an indication of progression through the immersion process, and decreasing involvement as an indication of regression, the experience line charts were used to guide the interviews towards the states and events that might be causing these changes. The charts were also used to identify peak moments of involvement, in line with the understanding of immersion as the deepest form of involvement (Brown & Cairns, 2004). For each interview, background information on the informants was collected through a short one-page questionnaire, which was distributed at the end of the interview. This contained questions about the informants' age, prior experience with the activity, motivation for participation in the activity, and prior interests related to the activity.

Observations were used in combination with the retrospective interviews to gain insight into events that were influential to the visitors' immersion process. The advantage of using observations for this purpose is that the observer has the potential to capture events that the informants may not perceive. However, there might also be events that are relevant to the

immersion process that lay beyond the conscious perception of both the observer and the informant (e.g. physiological or psychological events and processes arising inside the minds and bodies of the visitors). Such events would not be captured by the chosen methods, and a broader range of events might have been identified if the observations had been supplemented with methods such as the previously mentioned physiological measures (which could have been used to capture physiological events) or through the use of affective responses scales (such as the PANAS scale (D. Watson, Clark, & Tellegen, 1988)), which could have assisted in capturing emotional events.

Observations and semi-structured, post-experience interviews supported by experience line charts were used in all three case studies, but due to contextual differences, the interviews and the accompanying observations were conducted in a slightly different manner across the three studies. In all three studies, however, informants were initially sampled based on an open sampling strategy, where informants were selected randomly (Strauss & Corbin, 1990). This gradually evolved into a more targeted, theoretical sampling approach as data pointed to new directions worth pursuing (Gibson & Hartman, 2014; Strauss & Corbin, 1990). The data collection ceased when theoretical saturation was reached for each of the identified categories (Strauss & Corbin, 1990) and when the interviews no longer yielded any new theoretical insights (Gibson & Hartman, 2014). A summary of the sample and the methods used in each case study is presented in Table 3 and in more detail in the subsequent sections. More information about the informants and their group context is provided in Appendix 1.

4.2.1 Data collection Study 1

Study 1 utilized a combination of participatory observations and semi-structured interviews. Interviews with employees prior to the data collection and two test observations indicated that each sailing trip was unique in some way, partially due to rapidly changing weather

conditions. Participatory observations were therefore considered to be the most suitable approach. The observations were conducted without the researcher disclosing their role as a researcher until after the experience had ended to avoid influencing the behavior of the participants. The observations provided insight into incidents and events that occurred during the sailing trip, including interactions between the participants, and between the participants and other elements of the experiencescape. This was valuable, as the purpose of Study 1 was to explore the role of the visitors' interactions with the different elements of the experiencescape in the immersion process. The informants that were sampled for this study represented variation in terms of age, gender, nationality, purpose of visit, and visitation context.

4.2.2 Data collection Study 2

Study 2 employed a combination of direct observation and semi-structured group interviews. Direct observations were chosen due to the nature of the case context which made non-intrusive participatory observation unfeasible. Instead, observations were conducted through pre-installed audio and video fixtures inside the escape room, which enabled the researcher to observe the group in a non-intrusive manner. Before the observations began, each group was informed about the observations and gave verbal consent to being observed. These observations generated insights into group dynamics, interactions between the visitors and the experiencescape, and the incidents that occurred during the visit. It also gave insight into the visitors' outward responses to these interactions, and to their responses to accomplishments and challenges (sought after in body language, facial expressions, and verbal cues). Although the focus of Study 2 was on individual responses and the individual visitors' experience, the interviews were conducted as group interviews. This choice was made to facilitate within-group analysis and to enable individual differences between group members to stand out more clearly. This approach did,

however, have a weakness in that it opened for inter-informant influence, a bias where the presence of other informants can influence the answers of the individual informants (Pösö, Honkatukia, & Nyqvist, 2008). The researcher sought to reduce the effects of this bias by having the informants draw their experience line charts individually before opening for a shared group discussion. The interviews were also triangulated with observational data, which was used to validate the statements of the informants to a certain degree. However, the possibility that the informants' answers were to some extent influenced by the presence of other group members cannot be fully excluded. All the informants included in this case study were Norwegian nationals but represented variation in terms of age, gender, tourist status, purpose of visit, and group composition.

4.2.3 Data collection Study 3

Data for Study 3 was collected through semi-structured, in-depth interviews with informants participating in virtual gameplay while visiting House of Nerds. The informants were interviewed either alone or, when possible, together with their gaming companion(s). This was done to bring out individual differences as described under Study 2, but was not always possible, as some of the visitors were playing with online companions, while others were interviewed in a tournament context, where their gaming companions were not available for interviews. There were no direct observations conducted for this study due to the nature of the experience product, which hindered non-intrusive observations. The researcher, therefore, conducted observations of the general environment in which the virtual experience took place, observing the number of fellow players present in the experiencescape, noise levels, interaction levels between players, the behavior and size of the audience, etc. In addition, observations of the games the informants played were conducted both on- and off-site, to gain insights into both the experiencescape in which their virtual experiences had taken place and

into the gameplay of each game. The informants sampled for Study 3 represented variation in terms of purpose of visit, tourist status, group composition, and visitation context (first time vs. return visitor), but had a somewhat limited variation in terms of age (18-35) and gender (13 male, 1 female) compared with the two previous case studies.

Table 3 Summary of the methods employed in Paper 1, 2, and 3

Paper	Purpose	Approach	Case context	Data collection	Sample
1	Explore the nature of the immersion process	Grounded theory + case study	Sailing trip, Roskilde Viking Ship Museum	Participatory observations & semi-structured interviews	13 informants 8 observations
2	Explore the role of individual responses and antecedent factors	Grounded theory + case study	Escape room, Escape Reality Trondheim	Direct observations & semi-structured group interviews	9 groups (41 informants) 9 observations
3	Compare the immersion process in conventional vs. technology-empowered experiences	Grounded theory + case study	Virtual games, House of Nerds	Semi-structured interviews & general on-site observations	14 informants

4.3 Data analysis

Data analysis in Straussian grounded theory follows three distinct coding stages: open coding, axial coding, and selective coding (Strauss & Corbin, 1990). During the first coding stage, open coding, the data was analyzed systematically, using line-by-line analysis to identify concepts in the data. Each new code was compared to previously identified codes, in a circular process of coding and re-coding. In the second stage of the analysis, the axial coding, the codes derived from the open coding were grouped together and categorized into sub-categories through pattern matching. These sub-categories were then linked into categories through a set of relationships, denoting causal conditions, phenomenon, context, intervening conditions, and consequences. Which were then grouped into higher-level main categories in a hierarchy of abstraction (illustrated in Figure 6). During the final stage of the coding process, the selective coding stage, a main category was identified and the relationship between the previously identified categories and sub-categories was established in relation to this main category. While presented here sequentially, the coding process was circular as the researcher moved back and forth between the different stages of the coding process; refining, re-coding, re-categorizing, and redefining emergent codes, categories, and relationships in a circular process. In line with the principles of GT, the researcher also moved back and forth between data collection and analysis, as initial analysis pointed to new directions worth pursuing. In all three studies, the NVivo 12 software package was used to organize codes and categories.

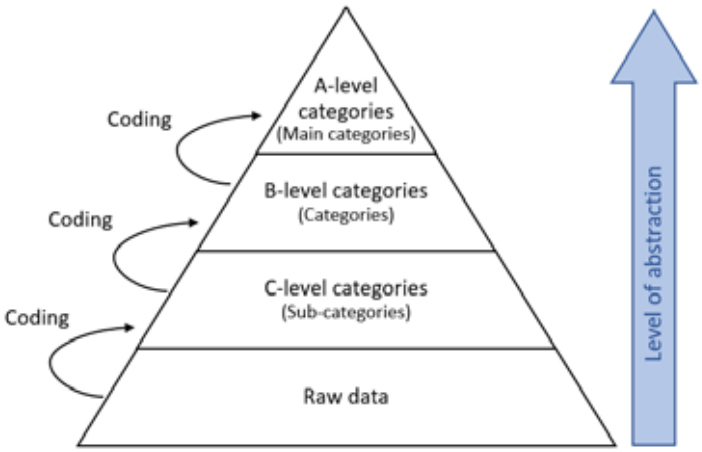

Figure 6 Hierarchy of abstraction; from raw data to main categories (adapted from Jensen and Hansen (2007, p. 610).

In the following sections, a brief description of the specificities of how Strauss and Corbin's (1990) analytical procedures were employed in each of the three case studies are presented. A more thorough description of the analytical procedures is presented in the respective articles.

4.3.1 Data analysis Study 1

Study 1 set out with a pre-determined focus on the immersion process and the role of the visitors' interactions with the experiencescape. It did however have an open explorative approach to the immersion process, with immersion itself as the only category that to some extent was pre-defined based on existing literature. The remainder of the categories identified in this study was developed based on Strauss and Corbin's (1990) analytical coding procedures and were thus data-driven and grounded in the empirical data collected for the study.

4.3.2 Data analysis Study 2

Study 2 utilized a similar analytical approach, but unlike Study 1, it started out with several a priori constructs derived from Study 1, as it sought to build on and expand the findings generated through the previous study. To ensure the proper grounding of the gradually emerging theory in the data, these pre-defined constructs were however treated as tentative and were only included in the analysis if they were found to be present in the data collected for Study 2. Study 2 thereby followed a moderated version of open and axial coding, as the researcher operated with some pre-defined constructs, but remained open to the identification of new codes and categories, and to the refinement, redefinition, and omittance of pre-defined constructs and previously identified relationships.

Another consequence of this study's goal of expanding the findings from Study 1, by further exploring the role of individual responses in the immersion process, was that the selective coding phase was divided into two analytical steps. The first step was to investigate whether individual responses also played a moderating role in the immersion process in the case context used in Study 2. This was achieved by analyzing the relationship between the categories identified in the present study and comparing them to the involvement levels and stages previously identified in Study 1. Once the role of individual responses in the present case context had been established, the second stage of the selective coding process began. This stage focused on establishing which of the different types of individual responses identified appeared to influence the immersion process and on identifying the relationships between these individual responses and the underlying factors that influence them.

4.3.3 Data analysis Study 3

The final case study, Study 3, sought to extend and test the contextual limits of the immersion process model that had gradually emerged throughout the two previous studies. Similar to Study 2, this study set out with a set of pre-defined categories derived from the two previous case studies. The first stage of the coding process could thereby be described as a "semi-open", as the study started with four tentative, but pre-defined categories: immersion, engagement, engrossment, and transcending involvement, which represented the three involvement levels identified as being part of the immersion process in Study 1 and 2. This "semi-open" coding phase was followed by an axial coding phase, similar to that of the two previous studies, in line with the coding procedures described by Strauss and Corbin (1990).

To ensure proper grounding of the theory in the data and to reduce the effect of confirmation bias (Klayman, 1995), the selective coding stage in Study 3 consisted of two separate, consecutive phases. In the first phase, the relationships between the categories identified in the present data and the pre-defined involvement levels were identified. Then, in the second phase, these categories and relationships were subsequently compared to the categories and relationships identified as influential to the immersion process in the two previous studies. This process lead to the identification of new categories and sub-categories, which were then incorporated into the immersion process model that had gradually emerged through the two previous case studies.

4.4 Measures of quality: Trustworthiness and rigor

In the quantitative literature, validity (internal, external and construct validity) and reliability are generally accepted as measures of research quality. In the qualitative literature, however, the criteria on which to evaluate the quality of research is more contested. Scholars such as

Whittemore, Chase, and Mandle (2001) for example, contend that qualitative research should adopt the quality measures used in quantitative research. While others, such as Agar (1986) and Kirk and Miller (1986), argue that adopting such quantitative measures to the evaluation of qualitative research is inappropriate (Silverman, 2014). Maintaining instead that measures such as reliability, which is concerned with the stability and replicability of the findings (Whittemore et al., 2001), are only relevant if one ascribes to the positivist philosophy where the world is seen as an objective, stable, external reality, waiting to be discovered and described by researchers. Instead, scholars have maintained that qualitative studies should adapt their own measures of quality (Denzin & Lincoln, 1994; Lincoln & Guba, 1985), with Lincoln and Guba (1985) suggesting rigor and trustworthiness as alternative measures of quality. Rigor relates to procedures for data collection and analysis, while trustworthiness concerns the credibility, dependability, confirmability, and transferability of the findings. As the procedures for data collection and analysis have already been described in previous sections, the focus in the subsequent sections will be on measures related to trustworthiness.

4.4.1 Credibility

Credibility refers to the confidence in the truthfulness of the findings. This has to do with how accurately the phenomenon under study is described and the extent to which the researcher has been able to accurately identify the phenomenon they seek to study, as opposed to another closely related phenomenon (Lincoln & Guba, 1985). The credibility criterion is similar to the internal validity criterion of quantitative, positivist studies (Shenton, 2004) and requires the researcher to exhibit a thorough understanding of different aspects of the case and the phenomenon under study (Denzin, 2001). One of the ways in which the credibility of a study can be increased is through triangulation, as it reduces the risk of the researcher basing their findings

on an incomplete understanding of the phenomenon under study (Andersen, 2013; Denzin, 2001; Stake, 2005). Fours forms of triangulation were employed in this thesis: informant triangulation, method triangulation, case triangulation, and researcher triangulation. Case triangulation was attained by studying the immersion process in three different case contexts, which provided insight into the manifestation of the immersion process in three different experience contexts. Informant triangulation was done by interviewing multiple informants from different visitor groups at each attraction, which provided different experiential perspectives on the immersion process. Method triangulation was achieved by using a combination of interviews and observations, which brought out different aspects of the immersion process and contributed to a more comprehensive (although not necessarily a complete) understanding of the events that were actualized in relation to the immersion process. Lastly, researcher triangulation, which involved continued discussions with more senior researcher colleagues, contributed to reducing the potential effects of confirmation bias (discussed in more detail below).

4.4.2 Confirmability

Confirmability relates to whether the results reflect the thoughts, views, and experiences of the informants rather than those of the researcher (Lincoln & Guba, 1985). One of the criteria of confirmability is that the researcher is open about the methodological choices that have been made - why one approach was chosen over the other. A clear presentation of employed methodological procedures is therefore also important for the confirmability of the findings. It is also important that the researcher reflects upon and declares potential biases that might influence the data collection, the analysis, and the conclusions drawn from the study. One such bias is the confirmation bias, where the researcher's interpretations are skewed towards information that confirms their hypothesis, while disconfirming data is discredited (Klayman, 1995). While the studies

included in this thesis did not start with pre-formed hypotheses, tentative hypotheses of the nature of the immersion process did emerge during the courses of the research process as a theory of the nature of the immersion process gradually emerged. Confirmation bias could therefore potentially influence the conclusions drawn from the three case studies included in this thesis. One of the ways in which confirmation bias can be reduced is by applying methodological strategies that are suitable to the phenomenon being studied and that enables the researcher to check for such biases. The grounded theory approach enables such checking through the constant comparative method which requires emergent theoretical assertions to be continually compared to and checked whit the empirical data collected for the study. Only assertions that find sufficient coverage in the data should be included in further analysis. What constitutes sufficient coverage is however a matter of interpretation, which again opens for the influence of confirmation bias. In this thesis, I sought to reduce the potential influence of confirmation bias by utilizing researcher triangulation, since, according to Klayman (1995), experienced researchers who have experience with the research problem at hand are less likely to be influenced by confirmation bias. The findings and initial analytical conclusions of each of the three studies were therefore continually discussed with more experienced research colleagues.

Confirmation bias was however not the only bias that had the potential to influence the conclusions drawn from this thesis. The most predominant data collection method used in this thesis was the semi-structured interview. This form of data collection happens through interactions between the researcher and the informants and can therefore be influenced by both interviewer and interviewee biases. The interview setting in and of itself might taint the information collected, as it might not give an accurate depiction of the informants' actual behavior outside the interview setting (Hammersley & Atkinson, 2007). This can be due to the social desirability bias, where the informants answer based on what

they deem to be the socially acceptable answer, rather than based on their true thoughts, feelings, and opinions (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The presence of the researcher can enhance the informants' desire to answer their questions "correctly" and they might look to the researcher for "indication of whether the answers being provided are appropriate, and also perhaps of any sign of judgmental reaction" (Hammersley & Atkinson, 2007, p. 110). In the interviews conducted for this thesis, the interviewer, therefore, especially at the beginning of the interview, stressed the acceptability of all answers, to establish a sense of tolerance and openness to different experiences and perspectives. In a further effort to reduce the effect of the social desirability bias, the informants were only informed about the study's focus on immersion and the immersion process at the end of the interview, in order to reduce the likelihood of informants exaggerating their experience of immersion to give a more "correct answer". The informants were informed that the focus of the interview would be on how they experienced the experience product they had just consumed, but that the researcher was not affiliated with the experience provider and therefore had no stake in their evaluation of the experience product. This, combined with information about the anonymization of the data and reassurance that no one other than the interviewer would be able to access the recordings from the interviews contributed to established confidentiality and mutual trust.

Another challenge related to social desirability biases is that several of the interviews were conducted in groups of varying sizes. This was considered necessary to gain access to informants and to bring out different perspectives and individual differences between visitors who had participated in the same experience product as a part of the same group. This did however bring out the potential bias that can follow from having an "audience", which according to Pösö et al. (2008) can affect the informants' answers. Conducting interviews in groups can however also have a positive effect in that they can make the interview situation

less threatening, encouraging informants to be more forthcoming (Hammersley & Atkinson, 2007). In this project, the author sought to mitigate the potential negative effect of the presence of an "audience" by triangulating the interview data with field notes from observations. The possibility that the data gathered from the group interviews were influenced by social desirability biases cannot however be excluded.

4.4.3 Dependability

Meeting the replicability criterion can be difficult, if not even irrelevant, in qualitative research (Lincoln & Guba, 1985; Shenton, 2004). It is therefore often replaced by the dependability criterion. This criterion is closely connected to credibility and refers to the consistency of the study. It can be established by creating a clear chain of evidence. Providing a transparent and clear description of the methods and procedures employed in the whole research process, from research design through to data collection, analysis, and conclusions (Andersen, 2013; Denzin, 2001; Moisander & Valtonen, 2006). This is especially important in case studies, which have been criticized for being based on representativeness heuristics, referring to the general human bias towards generalizing based on only a few isolated observations, rather than on scientific criteria (Gobo, 2004). Transparency in terms of the applied theoretical framework is also important, as this framework influences both how the data is analyzed and the theoretical domain to which findings can be generalized (Moisander & Valtonen, 2006). The methodological procedures employed in the three case studies are therefore described in detail in each article (including case selection criteria, informant selection procedures, observational guidelines, interview protocols, and analytical procedures). The theoretical framework that formed the basis of the three studies are presented both in Chapter 3 and in each respective paper.

4.4.4 Transferability

One point of criticism that is frequently directed towards case studies is that they hold limited theoretical value as findings from case studies cannot be generalized beyond the given case context (Flyvbjerg, 2004). This criticism is however misdirected as it is based on a misconception about what is meant by the term generalization in relation to case studies (Yin, 1989). As Yin (1989) points out, there are two different types of generalizations: Statistical generalization and analytical generalization. The former is related to quantitative approaches where the goal is to measure prevalence and quantify populations. The latter, however, is related to qualitative approaches and is concerned with generalizing to theoretical prepositions rather than populations (George & Bennett, 2005; Stake, 2005). Analytical generalizations, therefore, require a more comprehensive interpretation process before the findings can be generalized, as they first have to be developed into theories (Gobo, 2004). At the same time, it is important to acknowledge that findings from a case study cannot be generalized to all instances of a phenomenon, and qualitative case studies therefore typically focus on transferability rather than generalizability (Miles et al., 2014).

Transferability refers to the degree to which the findings generated from a study are applicable to other settings that are comparable to the context from which the findings were derived. It is therefore important that the researcher provides a sufficient description of the context and the characteristics of the case(s) on which their conclusions are based. Since it is these characteristics represent the specifications of the type of contexts to which the substantive theory generated through the study can be transferred (George & Bennett, 2005). Context is at the very heart of substantive theories (Strauss & Corbin, 1990), and a substantive theory about the nature of the immersion process developed in the context of a high-risk physical activity in an unfamiliar setting (e.g. whitewater rafting) therefore, cannot readily be transferred to the immersion process in the context of playing computer games from the comfort of one's own

home (a sedentary, low-risk activity in a familiar setting), as these are contexts that represent completely different experiential characteristics and contexts. In this project, the researcher has been conscious in choosing consecutive case contexts that represent contextual characteristics that build on and to some extent extends on the characteristics of the previous case context(s) (which was also the case for the deviant case context used in Study 3). This was done to build a solid foundation for generating a substantive theory about the nature of the immersion process in the context of social, short duration, structured, and interactive experience products offered within managed visitor attractions that offer themed, safe, and enclaved experiencescapes.

5 Results

This section presents the main findings from each of the three papers of this thesis. The results are first presented separately before they are summarized in a generic immersion process model presented at the end of the chapter.

Phase 1: Developing a model of the immersion process

In line with the overarching aims of this thesis, Study 1 sought to explore the nature of the immersion process in the context of a sailing trip experience product offered at the Roskilde Viking Ship Museum. The study had a pre-determined focus on the experiencescape and the visitors' interactions with its different elements, as previous research has indicated that these interactions can be influential to the visitor's immersion process (Cairns et al., 2013; Carù & Cova, 2007; Hansen, 2014; Hansen & Mossberg, 2013; Mossberg et al., 2014; Sanders & Cairns, 2010).

By conducting line-by-line analysis of the collected data, identifying codes, and grouping them into categories through a circular process of coding/re-coding and categorization/re-categorization, nine categories were developed: (1) physical challenges, (2) group assimilation, (3) personal resource utilization, (4) intellectual challenges, (5) memories, and (6) imagination, (7) involvement through the present, (8) involvement through personal life narrative, and (9) immersion. Each of these categories was found to be influential to the immersion process.

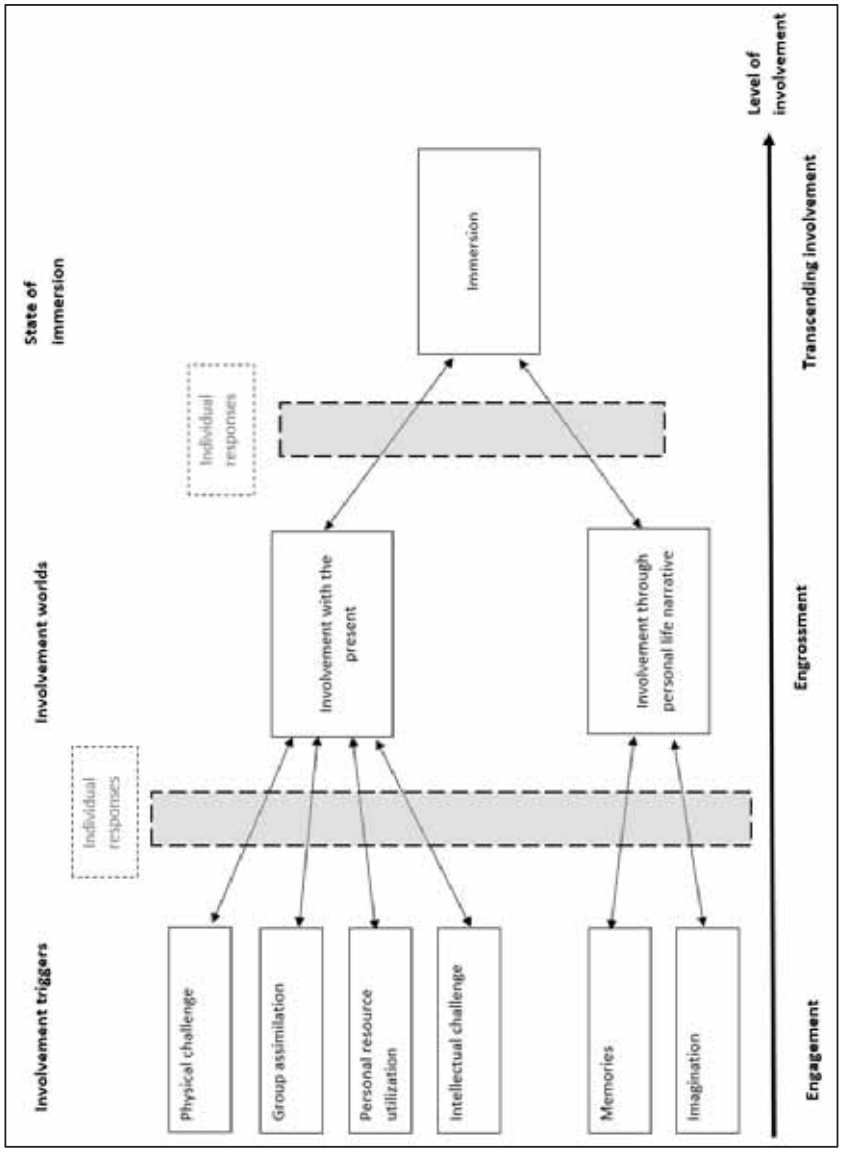

Figure 7 The interrelationship between different main-categories, sub-categories, and involvement levels identified as influential to the immersion process in Study 1*.

**Note that the model presented in Figure 7 has been modified from the original model published in Paper 1, as one-directional arrows have been replaced by two-directional arrows to better illustrate the dynamic nature of the immersion process.*

By analyzing the relationship between these categories, it was found that each category was connected to a certain level of involvement and could be grouped into three main categories (involvement triggers, involvement worlds, and the state of immersion) based on the level of involvement they were connected to. Pointing to involvement as the core category binding the categories together. Involvement triggers were categories connected to the lowest level of involvement (labeled engagement), involvement worlds to a medium level of involvement (labeled engrossment), and the state of immersion to the highest level of involvement (labeled transcending involvement). The three main categories can be described as stages in the immersion process, as involvement appeared to be the driving force, driving the immersion process forward and pushing visitors towards the state of immersion. The interrelationship between the different main-categories, categories, and involvement levels is illustrated in Figure 7, which presents a context-specific immersion process model.

The six categories categorized as involvement triggers were: (1) physical challenges, (2) group assimilation, (3) personal resource utilization, (4) intellectual challenges, (5) memories, and (6) imagination. Each of these involvement triggers were connected to one of the two involvement world categories (category 7 and 8). Involvement trigger 1-4 were connected to "involvement through the present", while 5 and 6 were connected to "involvement through personal life narrative". The categories labeled involvement worlds represented one step deeper into the immersion process. They were characterized by intense focus and a strong attentional direction and had the potential to lead visitors to the state of immersion. What separated the two involvement worlds from one another was the direction of this attentional focus. As the name

implies, “involvement with the present” was characterized by a strong focus on the present moment - an externally directed focus where the visitors' attention was directed towards the situation presently unfolding in front of them. The second involvement world, “involvement through personal life narrative”, was characterized by a more internally directed focus, where the visitors’ focus was directed inward towards their personal life narrative rather than towards the present moment. While involvement through the present has previously been identified as a path to immersion in the existing literature (Carù & Cova, 2006; Hansen & Mossberg, 2013; Mainemelis, 2001), involvement through personal life narrative represents a novel path to immersion.

The data further showed that visitors fluctuated in and out of different levels of involvement and between different phases in the immersion process throughout the duration of the experience. An informant could, for example, go from an involvement trigger at the engagement level, to an involvement world (engrossment level), before going back again to the engagement level, rather than progressing into the state of immersion. This was the case also for the state of immersion itself, which the interview data and the informants’ experience line charts (Figure 8) indicated that the visitors only experienced fleetingly, before receding to a lower level of involvement and a different stage in the immersion process. These findings suggest that the process is dynamic, rather than sequential and progressive in nature, as suggested by Carù and Cova (2005) and Brown and Cairns (2004) respectively. The dynamic nature of the immersion process is demonstrated in Figure 8 which, through examples from the informants’ experience line charts, illustrates the visitors’ fluctuation between different levels of involvement during the course of the sailing trip.

When analyzing the causes of the visitors’ fluctuation between different levels of involvement and between the different stages of the immersion process, individual responses were found to play an influential role. As the visitors’ responses to the different involvement triggers and

involvement worlds seemed to moderate the visitors' progression through the immersion process. Findings from Study 1 however only offered limited empirical insights into how these responses influenced the process, the type of responses that influenced the process, and the underlying factors that influence these responses. The purpose of Study 2 was therefore to build on the findings from Study 1, expanding the emergent model by developing a better understanding of the role of individual responses and their underlying antecedents in an effort to develop a more dense grounded theory (Strauss & Corbin, 1990).

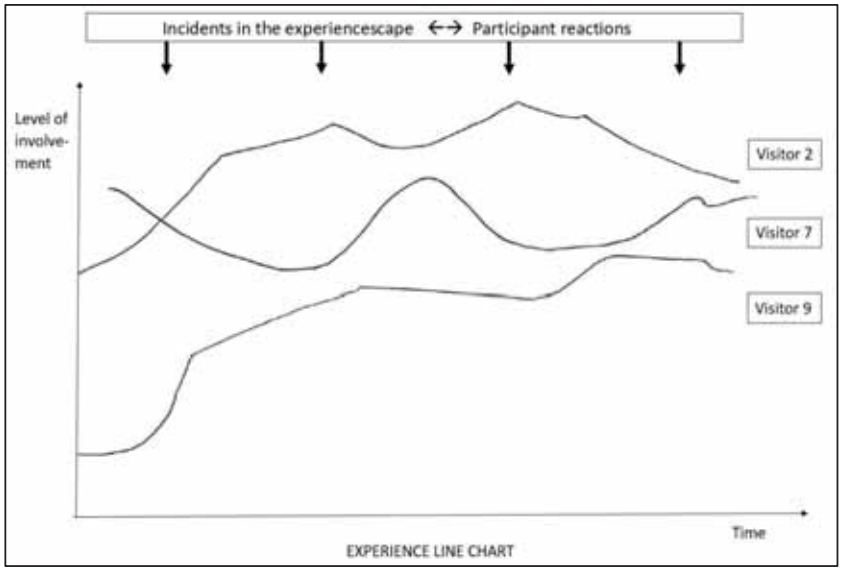

Figure 8 The dynamic nature of the immersion process: Illustrations from the informants' experience line charts.

Phase 2: Expanding the immersion process model: The role of individual responses and their underlying antecedents

Study 2 was conducted in the context of a technology-enhanced escape room experience product (The Heist) offered at Escape Reality Trondheim. It represented an extension of the experience context, as it differed from the sailing trip context on several parameters (including technology integration, contact with employees, competition, group familiarity, attraction theme, and how the experience was scripted & lead). The first step in the analysis was therefore to examine the applicability of the emergent model in this new case context. This was achieved by examining whether the same categories found in Study 1 could also be identified in the data collected for Study 2 and whether these categories played a similar role in this new experience context.

The analysis showed that the same core components of the immersion process identified in Study 1 were also a part of the immersion process in Study 2. This included the same involvement levels (engagement, engrossment, and transcending involvement), the same stages in the process (involvement triggers, involvement worlds, state of immersion), and the dynamic nature of the process. There were, however, contextual differences between the two cases in terms of the concrete involvement triggers and involvement worlds (B-level categories) identified. These differences are illustrated in the context-specific immersion process model presented in Figure 9, illustrating the different involvement triggers and involvement worlds identified in Study 2. (For a complete overview of the A-, B-, and C-level categories developed in each of the three case studies, see Appendix 2.)

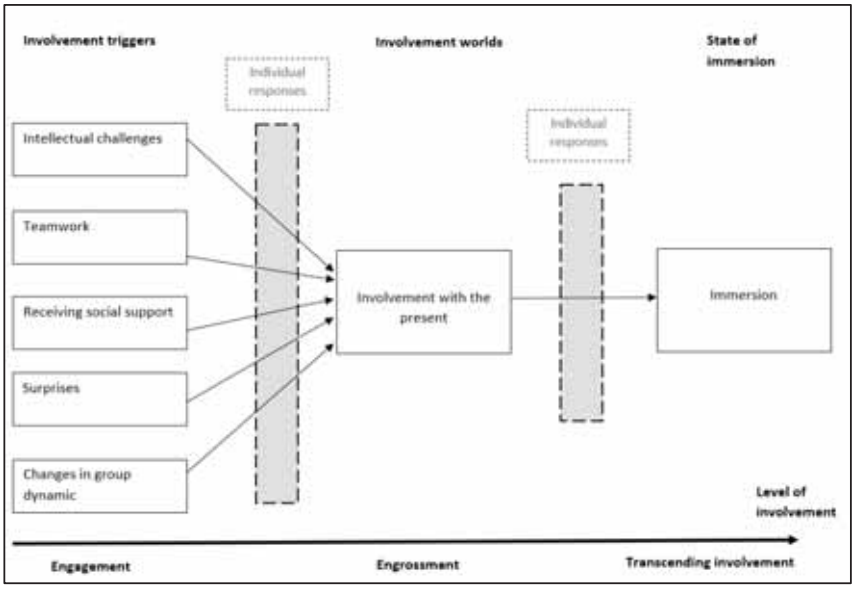

Figure 9 Context-specific immersion process model developed from Study 2.

As illustrated by Figure 9, individual responses were also, once more, found to moderate the visitors' progression through the immersion process. The focus of the analysis therefore shifted towards identifying individual responses that seemed to influence the immersion process and exploring how these responses influenced the process. This analysis resulted in the development of six categories of individual response types that were found to influence the immersion process in the escape room context used in Study 2: (1) adversity responses, (2) active participation, (3) absorption, (4) stress responses, (5) emotional engagement, and (6) emotional responses. Each category was developed based on codes and sub-categories derived from the data and could be grouped into one of three main categories: behavioral responses (1-2), cognitive responses (3), and affective responses (4-6).

Each response type appeared to have a dual potential. They could function both as facilitators and as hindrances to the visitors' progression

through the immersion process, dependent on the valence of the response. Positive emotional responses, such as the feeling of mastery, was for example found to have a positive effect on the visitors' progression through the immersion process, as such responses contributed to increasing the visitors' level of involvement. Whereas negative emotional responses such as the feeling of inadequacy or disappointment could stifle the visitors' progression by negatively influencing their level of involvement. The valence of the individual responses hence seemed to play an important role in the immersion process and the focus of the analysis, therefore, shifted towards examining the underlying factors influencing the valence of the visitors' individual responses. As a result of this analysis, six categories of underlying antecedents were developed: (1) group composition, (2) experience design features, (3) perception of challenges, (4) prior experience, (5) personal pre-dispositions, and (6) expectations. These categories were then grouped into four main antecedent categories: social antecedents (1), external antecedents (2), appraisals (3), and personal antecedents (4-6). Each of these antecedents was found to influence at least one of the individual response types that had been identified in the earlier stages of the analysis. Group composition (a social antecedent) was for example found to influence the visitors' active participation. Whereas expectations (a personal antecedent) was found to influence the visitors' responses to adversity.

Study 2 offered new insights into the subjective nature of the immersion process, providing a categorization of the different individual responses and antecedents influencing the immersion process in the chosen escape room context. By incorporating these findings into the emergent theory developed through Study 1, we were able to develop an expanded model of the immersion process that also accounts for the role of individual responses and their antecedents, reflecting that the visitors do not enter the experiencescape empty-handed, but instead brings with them a number of prior experiences and personal pre-dispositions.

Phase 3: Exploring contextual limits: Immersion in virtual technology-empowered experiences

Throughout Study 1 and 2, a new contextually bound model of the nature of the immersion process gradually emerged. In line with the critical realist perspective, where context is seen as influential to which underlying mechanisms and events are actualized, the focus of phase 3 was on exploring the contextual limits of the emergent model. This was done by exploring its applicability in a case context that offered contrasting conditions to the two previous studies: virtual technology-empowered gaming experiences offered at the managed visitor attraction House of Nerds (HoN).

Analysis of the data collected from HoN revealed that despite the contrasting conditions offered by the case, the same main categories and core components of the immersion process were identified also here (including its dynamic nature, the stages of the process, individual response types, and the types of antecedents influencing these responses). Indicating that the immersion process model developed in the context of "real world" tourism experience products (Study 1 and 2), might also be applicable to the immersion process in virtual technology-empowered experience contexts.

Like in the two previous case studies, a context-specific version of the immersion process model was developed also for this case context (see Figure 10). As the figure illustrates, there were also contextual differences in terms of the B-level categories identified in this study (see Appendix 2). Most notably is the identification and development of a new "involvement world" category: "emotional involvement with game narrative and/or characters". Similarly, to the two previously identified involvement worlds, this involvement world was characterized by an intense focus and could take visitors down the path towards transcending involvement and immersion. What was unique about this involvement world, however, was that it was the visitors' emotional involvement with

the game narrative, or with the game's characters that lead them down this path.

Study 3 did however also see the identification and development of a new main category that had not previously been identified in the two previous case studies: pre-existing involvement. This category consisted of a combination of the visitors' prior knowledge, experience, and skills (both tacit and explicit) and their pre-existing relationship with the character(s) in the game. This pre-existing involvement was found to function as a pre-experience *"involvement booster"* increasing the visitors' level of involvement going into the experience (illustrated in Figure 10). The identification of a new main category could be an indication that the immersion process in "real world" tourism experiences does indeed differ from the immersion process in virtual technology-empowered experiences. Comparisons between the three case contexts, however, indicated that this difference was not caused by characteristics related to the virtual nature of the experience products offered at HoN. Instead, it seemed to be caused by the fact that none of the informants in the two previous case studies had any experience with, and therefore no prior involvement with, the specific experience product they consumed at the attraction. At HoN, however, the majority of the informants had prior experience with the virtual game they were playing during their visit, which might explain why pre-existing involvement was identified here, but not in the two previous case contexts. Study 3, therefore, concludes that in the context of managed visitor attractions the immersion process appears to be comparable across both "real world" and virtual technology-empowered experience products.

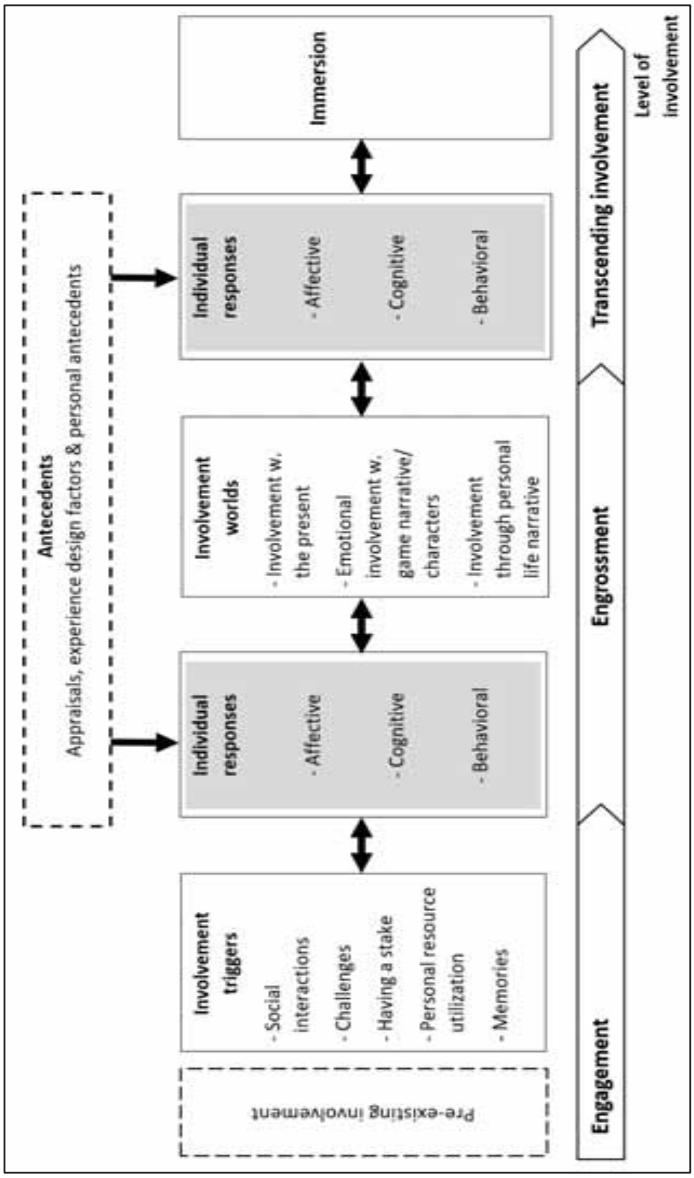

Figure 10 The immersion process in virtual technology-empowered experience products offered at House of Nerds.

5.1 Summary of results

By combining three singe-case studies that each follows the logic of grounded theory, it was possible to develop a new empirically grounded model of the immersion process that was initially developed in one experience context, subsequently expanded and further developed in a contrasting experience context before the limits of the model's applicability was explored through a deviant case context.

The results suggest that in the context of managed visitor attractions, the main components of the immersion process are the same across experience products that vary in terms of technology integration, from conventional tourism experiences to technology-enhanced, and technology-empowered experience products (Neuhofer et al., 2014). This was the case even across experience products that differed in terms of theme, tightness of activity script, within-group familiarity, and visitor control. The status of the visitors as tourists, day-trippers, or local residents also did not seem to influence the process. The core components of the immersion process model that emerged through the three case studies are presented in Figure 11, which forms the basis for the discussion that follows in the subsequent chapters.

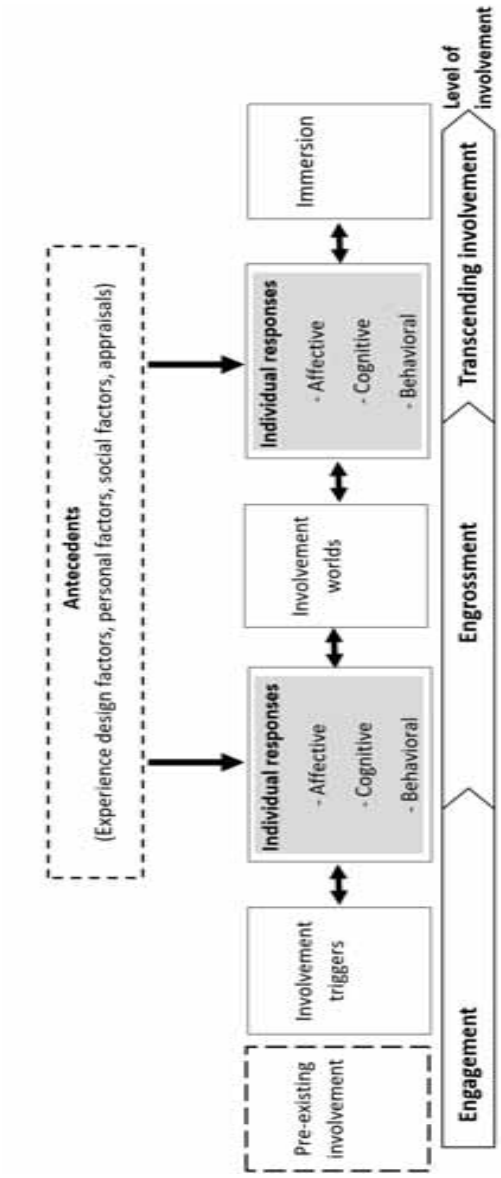

Figure 11 The core component of the immersion process identified in the substantive context examined in this thesis.

6 Discussion

This thesis has explored conceptual dimensions of the immersion process, the process through which visitors become immersed, theoretically, and empirically, to obtain new insights into the nature of this process. The context in which the empirical studies were conducted can be characterized as interactive, short-duration experience products, based on varying degrees of technology integration, offered within visitation settings categorized as managed visitor attractions (Jensen, 2015). This empirical investigation resulted in the development of a model of the immersion process that was presented in the previous chapter (Figure 11). In this chapter, the focus will be on discussing how this model and the findings generated through the three case studies contribute to uncover the underlying structures, mechanisms, events, and experiences that make up the immersion process within the substantive domain examined in this thesis. The chapter begins with a discussion about the underlying structure, events, and experiences involved in the immersion process. Before moving on to a discussion on the underlying mechanisms hypothesized to be causing the actualization of these events and experiences. The chapter concludes with a discussion about the influence of context and contextual conditions on these mechanisms and their actualization.

6.1 Experiences, events, and the underlying structure of the immersion process

Throughout the three case studies included in this thesis, the immersion process was consistently found to consist of three stages (involvement triggers, involvement worlds, and the state of immersion), that were connected to increasingly higher levels of involvement (engagement, engrossment, and transcending involvement). These stages combined with the dynamic nature of the immersion process, appeared to make up the fundamental structure of the immersion process, as this structure was

consistently identified across the three case studies. It is within this structure that we find the different mechanisms, events, and experiences that make up the immersion process in the substantive context examined in this thesis. While the different stages of the immersion process can be considered to be a part of its underlying structure, the different components of each stage can be categorized as either mechanisms, events, or experiences.

Involvement triggers

The first stage in the immersion process structure consisted of different involvement triggers, which represented conglomerations of stimuli that, the interviews revealed, were largely consciously experienced by the informants. Thirteen involvement triggers were identified across the three case studies (see Appendix 2: Category overview), but only one appeared to consistently lay beyond the immediate perception of the visitors themselves: "changes in group dynamic". This involvement trigger was observed by the researcher in Study 3, where it was found to trigger some of the visitors' involvement in the experience product. The visitors who responded to this involvement trigger did not however consciously perceive the stimuli the involvement trigger represented. Indicating that rather than being an experience belonging to the domain of the empirical, this involvement trigger can be classified as an event within the domain of the actual, representing stimuli that the visitors do not themselves perceive, but that they nonetheless subconsciously respond to. Similarly, the involvement trigger "personal resource utilization" (identified in Study 1 and 3) seemed to lay somewhere on the border between the domain of the actual and the domain of the empirical, as it were sometimes consciously perceived by the informants, other times not. This could be indicative of its status as an event rather than an experience, as events are also sometimes perceived by the individual experiencing them, although they are not likely to be the primary focus of their perception, and are more likely to be reflectively reconstructed in retrospect (Bhaskar, 2008).

With a few potential exceptions, the involvement triggers identified in this thesis can largely be described as experiences belonging to the domain of the empirical. In line with the critical realist understanding of how experiences are formed, these empirical experiences are triggered by events (belonging to the domain of the actual), which represent actualizations of underlying mechanisms (belonging to the domain of the real). To be able to fulfill the goal of exploring these underlying mechanisms, we must first identify the events that lead to these empirically experienced involvement triggers.

By analyzing the observational notes of the researcher and the informants' reflections on their experiences, it was found that in this substantive context, involvement triggers seemed to be actualized as a result of the visitors' interactions with the different elements of the experiencescape (including other visitors, employees, objects, and the physical environment). These interactions were the events that combined lead to the visitors' perceived experience of involvement triggers such as "physical challenges", "surprises", and "teamwork". "Physical challenges" was for example actualized through the visitors' interactions with objects in the experiencescape, as well as with their physical surroundings. While "teamwork" was actualized through a series of interactions between visitors and between visitors and objects. The visitors' interactions with different elements of the experiencescape have also in previous research been found to play a key role in the formation of visitor experiences (see for example Arnould and Price, 1993; Mossberg, 2007; Silkapit and Fisk, 1985; Wakefield and Blodgett,1996).

Involvement worlds

The second stage in the immersion process structure consisted of different involvement worlds. Three such involvement worlds were identified: "involvement with the present", "involvement through personal life narrative", and "emotional involvement with narrative/characters". These involvement worlds generally laid beyond

the perception of the visitors themselves and were uncovered by analyzing the visitors' retrospective descriptions of their thoughts, reflections, and experiences during their consumption of the experience product. One of the involvement worlds (emotional involvement with narrative/characters) was, however, to some extent also consciously perceived by the informants. Since several informants in Study 3 reported experiencing a strong emotional involvement with the game narrative and/or characters and acknowledged this emotional involvement to be the focal point drawing them into the experience and increasing their level of involvement. This, however, appears to be something the informants perceived reflectively in retrospect, rather than something they were consciously aware of during the consumption of the experience product. The involvement worlds thus appear to be largely unperceived by the visitors during their immediate experience, which indicates that they belong to the domain of the actual, representing events that have a causal effect on the visitors' immediate experiences.

The state of immersion

Although immersion was a category that to some extent was pre-defined prior to the data collection, it was not clear prior to the analysis whether immersion should be classified as a surface phenomenon belonging to the domain of the empirical or as a state belonging to the domain of the actual. The analyzes however show that immersion was a state that the informants were largely unconscious of during their immediate experience, although several of the informants were able to reconstruct it retrospectively when reflecting on their experience during the interviews. In the substantive context of this thesis, immersion can thus be classified as a state belonging to the domain of the actual.

Individual responses

The final component of the immersion process structure was individual responses. Ten individual response types were identified in the data and whether these responses were consciously perceived by the informants

varied from informant to informant, and from situation to situation. Adversity responses such as “giving up”, “withdrawing from the group”, and “pushing through” was for example sometimes reported by the informants themselves. Other times, the informant did not perceive such responses in themselves, but they were observed by the researcher or reported by other members of the informant's group. When the informants did perceive such responses in themselves, they appeared to be reconstructed reflectively in retrospect, rather than being perceived immediately during the consumption of the experience product. Combined, this indicates that in this context, individual responses should be classified as events belonging to the domain of the actual.

6.2 The mechanisms underlying the immersion process structure

After having identified experiences, events, and the underlying structure of the immersion process, I now turn to a discussion on the underlying mechanisms hypothesized to be causing the actualization of these events and experiences.

6.2.1 Visitors as co-creators

In the previous section, it was established that the involvement triggers experienced by the visitors were actualized as a result of the visitors’ interactions with different elements in the experiencescape. Analysis of the underlying mechanisms that might be causing these events pointed to *the visitors’ role as active co-creators* as a key underlying mechanism. As the data showed that it was through the visitors’ active engagement and interaction with their surroundings that the physical, social, and mental stimuli the involvement trigger represent were created. This mechanism (labeled Mechanism A) was also found to be at play in the involvement world stage of the immersion process, as the three involvement worlds seemed to emerge as a result of the visitors’ co-creating efforts; through their interactions with, and interpretation of,

different sources of stimuli. Visitors as co-creators is hence hypothesized to be one of the key mechanisms influencing the immersion process in the substantive context examined in this thesis. This ties in with the discussion in Chapter 3 on how stimuli and experiences are created, as these findings seem to support the notion of consumers as active co-creators of their own experiences, rather than passive consumers of externally produced stimuli provided to them by the experience provider (Mehrabian & Russell, 1974; Thompson et al., 1989).

6.2.2 The influence of individual responses

The second mechanism (Mechanism B) identified as a plausible causal mechanism in the immersion process was *the mechanism through which the visitors' individual responses influenced their experience* of the stimuli the involvement triggers, involvement worlds, and the state of immersion represented. Stimuli is here understood to mean both the stimuli the visitors consciously experienced and observed (domain of the empirical), and the stimuli they did not perceive, but subconsciously respond to (domain of the actual). The visitors were found to respond both cognitively, behaviorally, and affectively to this stimulus and their responses represented events that not only influenced how they experienced or perceived this stimulus, but that also became input to their interactions with new stimuli (e.g. other involvement triggers or involvement worlds). Mechanism B was consistently found across the three stages of the immersion process and in all three case studies. The mechanism is highlighted with blue circles in Figure 12.

The nature of this mechanism and exactly how it performs its functions is a part of a larger debate within the consumer behavior literature, where various theories propose different answers to the question of how individual responses influence the individual consumer's experience. Cognitive appraisal theory, for example, suggests that rather than being a direct result of stimuli, affective responses are elicited through individual, cognitive evaluations or appraisals of stimuli, which mediates

how an individual responds to the stimulus they are exposed to (L. Watson & Spence, 2007). This idea is however rejected by the proponents of the opposing non-representational theory, who argue that cognitive appraisal theory puts an over-emphasis on representationalism and the role of conscious cognitive processes in how we respond to stimuli (Spackman & Yanchar, 2014; Thrift, 2007). Suggesting instead that how we respond to stimuli is also influenced by precognitive (nonrepresentational) sensations, that we subconsciously experience, but might not be cognitively aware of (Hill et al., 2014; Thrift, 2007). In this thesis, however, findings indicated that the visitors' responses to the stimuli that arose during the experience were influenced by a series of personal and context-specific antecedents through Mechanism C, which is described in the following section.

6.2.3 Antecedents influencing responses

Findings from Study 2 and 3 showed that series of antecedents (including experience design factors, personal factors, social factors, and individual appraisals) influenced how the visitors responded (cognitively, affectively, and behaviorally) to the different stimuli that arose during the experience. *The mechanism through which these antecedents influence the individual responses of the visitors* was labeled Mechanism C and is highlighted with red circles in Figure 12.

This was an underlying mechanism that, similarly to Mechanism A and B was not consciously perceived by the informants, nor by the researcher through observation, but that was uncovered through analyzing differences between the informants' responses to the different involvement triggers and involvement worlds and by exploring the underlying factors that seemed to cause these differences. Some of the differences were caused by differences in the visitors' interactions with the different elements of the experiencescape (related to Mechanism A), but the visitors' responses were also influenced by several underlying antecedents. Mechanism C was closely connected to Mechanism B, as it

mediated the effects of Mechanism B, influencing the events actualized by Mechanism B. This aligns with the critical realist understanding of how experiences are formed, were individual antecedents, in the form of mental frameworks shaped by past experiences and personal beliefs, are considered to influence how we see and experience the world (Bhaskar, 2008; Giddings & Grant, 2006; Neuman, 2011).

While the data showed that personal and context-specific antecedents influenced how the visitors responded to the different stimuli that arose during the experience. How this influence happened was not evident in the analysis, which could be an indication that there might be other, deeper, mechanisms at play in the immersion process that the methods and analytical procedures employed in this thesis may not have been able to capture. More research into the mechanisms that influence the immersion process is therefore needed.

6.2.4 Involvement

The final key mechanism identified as influential to the immersion process was involvement, labeled Mechanism D (highlighted in green in Figure 12). Involvement was consistently identified as central to the visitors' progression through the immersion process as increasing level of involvement was found to be the driving force driving the immersion process forward. This finding stands in contrast to the assertions of Carù and Cova (2005) who argued that the immersion process was driven forward by the visitors' cyclical and gradual familiarization with the activity or activity context. It does, however, align with the findings of Brown and Cairns (2004) who suggested that the immersion process is driven forward by the visitors' increasingly higher level of involvement with the experience.

The actualization of Mechanism D appeared to be moderated by Mechanism B, as individual responses could both enhance and stifle the visitors' involvement in the experience, and thereby either enhancing or

diminishing the actualization of Mechanism B. Mechanism A-D are all closely connected to one another as well as to the underlying structure of the immersion process and it is the interplay between Mechanism D and the three remaining mechanisms that causes the dynamic, fluctuating nature of the immersion process identified in this thesis. It is therefore important to understand these four underlying mechanisms in relation to one another, as they come together and combine with the previously described structure to become what in this thesis has been identified as the immersion process.

While the underlying structure and mechanisms discussed in this section are described as belonging to the domain of the real, it is important to highlight that this does not imply that they exist separate from the individual and the total visitor experience. On the contrary, the findings contradict the positivist notion that the internal is separate from the external and that stimuli only arise externally, separate from the individual (Mehrabian & Russell, 1974; Thompson et al., 1989), since the individual visitors were found to be an integral part of the identified mechanisms and were also found to play an active role in the creation of stimuli.

6.3 The influence of contextual conditions on the immersion process

While the findings suggest that the core components of the immersion process were comparable across experience contexts that varied in terms of technology integration, activity script, theme, group familiarity, and visitor control. It does not imply that contextual conditions did not have any influence on the immersion process. Instead, contextual conditions were found to influence which antecedents were of significance and which involvement triggers and involvement worlds were available to the visitors. Contextual conditions were thus generally found to influence what events and experiences were actualized in a given context, but not the underlying structure of the immersion process and the mechanisms

that influence it. That the same structure was consistently found across cases that varied in terms of technology integration is particularly interesting as one of the gaps identified in the literature is the lack of a shared understanding of the nature of the immersion process across tourism and human-computer interaction research. That the same structure and mechanisms were consistently identified across Study 1-3, provide empirically grounded indications that the fundamental structure of the process leading to the state of immersion is comparable across both conventional "real world" tourism experiences and virtual technology-empowered experience products when they are offered in the context of managed visitor attractions.

This thesis is not the first to uncover similarities between the individual processes involved in virtual and "real-world" experiences. It has for example been found that that the emotional engagement experienced when visiting a managed visitor attraction physically is comparable to the emotional engagement experienced when visiting the same attraction virtually (Wagler & Hanus, 2018). A recent study by Chirico and Gaggioli (2019) furthermore found that virtual and "real world" consumer experiences could elicit the same emotions in consumers, indicating that virtual experiences trigger many of the same subjective processes as "real world" experiences.

Another important finding that emerged through this thesis, is the acknowledgment that there are different involvement worlds that can lead visitors to the state of immersion. Three such involvement worlds, or paths, were identified in this thesis, and it was found that the visitors experienced the same state of immersion regardless of which of the three paths had led them to the state. This is however a finding that contradicts the existing literature, where it has been argued that different paths lead to different *types* of immersion (Ermi & Mäyrä, 2005; Hansen, 2014).

Of the three involvement worlds identified in this study, only "Involvement with the present" had previously been linked to the

immersion process in the existing literature (see for example Carù and Cova, 2006, 2007; Hansen and Mossberg, 2013; Mainemelis, 2001). It was also the only involvement world that was consistently identified across all the three case contexts studied in this thesis. This does not however necessarily imply that this involvement world is inextricably connected to the immersion process. Instead, its consistent presence across the three cases might be an unintended consequence or bias resulting from the inclusion criteria employed in the case selection process. One of the inclusion criteria the selected cases needed to fulfill was that they offered an experiencescape that embodied the characteristics that have previously been found to facilitate immersion (themed, enclaved, secure, and offering opportunities for active participation). However, since involvement with the present is the only path to immersion previously identified in the literature, it could be hypothesized that these characteristics are the characteristics of experiencescapes that facilitate immersion through "involvement with the present", rather than being characteristics of experiencescape that more generally facilitate immersion. More research is needed to investigate whether "involvement with the present" is indeed inextricably connected to the immersion process or if there are contexts in which this involvement world is not a part of the process.

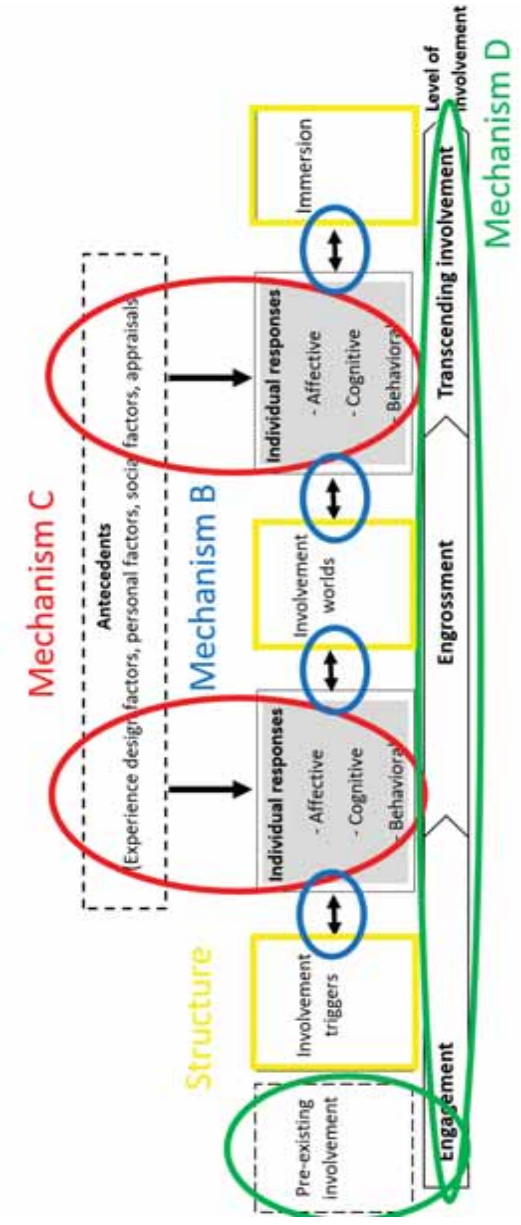

Figure 12 Structure and mechanisms in the immersion process.

7 Conclusion

Immersion is a nascent research topic in the tourism literature, and the findings generated through this thesis contribute to expanding the limited body of research that exists on the immersion process in tourism-related visitation contexts. The main contribution is the development of a new model of the immersion process that is grounded in empirical data and identified across a range of experience products offered within the context of managed visitor attractions. The model illustrates the structure of the immersion process, which was found to consist of three stages; involvement triggers, involvement worlds, and the state of immersion. Each stage was connected to an increasingly higher level of involvement and the visitors were found to continually fluctuate between them, making the process dynamic in nature. The structure appeared to be held together by four mechanisms: visitors as co-creators, the influence of individual responses, antecedents influencing responses, and involvement.

The nature of the immersion process has been a topic of contention in the literature, as it has been described differently across different experience contexts. This has resulted in a somewhat fragmented understanding of the nature of the immersion process and by developing a model of the immersion process that is grounded in empirical data and identified across experience contexts that vary in terms of group familiarity, visitor control, activity script, and technology integration, the findings of this thesis contribute towards closing an important gap in the literature. Although more research is needed to develop the substantive theory proposed in this thesis into a formal theory with applicability beyond the substantive context examined in this thesis, the findings provide preliminary indications that the core components of the immersion process might be comparable across experience contexts that differ in terms of contextual conditions.

7.1 Implications for future research

While this thesis contributes towards building a foundation for a cross-contextual understanding of the nature of the immersion process and its core components, considerably more research is needed to build a shared understanding of the immersion process across research fields such as tourism and human-computer interaction (HCI) research. The findings of this thesis can however be used as a point of departure for future research seeking to close the gaps in how the immersion process is understood in the literature. The immersion process model, its categories, suggested relationships, and hypothesized mechanisms can for example be used as the basis for a quantitative study seeking to test the applicability of the model to a wider range of experiencescapes in an effort to develop a more formal theory on the nature of the immersion process.

The preliminary indications provided through this thesis do however also offer some implications for future research. The similarities identified between the immersion process in virtual technology-empowered experiences and "real world" tourism experiences imply that findings from HCI, where research on immersion is more developed, could be a valuable source of input for research on immersion within the context of tourism. Previous research in HCI has for example showed that music (Cairns et al., 2014), time pressure (Cairns et al., 2014; Jennett et al., 2008), and the (perception) of playing against human opponents (Cairns et al., 2013) have a significant positive influence on immersion in computer games. Based on the findings of this thesis it could be hypothesized that such findings might also apply to immersion in the context of tourism experiences, thus opening several interesting opportunities for future research exploring the applicability of existing findings in new experiential contexts.

7.2 Practical implications

In the last few years, there has been an increase in interest in immersive experiences among tourism experience providers (Lunardo & Ponsignon, 2019). Due to the scarcity of studies on immersion experience providers have, however, been offered limited empirically grounded insights into how they can design experience products that encourage immersion. The findings of this thesis contribute in this respect, offering practical implications by adding to the limited body of knowledge about how attraction managers can use the experiencescape and experience product design to facilitate immersion.

The identification of involvement triggers is particularly relevant in this regard. As these were experiences that had the ability to trigger the visitors' involvement in the experience product and were found to largely arise out of the visitors' interactions with different elements in the experiencescape (including the physical environment, objects, personnel, and other visitors). This close connection between the involvement triggers and the experiencescape indicates that the experiencescape can be designed to facilitate different involvement triggers, which in turn can facilitate the visitors' progression towards the state of immersion by increasing their level of involvement in the experience.

Thirteen such involvement triggers were identified in this thesis: physical challenges, intellectual challenges, group assimilation, social interactions, personal resource utilization, having a stake, teamwork, receiving social support, social interaction, surprises, changes in group dynamics, memories, and imagination. While this list is context-specific and non-exhaustive, findings from previous studies indicate that these triggers also have the potential to trigger involvement in other experience contexts (Hansen & Mossberg, 2013; Tung & Ritchie, 2011). Knowledge about these involvement triggers can thus be used by experience providers to create experiencescapes and experience products that

facilitate involvement and immersion. Previous research has for example showed that experience providers can trigger their visitors' memories and feelings of nostalgia by incorporating nostalgic cues into the experiencescape (Hamilton & Wagner, 2014). It has also been shown that experience design can be used to facilitate involvement triggers such as "social interactions" and "group assimilation" by designing experience products that require visitors to work together towards a common goal, as this increases the amount of social interactions and can lead to the formation of communitas (Arnould & Price, 1993; Turner, 1987). For experience product providers it can be advantageous to seek to incorporate several involvement triggers into their experience products. Both to harvest the cumulative benefits of exposing visitors to several involvement triggers during the experience and to be able to trigger the involvement of a broader range of visitors as individual visitors were found to respond differently to different involvement triggers.

This thesis also saw the identification of three different involvement worlds, or paths, that could lead visitors towards the state of immersion. Like the involvement triggers, the findings indicated that these paths could also be facilitated through experience design and the design of the experiencescape. The involvement trigger "involvement with the present" appeared to be facilitated by enclaved, themed, and safe experiencescapes that offer opportunities for active participation. Whereas "involvement through personal life narrative" was facilitated by a combination of experience design that allowed time for reflection and an experiencescape that was designed to trigger the visitors' memories and imagination. Lastly, "emotional involvement with narrative and/or characters", could be facilitated by incorporating an emotionally engaging narrative into the experience design.

8 References

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Part 2

List of papers

Paper I

Blumenthal, V., & Jensen, Ø. (2019). Consumer immersion in the experiencescape of managed visitor attractions: The nature of the immersion process and the role of involvement. *Tourism Management Perspectives*, 30, 159 - 170.

Paper II

Blumenthal, V. (2020). Consumer immersion in managed visitor attractions: The role of individual responses and antecedent factors. *Scandinavian Journal of Hospitality and Tourism*, 20(1), 4-27.

Paper III

Blumenthal, V., & Gjerald, O. "You just get sucked into it": Extending the Immersion process model to virtual experiences in managed visitor attractions. *Submitted to Journal of Hospitality and Tourism Management.*

Paper I

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Consumer immersion in the experiencescape of managed visitor attractions: The nature of the immersion process and the role of involvement

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A B S T R A C T

This article focuses on consumer immersion and explores how interactions with the experiencescape can influence the immersion process. The study presented in this article is explorative in nature and utilize a grounded theory approach. Data was collected through a combination of participant observation and semi-structured interviews with visitors participating in themed sailing trips offered at the Roskilde Viking Ship Museum in Denmark. Data analysis revealed three distinct stages in the immersion process: "involvement triggers", "involvement words" and "state of immersion". Each stage was connected to an increasingly higher level of involvement. Findings further indicated that the visitors' progression through the immersion process was dynamic and appeared to be moderated by the visitors' individual reactions to the incidents that occurred during the experience. This article provides new insights into the nature of the immersion process that have practical and theoretical implications for attraction management as well as experience design.

1. Introduction

Over the last few decades, researchers have increasingly directed their focus towards the diversity of human experiences. This has resulted in the identification and development of a range of different experience concepts that are frequently referenced in the tourism literature, including peak experiences (Maslow, 1964), extraordinary experiences (Arnould & Price, 1993), transendent experiences (Schouten, Mcalexander, & Koenig, 2007) and flow (Csikszentmihalyi, 1990). Another experience concept that appear to have received less attention from tourim scholars is that of immersion (Hansen & Mossberg, 2013). Immersion as a concept was first introduced to the study of tourist experiences by Pine and Gilmore in 1999. Yet, only a very limited number of tourism studies have since focused on immerison as an independent experience concept. Immersion is however often included as an important dimension of more established experience concepts such as flow, peak and extraordianry experiences. Lindberg and Østergaard (2015) for example, discusses at length the role of immmerson in transendent experiences, while Arnould and Price (1993) argue that both extraordinary experiences and peak experiences involve some degree of immersion. According to Hansen and Mossberg (2013:212) however, immersion do not only play a part in these type of experiences, but make up "a pivotal part" of them. It would thus appear as though immersion is one of the underlying components shared by higher-level experience concepts such as peak experiences, extraordinary experiences and flow. Understanding immersion and the process leading up to it can therefore help us increase our understanding of these experience concepts better and their underlying components.

Furthermore, understanding the immersion process and the factors that influences it can have valuable practical implications. Previous studies have shown that immersion is connected is to emotional engagement (Brown & Cairns, 2004; Jennett et al., 2008) which is key in the creation of memorable tourism experiences (Johnston & Clark, 2001; Kim, 2014). Memorable experiences in turn, give rise to positive emotions, foster intentions to revisit and increase the spread of positive word of mouth (Kim, Ritchie, & Tung, 2010; Slåtten, Krogh, & Connolley, 2011). In an industry such as tourism were organizations are constantly competing with each other to facilitate high quality experiences, the ability to provide visitors with memorable experiences is crucial for their ability to remain profitable (Campos, Mendes, Do Valle, & Scott, 2016; Pine & Gilmore, 1999). A better understanding the immersion process can thus provide practical implications for attractions and experience providers wanting to gain competitive advantages in their efforts to create high quality memorable experiences for their visitors.

1.1. What is immersion?

Immersion has been defined as "a form of spatio-temporal belonging in the world that is characterized by deep involvement in the present moment" (Hansen & Mossberg, 2013:212) or as "the feeling of being fully absorbed, surrendered to, or consumed by an activity, to the point of forgetting one's self and one's surroundings" (Mainemelis, 2001:557).

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Immersion involves a loss of self-consciousness and lack of awareness of time (Hansen & Mossberg, 2013). It has been described as the deepest form of involvement (Brown & Cairns, 2004) and as the process of accessing the deepest level of an experience (Carù & Cova, 2007). A common metaphor used to describe the immersion process is that of being plunged into a pool, where the visitor becomes instantly immersed as they are plunged into an experience (Carù & Cova, 2006). This metaphor has however been criticized by several authors who consider the immersion process to be progressive (Brown & Cairns, 2004) or dynamic (Hansen & Mossberg, 2013), rather than instant. To this date, only a very limited number of studies focusing on the nature of the immersion process have been published and our understanding of its nature is therefore limited. Exploring studies of the immersion process from different experience contexts can therefore be of great value.

One of the few studies published on the immersion process is a study by Brown and Cairns (2004) conducted within the context of computer games. Their findings indicated that the immersion process was progressive and that consumers progressed through degrees of involvement, ranging from engagement to engrossment before finally reaching a state of total immersion. Involvement appeared to be the key driver behind the process and to reach the first level of involvement (engagement) the game had to be able to capture the consumer's initial interest, which would motivate them to invest time, effort and attention to “get into” the game. To reach the next level of involvement, engrossment, the game had to have the capacity to involve the consumer beyond the physical aspects of the game, creating a sense of emotional involvement. In the final stage of the immersion process, total immersion, the consumer became completely absorbed by the experience, feeling as though they were actually present in the game, losing a sense of their real world surroundings and their real world self.

Brown and Cairns (2004) offer a clear model of the process leading up to immersion, but while they acknowledge the fleeing nature of immersion, they do not offer any direction as to what happens after the consumer has become immersed. This was however included in Carù and Cova's (2005) model which is based on their study of artistic experiences. Their model proposes two different paths to immersion depending on how experienced the consumer is. Experienced consumers become immersed instantly, while inexperienced consumers go through a cyclical process where they progress through the stages of nesting, investigating and stomping. The process is driven forward by the consumer's gradual familiarization with the experience and the experience setting and it is at the final stage, the stomping stage, were the consumer is in a position to become immersed. The state of immersion might however only last for a few moments, before the consumer returns to the nesting stage and restarts the process. A third model of the immersion process has been proposed by Hansen and Mossberg (2013), based on their study of nature based adventure tourism experiences. In contrast to the two previous models, that presents the immersion process as a secquential and progressive, they suggest that the immersion process is dynamic in nature and that consumers fluctuate between different levels of immersion throughout the duration of experience. Each of these three models of the immersion process is illustrated in Fig. 1.

The studies described above were conducted within three widely different contexts (computer games, artistic experiences and adventure tourism) and some of the differences in their depiction of the immersion process might therefore be due to contextual differences. While the focus of this article is on immersion within the context of tourism experiences and only Hansen and Mossberg's (2013) study originates from the same context, it is still valuable to explore Brown and Cairns' (2004) and Carù and Cova's (2005) models, given the limited number of studies currently published on the topic. Nonetheless, our review of the existing literature indicates that there is a need for further empirical exploration of the immersion process and its nature, in the context of tourism and across different experience contexts.

1.2. Factors that can facilitate or hinder immersion

As immersion is a relatively underexplored phenomenon, our understanding of the factors that facilitate and hinder it is also limited. Several studies have however identified the experiencescape as an influencing factor (Carù & Cova, 2007; Hansen, 2014; Hansen & Mossberg, 2013). Experiencescape is a term used to describe the environment with witch consumers interact to create their own experiences (Mossberg, 2007). The term was developed from Bitner's (1992) earlier model of the “servicescape” which mainly focused on the effect of ambience and physical surroundings on consumer behavior. The experiencescape model however has a wider, more holistic approach to the consumption environment, including not only the physical environment, products and objects, but also personnel and other visitors (Mossberg, 2007). Previous research has shown that all these elements have a direct influence on the visitor's experience through the visitor's interactions with them (Arnould & Price, 1993; Mossberg, 2007; Silkapit & Fisk, 1985; Wakefield & Blodgett, 1996).

Carù and Cova (2007) has furthermore identified three distinct characteristics of experiencescapes that can facilitate immersive experiences: the experiencescape should be themed, clearly limited in time and space and be perceived as safe. A themed experiencescape can facilitate immersion by providing a symbolic packaging around the experience, adding meaning to the experience (Edensor, 2000). This in turn stimulates emotional involvement with the experience (Mossberg, Hanefors, & Hansen, 2014) which is considered key to the immersion process (Brown & Cairns, 2004; Jennett et al., 2008). Creating an experiencescape that is enclaved with clear boundaries enhances the intensity of the experience by reducing interfering elements (Firat & Dholakia, 1998). Such rites of intensification can in turn increase the emotional intensity of the experience and facilitate immersion among visitors (Hansen, 2014). Furthermore, being in a place with clear boundaries facilitates the perception of the experience taking place in a liminal space, where the norms and worries of daily life are temporary lifted ((Lindberg & Østergaard, 2015). Allowing the visitors to leave their self-awareness behind, let themselves go, and become completely immersed in the experience (Carù & Cova, 2007). Lastly, security and the feeling of being safe is significant in the sense that worrying about once health, belongings etc. depletes the consumer's concentration and distracts them from becoming immersed (Carù & Cova, 2007; Hansen & Mossberg, 2013).

The visitors' interactions with different elements in the experiencescape have previously also been shown to influence immersion. Mossberg et al. (2014) for example, found that social interactions were vital to the immersion process. Tourists often find themselves in an environment that is unfamiliar and potentially dangerous and guides and other on-site personnel can therefore play an important role in facilitating immersion by creating a protective frame around the experience (Hansen & Mossberg, 2016). Guides can also help create a thematic packaging around the experience even when the experience is set in a natural unmanaged experiencescape (Hansen & Mossberg, 2016). Service personnel can also facilitate immersion by taking on the role as interpreters of the experience when consumers are faced with unfamiliar practices, helping to close the distance between the consumer and the experience (Carù & Cova, 2006).

Experiences can be understood as subjective, individual phenomenon resulting from series of complex psychological processes within the individual (Larsen, 2007). What follows from this understanding, is that providers of experience products cannot themselves produce

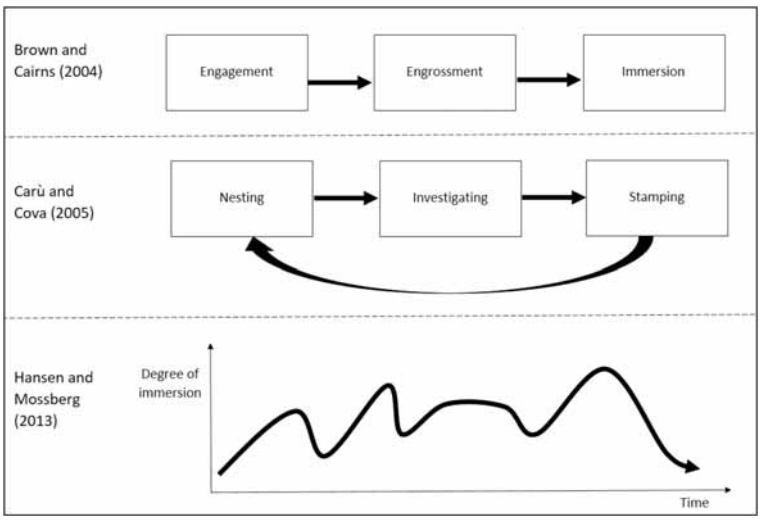

Fig. 1. Theories on the nature of the immersion process (adapted from Brown and Cairns (2004), Carù and Cova (2005) and Hansen and Mossberg (2013)). (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

experiences for their customers. They can only facilitate experiences by creating circumstances and environments with which consumers can interact, in order to create their own experiences (Campos et al., 2016; Jantzen, 2013). One of the central challenge facing tourism planners today is to design experience products that effectively facilitates tourist experiences that are memorable and out of the ordinary (Hansen & Mossberg, 2013; Ritchie, Hudson, Jackson, Morgan, & Hemmington, 2009; Wirtz, Kruger, Scollon, & Diener, 2003). Expanding our understanding of the connection between the immersion process and the experiencescape is therefore important, as it will enable providers of experience products to facilitate immersive experiences to a greater extent. Which can give them a competitive advantage given the connection between immersion and both memorable and extraordinary experiences.

2. Methods

Given that the immersion process is a relatively unexplored topic, there is a need to apply a methodological approach that facilitates the discovery of new theories based on empirical inquiries (Miles, Huberman, & Saldaña, 2014). Grounded theory (GT) was therefore deemed to be a suitable approach for the purpose of this study as GT facilitates the generation of new theories and is considered to be particularly applicable to the study of phenomena of which our understanding is limited (Strauss & Corbin, 1990). The present study do not however follow the strict interpretation of grounded theory originally proposed by Glaser and Strauss (1967), as it set out with a pre-determined focus on the role of the experiencescape in the immersion process, which provided direction for both the data collection and the subsequent analysis. Furthermore, involvement played a role as a pre-identified sensitizing concept (Strauss & Corbin, 1990) that influenced the data collection, as a high level of involvement was seen as a potential indicator of immersion (Brown & Cairns, 2004).

As the aim of this study was to explore the relationship between the immersion process and the experiencescape in which the process takes place, the case study approach was chosen as it allows for the study of the core phenomenon within its real life context (Yin, 2003). Due to the explorative nature of this study, a single case design was chosen, as this design enables a deeper exploration of the case context. The selected case was chosen based on a purposive sampling strategy (Creswell, 2014). Since the aim of the present study was to explore the immersion process, it was crucial to identify a case that had the potential to facilitate immersive experiences. A set of pre-defined criteria was therefore developed, based on our review of previous research on the facilitators of immersion. In line with the findings of Carù and Cova (2007) it was determined that the case should offer an experiencescape that had the potential to be perceived by visitors as being themed, secure and enclaved. Furthermore, the selected case should offer visitors opportunities for active, physical participation in the experience, in line with the assumption that physically active experiences facilitate immersion to a greater extent than passive experiences (Hansen & Mossberg, 2013). The final criteria was that the selected experience product should be offered within the context of a managed visitor attraction (Swarbrooke, 2002), as this was considered to provide a more stable context than a purely natural, unmanaged setting, which are typically more prone to contingencies (Cohen, 1995).

Based on the above-mentioned criteria, the "Viking ship sailing trip" experience product offered at The Roskilde Viking Ship Museum in Denmark was selected as the case for this study. The experience involves visitors sailing out into the Roskilde fjord in a replica of an old Scandinavian sailboat together with two crewmembers and 8–15 fellow visitors. The trip requires active participation as the visitors partake in the rowing, steering and sailing of the ship. The trip takes approximately 50 min and is set within the context of an active museum where visitors can admire a variety of replica ships and watch craftsmen work with different aspects of the boat building process (rope making, sail

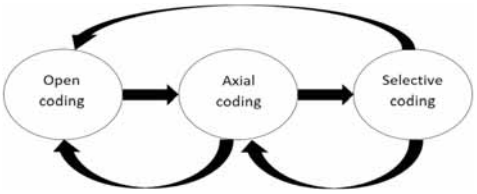

Fig. 2. The coding process in grounded theory based on Strauss and Corbin (1990).

weaving, woodcarving etc.). This context contributes to create a clear thematic frame around the activity, while simultaneously adding to the impression of being in an enclaved space. This feeling is further enhanced by the dramaturgy of the experience, as visitors depart from the museum and set out into the fjord, creating a sense of being in a space with clear spatial and temporal limits. The museum also enhances the visitors' perception of safety by providing safety instructions prior to departure and by emphasizing the skills and expertise of the crew-members.

2.1. Data collection

One of the major challenges with the study of immersion is that of measurability. Immersion is a fleeting psychological state experienced by an individual (Mainemelis, 2001) and it can therefore be difficult to objectively determine whether someone is immersed or not. This difficulty is enhanced by the lack of self-awareness that characterize the state of immersion, which obstructs the possibility of interviewing informants about their experience in real time. Researchers have therefore opted for interviewing informants about their experience retrospectively (see among others Lindberg and Østergaard (2015), Hansen and Mossberg (2013) and Brown and Cairns (2004)). This approach does however have its weaknesses, as it is dependent on the memory of informants who by definition were lacking self-awareness in the moment in question (Mainemelis, 2001). To overcome this weakness researchers have attempted to measure immersion non-intrusively, in real time by utilizing physiological measures such as eye movement tracking (Cairns, Cox, Berthouze, Dhoparee, & Jennett, 2006; Jennett et al., 2008). These studies has however yet to provide consistent results in terms of the ability of these tools to measure and identify the state of immersion (Jennett et al., 2008). As both approaches have its weaknesses, it was determined that retrospective semi-structured interviews would be used to identify immersion, as this approach has previously been successfully applied to the study of immersion in the context of tourism (Hansen, 2014; Hansen & Mossberg, 2013). The interviews were supported by the use of "experience line charts" - a tool that was successfully applied by Hansen (2014) in her study of immersion in nature-based tourism experiences. These charts were used to assist informants in drawing a curve indicating the varying levels of involvement they experienced during the course of the experience. This curve was then used to guide the interviews towards peak moments of involvement, based on the understanding of high involvement as a potential indicator of immersion (Brown & Cairns, 2004). Interviews were conducted directly after the sailing trip had ended, which allowed us to interview participants while the experience was still fresh in their memory and without interfering with their experience during the trip. During the interviews, informants were probed about incidents during the trip, the role the different elements in the experiencescape had played in their experience, their level of involvement and their perception of time. The interview guide is attached in Appendix 1. Informants were initially selected based on a random sampling strategy, which gradually progressed into a more targeted theoretical sampling strategy as the emergent theory begun to evolve and data pointed to new directions worth pursuing. Thirteen informants were interviewed for the purpose of this study. Ten were interviewed together with their travel partner and three were interviewed alone. Data collection ceased when a sufficient level of saturation was reached and interviews no longer yield any new theoretical insights.

Data from the interviews were supplemented with field notes from the participatory field observations. During the observations the researcher focused mainly on interactions between visitors and the different elements in the experience and their reactions to these interactions in terms of level of excitement, what they payed attention to, how focused and involved they seemed and potential signs of immersion. Ques were sought after in the visitors' verbal ques. as well as in their body language and facial expressions. These observations had two functions. Firstly, to provide the researcher and participants with a common ground for discussing incidents and occurrences during the sailing trip. Secondly, the observations were used to triangulate data from the interviews as a means of adjusting and reinforcing the categories identified in the interview data. Generally, the observations corresponded well with data gathered from the interviews. There was only one instance where the observational data directly contradicted the interview data, and in this instance, it was decided to exclude the category in question (taking photos and filming) from further analysis due to its limited empirical support.

2.2. Data analysis

The interviews were transcribed and analyzed together with the observational data through a circular coding process consisting of three stages; open coding, axial coding and selective coding (Strauss & Corbin, 1990). The open coding stage consisted of repeated line-by-line analysis of the data were new and emerging codes were compared to previous codes in a circular process of coding and re-coding. During the axial coding, codes derived from open coding were grouped together and categorized into a hierarchy of abstraction, with more descriptive sub-categories being linked together with higher-level main categories. Finally, during the selective coding the relationship between the categories developed were analyzed and compared with the conceptual content of the initial definition of immersion. The way the sub-categories fitted conceptually with this main category was checked and contextual specification was achieved as a part of the results. While presented here sequentially, the coding process in grounded theory is circular (Blaikie, 2000) and emergent codes and categories were compared constantly in order to refine, redefine and re-code existing codes and categories (see Fig. 2).

3. Findings

3.1. Categories identified in the data

The coding process described above resulted in the development of a set of nine categories that played a role the immersion process; (1) "physical challenge", (2) "group assimilation", (3) "personal resource utilization", (4) "intellectual challenge", (5) "memories", (6) "imagination", (7) "involvement with the present", (8) "involvement through personal life narrative" and (9) "immersion". Each of these categories is presented in more detail in the following section. A summarized overview of the different categories and their characteristics is presented in Fig. 3.

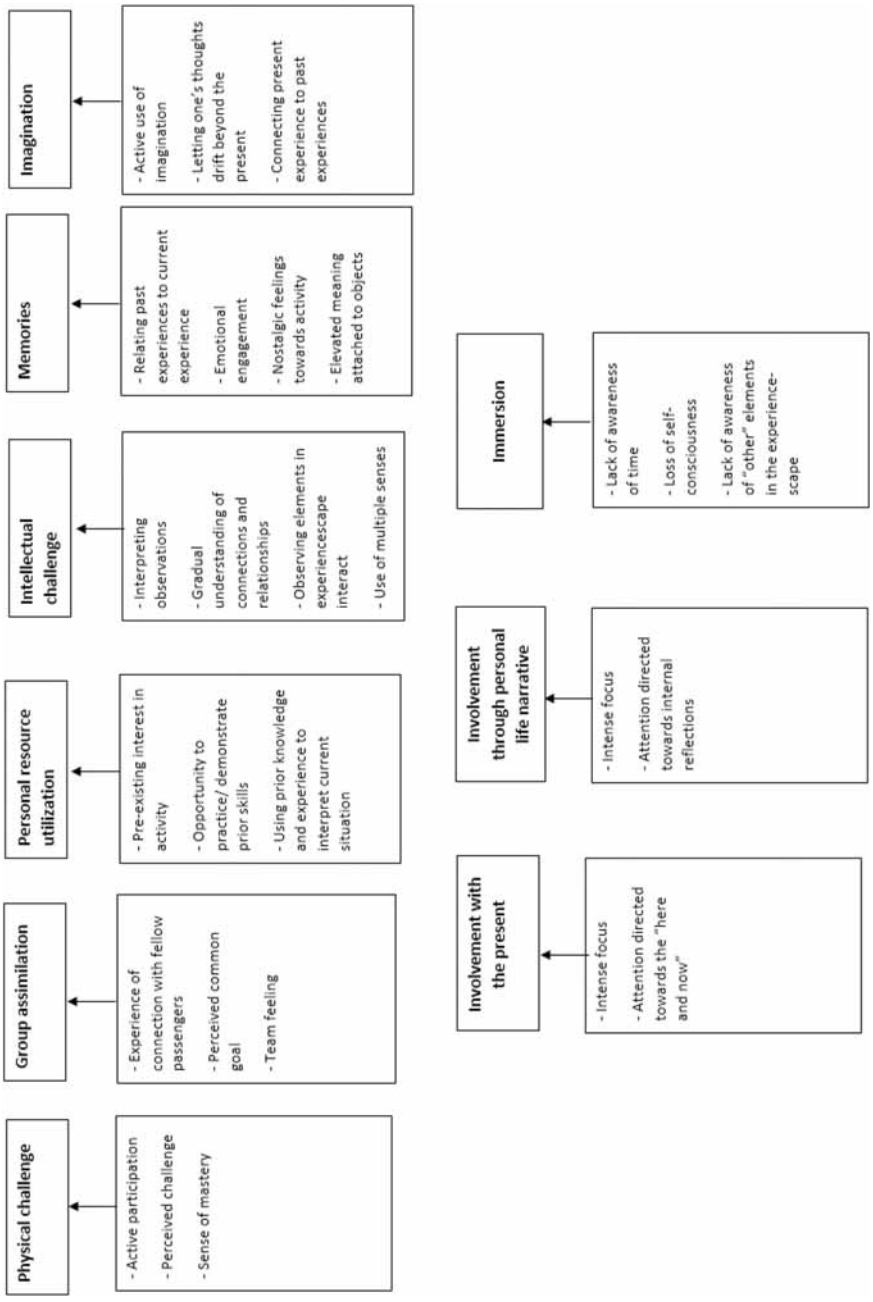

Fig. 3. Overview of identified categories and their characteristics.

Category 1: Physical challenge

The category “physical challenge” grew out of the visitors' interactions with the physical environment and included their active participation in rowing and sailing the boat, which many visitors found challenging. The challenge arose from physical activities such as the strain of hoisting the sail, the unfamiliar task of handling the oars and the focus required to be able to coordinate one's own rowing rhythm with that of others. The level of focus required appeared to increase when there was a sense of competition involved.

Visitor 7: “Every time I began focusing on the other boat I lost my rhythm. So it was very important to, to be present.”

The physical challenges experienced by the visitors required high levels of involvement with the present moment and the task at hand, but gave rise to a sense of mastery when they were able to overcome the challenge. One participant even reported experiencing a state of flow (Csikszentmihalyi, 1990) while steering the boat.

Visitor 5: “Subconsciously, you are doing it. But you are doing it without having to think about it too hard. You are just subconsciously steering, so it doesn't. Then you are sort of just enjoying it.”

Category 2: Group assimilation

Several informants reported feeling as though they were a part of a team working towards a common goal. This sense of group identification and the feeling of being part of something bigger than themselves appeared to lead to increased involvement. One informant explained that she saw herself as a part of a bigger machinery and thus felt highly involved with the sailing of the boat, even when she was not herself directly involved in it.

Visitor 13: “…because I feel like I am a part of a big plan. It's really like that, if one person is missing then the whole thing is not the same.”

This high level of involvement through indirect participation and sense of team spirit seemed to lead to high involvement with the present, excluding thoughts and reflections external to the immediate experience. Becoming involved through group assimilation appeared to be dependent on the visitor feeling a sense of connection with fellow passengers indicating the important role of social interactions in this involvement trigger.

Category 3: Intellectual challenge

The category “intellectual challenge” was connected to visitors taking on the self-assigned task of observing and interpreting how different elements in the experiencescape interact and effect one another: The effect of the wind on the sail, the rudder's effect on the direction of the boat, the employees communicating with each other etc.

Visitor 1: “…there was a point in which, she ordered something to be done, and the guy who was at the stern…Well anyway. She wanted something to be done. He did it and said: I've done this. And she didn't acknowledge it. So he said it again louder. And then she acknowledged it!”

Short moments of epiphanies followed by learning, gradual understanding of relationships and increased enthusiasm seemed to be key characteristics of this category. The intellectual challenge of identifying and interpreting the connections between different elements in the experiencescape required the visitors to pay attention to several elements simultaneously and make use of multiple senses to take in information from the surroundings. Hence, this category contains a multitude of interactions among the visitors and different elements of the experiencescape, including other visitors, personnel, objects and the general physical environment. This put high demands on the visitors' attentional resources and appeared to lead to a high level of involvement with the present.

Category 4: Personal resource utilization

Another category that played a role in the immersion process was “personal resource utilization”. Key to this category was the visitors' prior skills and experience and the degree to which the experience provided them with the opportunity to use these resources. This category was outlined by an informant who became highly involved with the present moment as she witnessed the crew attempt a sailing maneuver she knew from previous experience to be very difficult.

Visitor 10: “I know how difficult it is to sail into the harbor. So I was very interested there in the end. Then it increased again. My involvement. Because I was curious to see if he could manage to sail into the harbor with the sails. It is difficult. But they managed it fine.”

In this particular case, the skills and knowledge of the employees played an important role in the informant's immersion process, but ultimately, it was the informant's own experience with and interest in sailing that triggered her involvement.

Category 5: Memories

The category “memories” include the visitors' emotional involvement with the experience activated by emotional attachment to objects, which trigger memories and a sense of nostalgia. According Schouten et al. (2007) objects that have been used in past transcendent experiences can take on an elevated meaning to the consumer and serve as a trigger for future transcendent experiences. For one of the informants in the present study, the sail seemed to have taken on such an elevated meaning, where the mere sight of it being caught by the wind instantly transformed her into a state of transcendence.

Visitor 2: “I was just so fascinated by the sail. It was just so epic and the way in which it went up and, it was, it got caught immediately by the wind.”

The anticipation of the appearance of the object lead the informant to become fixated on it. Yet her focus appeared to be directed inwardly as she connected past experiences and her personal life narrative to the current experience, bringing nostalgic feelings towards the activity to the surface. The present experience hence appeared to trigger internal reflections creating involvement through the informant's personal life narrative rather than through involvement with the present.

Category 6: Imagination

The category “imagination” involved the visitors' active use of their own imagination as they let their thoughts drift, connecting the present experience to prior experiences and imagining themselves in another context or role.

Visitor 5: “You are almost, sort of experiencing having a boat.”

This active use of imagination, initially triggered by elements in the experiencescape, appeared to lead visitors to become more involved with the experience through internal reflections and their personal life narrative.

Prior experiences and interest appears to play an important role as a facilitator of this type of imaginative internal reflections. Prior interest in particular, appeared to effect the direction of the reflection and the level of involvement it generated as both of the informants who became immersed through this path had a high to very high interest in the topic they focused their imagination on.

Visitor 11: “It kind of made all the books that I've, like all the novels. When you read about them [Vikings] being out in the sea…rowing. Or actually sailing, it just makes it…more realistic. You can. You can see

what they are doing more."

Category 7: Involvement with the present

The category "involvement with the present" was characterized by a strong focus on the present moment. The visitors' attention was directed towards the situation unfolding in front of them and they were involved in the "here and now".

Visitor 12: "That was all I could think about when I was out there."

How focused they were varied from visitor to visitor, but the level of focus appeared to increase with their level of involvement. Some informants only reached a low level of focus, or a focus that only lasted for a few seconds, but for the most involved informants the focus on the present became so strong that they temporarily shifted from a state of high focus to a state of immersion. Involvement with the present hence seemed to be a key step in the process leading up to immersion, representing a deeper level of involvement than category 1–6.

Category 8: Involvement through personal life narrative

The category "involvement through personal life narrative" also seemed to represent a deeper level of involvement and was connected to a strong focus similar to that of category 7. In category 8 however, the visitors' focus seemed to be directed inwardly towards their own personal life narrative rather than being directed externally towards the present. Instead of becoming involved with the experience through the events unfolding in front of them, the informants became involved through internal reflections, connecting the present experience to past experiences and periods of their life that are significant to them.

Visitor 2: "I used to sail when I was younger and I haven't really sailed much since. […] my chart was all about my sailing experience. And you know, being in the boat and sitting in it and get going, again. That's why my chart looks like that."

These internal reflections appeared to generate emotional involvement with the experience, and while the level of involvement reached varied from visitor to visitor, for some informants, the focus became all-consuming, leading them to a temporary state of immersion.

Category 9: Immersion

The category "immersion" is in a unique position as this category represents the pinnacle of the immersion process and the focus of this article. This category was to some extent pre-defined, as its outlines was drawn from existing definitions of immersion (Brown & Cairns, 2004; Carù & Cova, 2005; Hansen & Mossberg, 2013). The final version of the category was however derived from the data and based on the informants' description of a state where they reported experiencing a lack of awareness of time, loss of self-consciousness and lack of awareness of "other" elements in the experiencescape.

Visitor 11: "…when I get into it [rowing] it all goes away. Everything blurres out… Like you've get the wind whipping up and whistling around you and…and…You. You're just sat there."

When the informants were in this state, there were no longer any distance between them and the experience - the experience had become all-consuming.

3.2. Introducing of the core category – the relationship between the different categories

3.2.1. Involvement triggers, involvement worlds and the state of immersion

Analyzes of the nine sub-categories described above showed that involvement played a key role in each sub-category, pointing to involvement as the core category binding them all together. The analysis further indicated that each sub-category was connected to a certain level of involvement, which seemed to vary between the different sub-categories. Each of the nine sub-categories could thus be integrated into three main categories based on the level of involvement they were connected to: "involvement triggers" (category 1–6), "involvement worlds" (7–8) and "state of immersion" (9).

The sub-categories labeled involvement triggers represented the initial stage in the immersion process and the lowest level of involvement. These categories shared the ability to trigger the visitors' initial involvement with the experience by triggering an internal response within them. As visitors could experience several involvement triggers during the course of the experience these triggers could also increase the level of involvement beyond the initial triggering effect. The next category, labeled involvement worlds, was connected to a medium high level of involvement and was characterized by an intense focus with a clear attentional direction. Each of the two sub-categories labeled involvement worlds represented different attentional directions that were triggered by proceeding involvement triggers and the visitors' response to them. These involvement worlds represented one step deeper into the immersion process. This is where we began to see signs of visitors experiencing a distorted perception of time and reduced awareness of distractions in the experiencescape. The final category, state of immersion, contained only the sub-category immersion. This category represents the highest level of involvement, the most intense form of the core category. In summary, it seems as though the immersion process can be divided into three distinct stages (involvement triggers, involvement worlds and a state of immersion) and that the process is driven forward is the visitors' increasing level of involvement. Based on these findings, an overall model of the immersion process was developed to illustrate the relationship between level of involvement, the main categories and the different sub-categories (see Fig. 5).

3.2.2. Differentiating the immersion process: the role of individual responses and its dynamic nature

In the previous section, the immersion process is presented as a progressive sequential process where visitors move from one involvement trigger to an involvement world before becoming immersed if they reach peak level of involvement. This is however a simplification, as our analysis showed that informants fluctuated between different involvement triggers, involvement worlds and between different stages of the immersion process throughout the experience. Entering the immersion process through one involvement trigger did not exclusively tie the visitor to that involvement trigger for the entire duration of the experience. Instead, the majority of the informants reported touching upon several involvement triggers during the experience. Several informants also reported experiencing both involvement with the present and involvement through their personal life narrative during the course of the experience. This fluctuation can be illustrated by the immersion process of visitor 5, who first became immersed through a high level of involvement with the present caused by his struggled to overcome the physical challenge of steering the boat. As he mastered this challenge, his focus shifted towards his own imagination and he entered into a state of immersion yet again, this time through involvement with his own personal life narrative. This example illustrates the dynamic nature of the immersion process, but also points at the importance of the processual and emergent nature of the process. Demonstrating how one involvement trigger can not only trigger involvement but also contribute to the culmination of involvement and the process of becoming immersed (again) through another involvement trigger later in the process. Contrary to previous studies, the present findings indicated that the immersion process did not end after the visitor had become immersed (Brown & Cairns, 2004) nor that the entire process was restarted afterwards (Carù & Cova, 2005). Instead, our data showed that visitors continued to fluctuate between different levels of involvement even after having reached immersion the first time and that they did not necessarily return to the same involvement world as previously. The

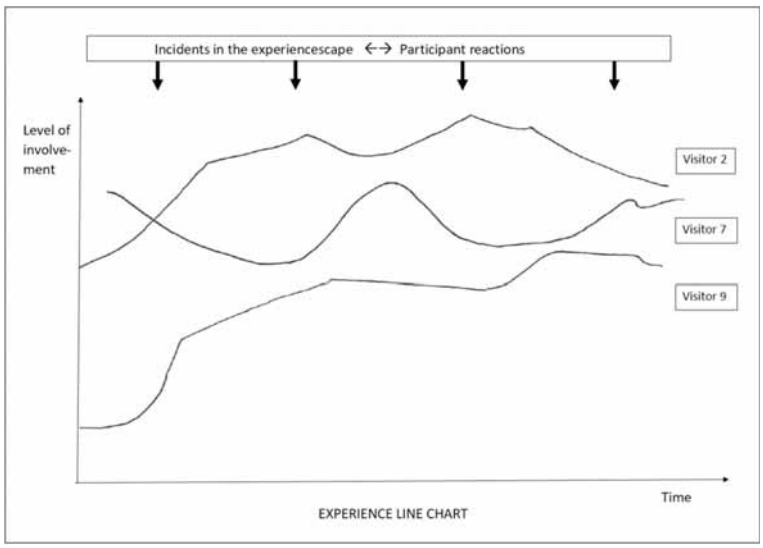

Fig. 4. The dynamic nature of the immersion process: Illustrations from the informants' experience line charts.

dynamic nature of the immersion process and the visitors' fluctuation between the different levels of involvement is illustrated in Fig. 4 where examples of the informants' experience line charts are displayed.

Fig. 4 also illustrate another important element in the immersion process: the role of individual responses. The informants experience was not only influenced by the visitors' interactions with the different elements in the experiencescape and the incidents that occurred during the trip, it was also influenced by their response to these interactions and incidents. These responses were individual and appeared to influence the extent to which incidents lead to increases or decreases in the participants level of involvement. A physical challenge that triggered involvement in one informant did not necessarily trigger involvement in the other. Indicating that the visitors' individual response to involvement triggers and involvement worlds could have a moderating effect on the visitors' progression through the immersion process. The moderating effect of the individual responses is illustrated in Fig. 5.

4. Discussion

The present study set out with an open explorative approach to the immersion process, with immersion itself as the only category that to some extent was pre-defined. The categories developed in this study are therefore data driven, and context specific. However, when comparing findings from the present study with existing experience-oriented literature, we are able to find conceptual connections between the categories developed in this study and previous research, indicating that our findings could potentially hold validity outside of the present experience context.

4.1. Involvement triggers

The first involvement trigger identified in the present study was "physical challenge", which has also been proposed as a potential source of immersion by Hansen and Mossberg (2013). "Intellectual challenge" was however also identified as a trigger of involvement in the present study. Informants reported that these self-assigned intellectual challenges required them to make use of multiple senses, which is in line with the findings of Mossberg (2007), who has argued that stimulating a variety of senses is crucial to involving the visitors intellectually in the experience. Intellectual engagement has also been identified as important in the co-creation of valuable experiences (Campos et al., 2016) and has been connected to the creation of memorable experiences (Tung & Ritchie, 2011).

The involvement trigger "group assimilation" has also been identified as a source of immersion in a study by Hansen and Mossberg (2013), where they found that adventure tourists traveling together for several consecutive days could become immersed into "communitas". The term "communitas" was first coined by Turner (1987) and has been described by Arnould and Price (1993,34) as "Feelings of linkage, of belonging, of group devotion to a transcendent goal…". In the existing literature, communitas have mainly been linked to the context of longer trips spanning across several days. It is therefore interesting to observe that we were able to identify the outline of an emerging communitas in a sailing trip with a duration of only 50 min and that this emerging communitas appeared to be able to trigger the visitors' involvement. The involvement trigger "personal resource utilization", which involves visitors becoming involved in the experience by making use of their prior skills, knowledge and experience, finds support in the findings of Tung and Ritchie (2011) which suggest that the consumer's level of involvement with the experience is positively related to their personal knowledge. Previous research has also shown that the visitors' use of such operant resources are key to the creation of individual experience value (Prebensen, Woo, Chen, & Uysal, 2013).

Furthermore, the visitor's connection to particular objects as a dimension of the involvement trigger "memories", relates to Schouten et al. (2007) who state that objects that have been used in past peak or flow experiences can take on an elevated meaning to the consumer and serve as a trigger for such transcendent experiences in the future. In the present study, the sail had clearly taken on such a role for visitor 2 who vividly described how the sight of the sail being caught by the wind mentally transported her back in time. The final involvement trigger, "imagination", finds support in Campbell (1987), who argue that it is

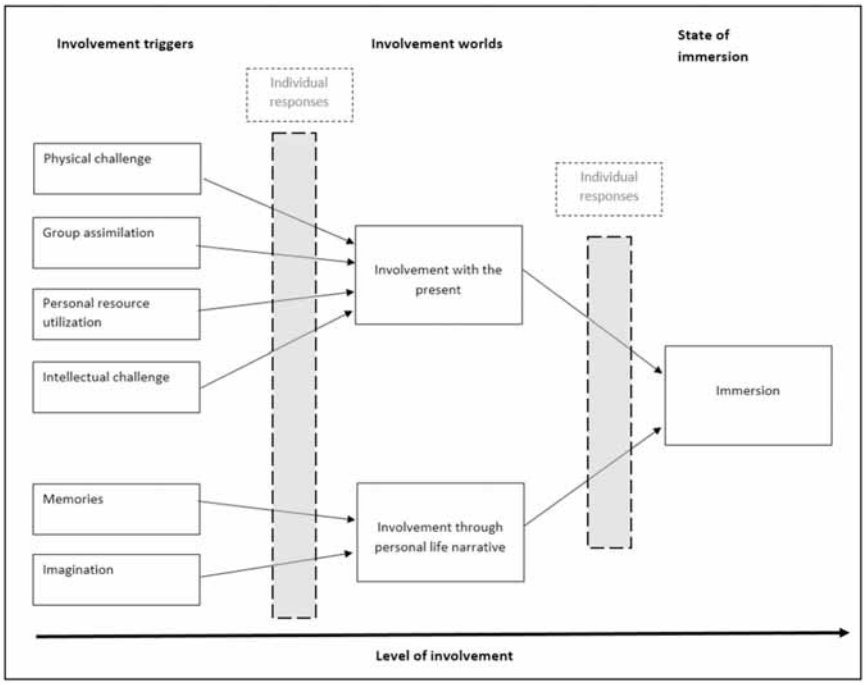

Fig. 5. Categories, stages and moderators in the immersion process.

the imaginative experience created by the consumers themselves that is at the heart of the consumption activity, not the use of the product itself. Which connects well with the notion of imagination as a trigger for involvement in the experience.

Six involvement triggers were identified in the present study. These are however context specific and might therefor not be applicable to other experience contexts. Similarly, other contexts might offer additional triggers not identified in this study. The list of involvement triggers presented here is therefore neither definitive nor exhaustive.

4.2. Involvement worlds

Previous studies have pointed to different "immersion types", such as challenge based immersion (Ermi & Mäyrä, 2005) and immersion in the self (Hansen, 2014). Findings form the present study however, point to different *paths* to immersion, rather than different *types* of immersion. Both paths lead to the same state of immersion, but the paths visitors take to get there differs, as one path goes through "involvement with the present" while the other goes via "involvement through personal life narrative".

The involvement world labeled "involvement with the present" represents the path to immersion typically described in the experience-oriented literature (Carù & Cova, 2006; Hansen & Mossberg, 2013; Mainemelis, 2001). This path is marked by an externally directed focus centered solely on the present situation - on the "here and now". Interestingly we were also able to identify another path to immersion: "involvement through personal life narrative". This path share some similarities with the immersion type "immersion in the self" described by Hansen (2014). It is characterized by an internally directed focus where visitors connect the present experience with their personal life narrative. Previous studies have connected this process to increased involvement in consumer experiences in general (Ahuvia, 2005; Jantzen, 2013; Lindberg & Østergaard, 2015), but involvement through personal life narrative has not previously been identified as a path to immersion. According to Lindberg and Østergaard (2015) the visitor's personal life story is particularly important in extraordinary experiences with a high degree of visitor involvement. As the present study represents such a context, more research is needed to determine the contextual boundaries of the involvement worlds identified in the present study.

4.3. The nature of the immersion process

In the introduction, three models representing competing views of the nature of the immersion process were presented: immersion as a sequential process (Brown & Cairns, 2004) as cyclical or immediate process (Carù & Cova, 2005) or as a dynamic process (Hansen & Mossberg, 2013). The fidnings presented in this article lends support to the latter view as the analysis showed that visitors seem to fluctuate between different stages of the immersion process and between different levels of involvement throughout the duration of the experience.

Our analysis also highlighted the subjective nature of the immersion process. Each informant's process differed from the next and this difference persisted even among informants who had participated in the same sailing trip. Differences among informants can partially be explained by the different roles they were given in the boat and the

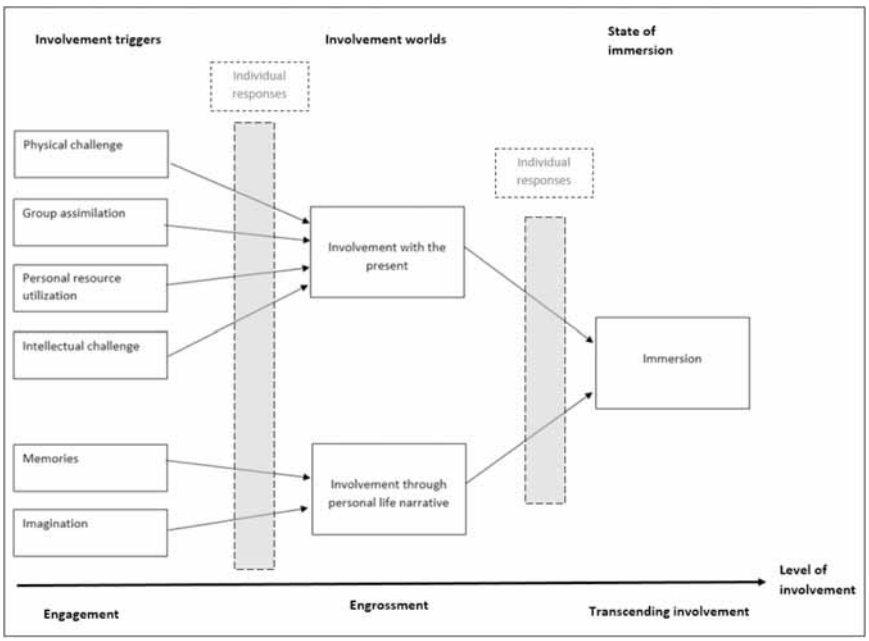

Fig. 6. Expanded model of categories, stages, moderators and involvement levels in the immersion process.

different interactions they had with the experiencescape during their trip. However, the analysis also pointed to the important role of individual responses, which appeared to have a moderating effect on the visitors' progression through the immersion process. These individual responses were in turn influenced by a number of underlying factors. As pointed out by Jantzen (2013) consumers do not enter the experiencescape empty handed, instead they bring with them a range of personal factors and prior experiences. Our data material only generated limited empirical insight into the factors that could potentially influence these individual responses, but by comparing data from informants who became immersed with data from those who did not, we were able to find some indications of which factors might potentially influence these individual responses. Four factors were identified in this respect: motivation, prior interest and perceived physical and social security. Informants who felt unsafe or insecure about certain elements of the experience seemed less inclined to become immersed. Similarly, informants who reported a low level of motivation for participation in the sailing trip and low interest in the themes being presented during the trip were less inclined to reach the level of involvement necessary to become immersed. These were however only indications of potential influencing factors. More research is needed to map out the underlying factors that influence the visitors' individual responses and progression through the immersion process.

4.4. Developing an extended model of the immersion process

The immersion process model (Fig. 5) presented in the findings section was developed in the context of an active experience product offered within an international tourist attraction (themed sailing trips offered at the Roskilde Viking ship museum). Yet, when comparing this model to the model proposed by Brown and Cairns (2004), which was developed in the seeimgnly highly different context of computer games, a number for similalrities emerge. This may however not be particularily suprsing as these contexts might be more similar than they appear. With reference to a blurred distinctions between the spheres of representations and reality (Lash & Urry, 1994) and to Cohen's (1979, 1995) dichotomy between “Home” and “the Other”, a parallel can be drawn between a virtual travel to another place and a physical travel. One could then compare travels to virtual spaces, such as through computer games, with a visit to a “tourist attraction” that is managed for offering immersive experiences as demonstrated by, for example, a virtual travel to Jurassic Park or “Pandora” from the Avatar universe. Immersive experiences would then be possible through a player's “presence” within such a virtual reality setting (Sanchez-Vives & Slater, 2005). In this light, the similarities between the immersion process model in the present study and the model proposed by Brown and Cairns seem fitting.

There are two main similarities between the models. Firstly, involvement is seen as the driving force behind the immersion process in both models. Secondly, there is a certain degree of overlap between the three stages of the immersion process identified in our model and the three levels of involvement proposed by Brown and Cairns (2004). In their model, the first and lowest level of involvement is labeled “engagement”, which is where the informants' initial interest is captured. This resonates well with the involvement triggers identified in the present study, which are also connected to a low initial level of involvement, often representing the first step on a visitor's path to immersion. The next level of involvement in Brown and Cairns' model is referred to as “engrossment”. This represents a deeper level of involvement where the consumer is “less aware of their surrounding and less self-aware than previously” (Brown & Cairns, 2004:1299). This stage is characterized by an emotional involvement with the

experience. Drawing parallels to the present study, similarities can be found between Brown and Cairns "engrossment" and the level of involvement connected to the two involvement worlds identified in this study. In the present study however, emotional involvement was only identified as an important component in the category "involvement through personal life narrative", not in the category "involvement with the present". The final level of involvement in Brown and Cairns' (2004) model is "total immersion" which seems to overlap with the "state of immersion" category identified in the present study. Albeit without the computer game specific sense of losing awareness of real world surroundings and the real world self. Instead, our informants reported a lack of self-awareness and a lack of awareness of "other" elements in the experiencescape. Due to the high degree of overlap between Brown and Cairns' (2004) categories of involvement and the involvement levels described in the present study, we are able to apply their involvement categorization onto the immersion process model presented in Fig. 5. In adjusting Brown and Cairns' (2004) conceptualization to the existing model, it was however decided to use the term "transcending involvement" instead of "total immersion" to clarify the difference between immersion as a category and the level of involvement it was connected to. By adding the involvement categorizations developed by Brown and Cairns to the model presented previously, we are able to create an extended model of the immersion process, including the stages, categories, involvement levels and moderators involved in the process (Fig. 6).

5. Limitations

The main challenge and limitation of the present study is the measurement of immersion. Immersion is an elusive psychological state that is experienced by an individual for only a fleeting moment. It can therefore be difficult to measure weather someone becomes immersed or not. The researchers attempted to reduce these challenges by operating with a clear definition of immersion and by triangulating the interview data with the experience line charts drawn by the informants themselves. Nevertheless, the degree of immersion experienced by informants was ultimately determined by the researchers' interpretation of the informants' experiences, and was thus open to the influence of researcher bias. The researchers sought to reduce these biases by actively seeking out disconfirmatory evidence in the data throughout the course of the analysis.

The present study introduces a new model of the immersion process based on empirical findings from a single case study. This approach has its limitations in terms of transferability beyond the current case context and the findings presented in this article should thus be interpreted with caution. More empirical research is needed to establish the boundaries for the transferability of the proposed model. It is however promising that existing literature lends support to the key findings of this study, including the connection between involvement worlds, involvements triggers and specific levels of involvement, adding confidence to the reliability of our findings. Despite these limitations, the present study has contributed to expand our understanding of the immersion process by providing a new perspective on the nature of the process, the different stages involved in it and by highlighting the role of involvement in the process.

6. Implications and future research

This article presents results from an explorative study of the immersion process within the context of a managed visitor attraction with a high proportion of international visitors. While there are some limitations connected to these types of exploratory studies, the findings presented in this article adds to our understanding of the nature of the immersion process by providing an empirical bridge between Hansen and Mossberg's (2013) description of the dynamic nature of the immersion process and Brown and Cairns' (2004) view of involvement as the driving force in the immersion process.

Furthermore, the present study contributes to differentiate our understanding of the paths leading to immersion, by identifying "involvement through personal life narrative" as an alternative path to immersion, in addition to involvement with the present, which has previously been identified as a path to immersion (Carù & Cova, 2006; Hansen & Mossberg, 2013; Mainemelis, 2001). Finally, by applying Mossberg's (2007) experiencescape model to the study of the immersion process, the present study provide empirical support to the notion that both the physical (Carù & Cova, 2007) and the social environment (Mossberg et al., 2014) can have an influence on the immersion process.

More research is needed to examine the visitors' individual responses to the different involvement triggers and involvement worlds, as well as the underlying factors that influence these individual responses. Studies applying cognitive appraisal theory (Watson & Spence, 2007) to the study of immersion might therefore be of particular interest in this regard, as cognitive appraisal theory focuses on the antecedents of the visitor's emotional response to stimuli, which in turn effects their behavioral responses. Applying cognitive appraisal theory to the study of immersion might therefore offer valuable insights into the factors that influence the visitors' progression through the immersion process.

Although the findings of this study are preliminary and should be interpreted with caution, the present study offers some practical implications for providers of experience products wanting to facilitate visitor involvement. Six involvement triggers were identified and described in this study: physical challenge, intellectual challenge, group assimilation, personal resource utilization, memories and imagination. While this list of involvement triggers is context specific and non-exhaustive, findings from previous studies indicate that these triggers might also have the potential to trigger involvement in other experience contexts. Awareness of such involvement triggers can thus be used by to experience providers to create experiencescapes that facilitate involvement and immersive experiences to a greater extent. As our findings also indicated that the effect of different involvement trigger appeared to be moderated by the individual visitor's responses to them, experience providers should seek to capture more visitors by ensuring that the experiencescape encapsulate more than one involvement trigger. This also has benefits in terms of harvesting the cumulative effects of exposing visitors to several involvement trigger during the course of the experience.

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Declarations of interest

None.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.tmp.2019.02.008.

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Paper II

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Consumer immersion in managed visitor attractions: The role of individual responses and antecedent factors

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ABSTRACT

While there is a growing interest in immersive experiences and visitor immersion within the tourism industry, there is still a deficiency of empirical research focusing on how visitors become immersed. This study explores the subjective nature of the immersion process by focusing on the moderating role of individual responses and the influence of antecedent factors in the process. Empirical evidence for the purpose of this study was collected through a combination of field observations and group interviews with guests visiting an Escape Room in Norway. Six individual responses that appeared to moderate the individual visitors' immersion process were identified in the study; including affective, behavioral, and cognitive responses. Findings further indicated that these responses were influenced by personal, external and social antecedents, as well as by the visitors' own appraisal of the core features of the experience product. The findings presented in this article shed light on the individual nature of the immersion process and the factors that moderate the visitors' progression towards a state of immersion.

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Introduction

Experiences have been a key research topic among tourism scholars since the 1960s. This has resulted in the development of a variety of experience concepts that are frequently cited in the tourism literature. Examples include peak experiences (Maslow, 1964), extraordinary experiences (Arnould & Price, 1993) and flow (Csikszentmihalyi, 1990). These are experience types that are highly regarded in the tourism industry, as they provide visitors with powerful experiences that have the potential to become lifelong memories (Arnould & Price, 1993). While several scholars have argued for the interconnectedness of these concepts (see for example Privette (1983) and Schouten, McAlexander, and Koenig (2007)), few studies have examined the individual components shared by these types of experience. According to Arnould and Price (1993), what they have in common, in addition to being personally transformative and hedonistic, is that they involve some degree of immersion and a feeling of loss of self. A better understanding

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of immersion can therefore give us a deeper understanding of one of the core components of these coveted experience types. A more thorough understanding of immersion can also have important practical implications as immersion has been linked to emotional engagement (Brown & Cairns, 2004; Jennett et al., 2008), which is one of the key components of memorable experiences (Johnston & Clark, 2001; Kim, 2014). Memorable experiences can, in turn, be crucial to the long term profitability of tourism providers (Campos, Mendes, Do Valle, & Scott, 2016) as memorable experiences are known to have favorable effects on re-visitation intentions as well as positive word of mouth (Kim, Ritchie, & Tung, 2010; Slåtten, Krogh, & Connolley, 2011). Experience providers in the tourism industry can hence use immersion as a strategic tool to facilitate memorable experiences for their visitors. To be able to facilitate immersive experiences it is however fundamental to understand the immersion process – the process through which consumers become immersed. In this study, we are therefore going to focus on the immersion process in an effort to expand on the existing knowledge of the factors that influence it.

Literature review

What is immersion?

Experiences can be understood as a subjective, individual phenomenon resulting from a series of complex psychological processes within the individual (Larsen, 2007). Immersion is a part of the total visitor experience and is hence a subjective phenomenon experienced inside the mind of the individual. Within the tourism and consumer behavior literature, immersion is commonly understood as a fleeting psychological state in which the consumer becomes so involved in the present experience that they become completely engrossed in it, losing their awareness of time and their own self-consciousness (Hansen & Mossberg, 2013). Immersion has been defined as "the feeling of being fully absorbed, surrendered to, or consumed by an activity, to the point of forgetting one's self and one's surroundings" (Mainemelis, 2001, p. 557), and has been described as the deepest form of involvement (Brown & Cairns, 2004).

In the literature, several different types of immersion have been described, including challenge-based immersion (Ermi & Mäyrä, 2005), imaginative immersion (ibid.) and "immersion as being" (Hansen, 2014). Findings from Blumenthal and Jensen (2019) however, indicate that rather than being different types of immersion, they represent different paths or "involvement worlds" leading to the same psychological state of immersion. This is also apparent through the way in which these different "types" of immersion is described. Challenge-based immersion is for example described as "the feeling of immersion that is at its most powerful when one is able to achieve a satisfying balance of challenges and abilities" (Ermi & Mäyrä, 2005, p. 7). Alluring more to how the consumer becomes immersed and the factors that can trigger immersion, rather than a certain type of immersion.

The nature of the immersion process

Only a limited number of studies focusing on the immersion process have been published to date and our understanding of the process is therefore limited. In the computer game

and consumer behavior literature the process has been described as progressive and sequential (Brown & Cairns, 2004), or as either cyclical or immediate, depending on the consumer's prior experience with the activity or context (Carù & Cova, 2005). Within the context of tourism however, the process has been found to be more dynamic, with visitors fluctuating in and out of different levels of involvement during the course of the experience (Blumenthal & Jensen, 2019; Hansen & Mossberg, 2013). Which could be an indication of contextual differences.

Several studies have identified involvement as the driving force behind the immersion process (Blumenthal & Jensen, 2019; Brown & Cairns, 2004; Hansen & Mossberg, 2013). Blumenthal and Jensen (2019) suggest that the immersion process begins with the visitors' initial involvement being triggered by "involvement triggers" during the "engagement" phase in the immersion process. These involvement triggers are factors, such as memories, group assimilation, and challenges (physical or intellectual), that have the ability to trigger internal responses within the visitors, leading them to a higher level of involvement. In the second phase of the immersion process, during the "engrossment" phase, the visitors' attention become more focused towards one of the two identified involvement worlds (involvement with the present or involvement through personal life narrative), leading them further down the path towards a state of immersion (see Figure 1). Both the involvement triggers and the involvement worlds arise from the visitors' interactions with the experiencescape, but their effect on visitor involvement seemed to be moderated by how the individual visitors respond to them. While the authors point to the important role of individual responses in the immersion process, their model seems to assume a simple stimuli – response correlation (Mehrabian & Russell, 1974). Where visitors are

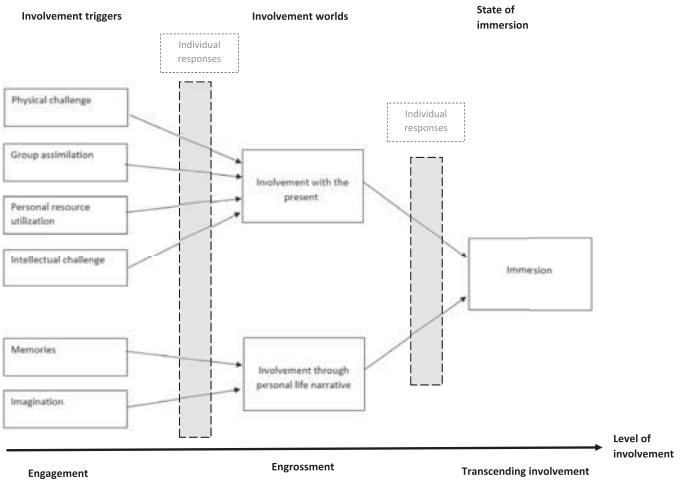

Figure 1. Blumenthal and Jensen's model of the immersion process (Blumenthal & Jensen, 2019, p. 168).

exposed to a stimulus and then have a response to that stimulus, without considering the different types of responses the visitors might have, and which factors beyond the given stimuli might influence the visitors' responses. The aim of the present study is therefore to develop and extend Blumenthal and Jensen's (2019) model by applying it to a new experience context and (A) investigating the type of individual responses that influence the immersion process and (B) explore the antecedent factors that influence these responses.

Methods

This study was designed as a single case study (Yin, 2003). This design was chosen, as case studies are considered particularly appropriate to the study of a phenomenon of which our understanding is limited and where current perspectives conflict with one another (Eisenhardt, 1989). Following the recommendations of Eisenhardt (1989), the study set out with two broad research questions and employed a purposive case sampling strategy based on a set of pre-defined criteria (Creswell, 2013; Flyvbjerg, 2004). As the study was dependent on a case context that has the potential to facilitate immersive experiences. It was determined that the selected experience product should, in line with previous research on the facilitators of immersion, offer opportunities for active participation (Hansen & Mossberg, 2013) and be offered inside an experiencescape that could be perceived by visitors as safe, themed and enclaved (Carù & Cova, 2007). Additionally, the selected experience product should be offered within the context of a managed visitor attraction and offer contrasting conditions to the original case used by Blumenthal and Jensen (2019).

Based on the above-mentioned criteria an escape room was selected as the case context for this study. An escape room is an experience product were visitors are locked inside a room and have to find a way to "escape" the room by solving a number of puzzles with the help of clues and hints hidden inside the room (Dilek & Dilek, 2018). The specific room chosen for this study was offered by Escape Reality Trondheim AS and was called "The Heist". It was designed to look like the study of a rich aristocrat and visitors would enter the room in groups. Once the door was locked, a 2-minute film would begin to play. The film would introduce visitors to the backstory of the room and present them with their mission, which was to locate and steal a large diamond and get out of the room before the antagonist's security guards storms the room (after 60 min). They were informed that they could contact the game master and ask for a limited number of hints during these 60 min. The activity is driven by the participants as individuals and as a group and is controlled by the physical environment as well as by a set of rules (of the game), in addition to limited personal interactions with the staff. This experience product was chosen as it offered contrasting conditions to the original case in terms of activity structure (unstructured rather than structured), the role of the employees (visitor steered rather than employee steered), experience foundation (fictional rather than historical basis) and group familiarity (pre-formed groups rather than groups formed by the organizers). As each group process was treated as a unique case performing within the same experience environment, the methodological design chosen for this study could also be described as an embedded multiple case study (Miles, Huberman, & Saldaña, 2014; Yin, 2003).

Since this study seeks to further develop and extend on Blumenthal and Jensen's (2019) immersion process model, it set out with a number of a priori constructs that shaped the

initial design of the study (Eisenhardt, 1989). The most important constructs were immersion and involvement, which were both explicitly measured in the interview protocol. In line with previous research on immersion (Blumenthal & Jensen, 2019; Brown & Cairns, 2004; Hansen & Mossberg, 2013), involvement was used as an indicator of visitor progression/ recession through the immersion process. Involvement was here understood as what Abuhamdeh and Csikszentmihalyi (2012, p. 258) describe as attentional involvement, which "represents the degree to which one's attention is devoted to the activity at hand". This understanding of involvement was used as attentional involvement has previously been linked to immersion in the literature, where it has been described as a requisite to access the experience and to experience activity engagement (Hansen & Mossberg, 2013).

Data collection

Data was collected through a combination of semi-structured group interviews and field observations. Field observations were conducted via a live stream of the participants inside the escape room, using the facility's existing camera and microphone fixtures. During the observations, the researcher focused mainly on interactions between the visitors and different elements in the experiencescape (including other visitors), and the visitors' responses to these interactions. Responses were sought after in body language, facial expressions, and verbal cues. These observations served two purposes: triangulate findings from the interviews and enable the researcher to guide the interviews towards incidents that appeared to lead to strong responses in the informants. Nine group interviews and observations with a total of 41 participants were conducted for the purpose of this study. The groups varied in size, age, gender composition and purpose of visit (see Appendix 1 for descriptive informant data), and the interviews lasted approximately 60 min with the exception of groups 6 and 7, which lasted approx. 15 min due to time constraints. These interviews were nonetheless included as they offered a variation in terms of purpose of visit (team building) which were considered relevant to include.

The interviews were conducted directly after the participants exited the escape room to ensure that the informants still had the experience fresh in their memory. (The interview guide is attached in Appendix 2). Despite the focus of this study being on the individual and their responses, the decision was made to conduct the interviews as group interviews, as we were dependent on interviewing several informants from the same group to make the influence of individual differences stand out more clearly. To keep the focus on the individual experience of the participants, each participant was asked to draw an experience line chart (Blumenthal & Jensen, 2019; Hansen, 2014), indicating how involved they felt during the course of the experience. Each participant was then asked to go through their individual line chart, explaining what had happened during the experience, during which the researcher probed them about their responses to these incidents (see Appendix 3 for examples from the participants' experience line charts.) After the initial run-through of each participant's individual line chart, a shared discussion about the experience was initiated, during which the informants commented on each other's line charts. This approach facilitated a discussion about individual differences among group members in terms of their interpretation, and experience of, the incidents that occurred during their time in the room, as well as potential reasons for these differences.

Data analysis

Data from the interviews and the observations were analyzed using the constant comparative method characteristic of the grounded theory approach, progressing, through the stages of open, axial and selective coding in a circular process (Strauss & Corbin, 1990). This approach was chosen as it enables new theoretical constructs to emerge from the data, which was key to the present study where the goal was to explore the role of individual responses and antecedent factors in the immersion process. As previously mentioned, the study set out with a number of a priori constructs, but to ensure a proper grounding of the theory in the data, these constructs were treated as tentative and were only included in the analysis if they were found in the data.

During the initial stages of the open coding, field notes and the transcribed interviews were coded on a line-by-line basis in a circular process. Each group was coded separately before across group comparisons commenced. Through the axial coding, individual codes derived from the open coding were grouped together and categorized into a hierarchy of abstraction. The axial coding subsided when the sub-categories had reached an abstraction level where the essence of the categories was captured without important precisions being lost. As the aim of this study was to explore the role of individual responses and antecedents, the first step in the selective coding process was to determine whether individual responses also seemed to play a moderating role in the immersion process in the present case context. This was achieved by analyzing the relationship between the identified categories and comparing them to the involvement levels and stages identified in Blumenthal and Jensen's (2019) previously developed immersion process model.

In line with the previous findings of Blumenthal and Jensen (2019), these initial findings pointed to individual responses as an important moderator in the immersion process. In the second phase of the selective coding, the sub-categories identified as individual responses were therefore analyzed in more detail, focusing specifically on how these factors influenced the immersion process and their relationship to the remainder of the categories identified in this study. While presented here sequentially, the coding process was circular, as emergent codes and categories were constantly compared to existing ones, in line with the principals of grounded theory analysis (Blaikie, 2000).

Findings

By analyzing the relationship between the categories identified in this study and comparing them to the involvement levels and stages identified in Blumenthal and Jensen's (2019) previously developed immersion process model, we were able to create a context-specific immersion process model (see Figure 2).

This model illustrates not only the stages and involvement levels identified in the present study but also the moderating role played by individual responses in the process. Similarly, to the findings of Blumenthal and Jensen (2019) we were able to identify three distinct phases in the immersion process: involvement triggers, involvement worlds and the state of immersion. Each of these stages was connected to an increasingly higher level of involvement (engagement, engrossment and transcending involvement), with a gradual transition between them. Our findings furthermore showed that the participants' immersion process was not sequential. Instead, visitors fluctuated dynamically in and out of different levels of

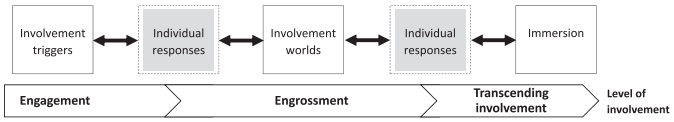

Figure 2. Phases, involvement levels and moderating factors in the immersion process.

involvement throughout the duration of the experience. A visitor could, for example, go from engagement to engrossment and then back to engagement again, as the visitors did not automatically progress into "transcending involvement". (See Appendix 3 for illustrative examples from the participants' experience line charts.) This fluctuation between different levels of involvement and between different stages in the immersion process seemed to largely be caused by the visitors' individual responses to the different involvement triggers and involvement worlds they were exposed to. This finding prompted a more thorough investigation of the role of individual responses in the immersion process.

Individual responses and their influence on the immersion process

After establishing the role of individual responses as an important moderating factor in the immersion process also in the present experience context, we turned our focus towards the main focus of this study: the role of individual responses in the immersion process.

Six individual response categories were identified in our analysis as influential to the immersion process: (R1) "emotional responses", (R2) "emotional engagement", (R3) "stress responses", (R4) "absorption", (R5) "active participation" and (R6) "adversity responses" (See Figure 3). In line with Holbrook and Hirschman's (1982) experiential approach to the consumer response system, these six response categories could be classified into three different response types. Emotional engagement, emotional responses, and stress responses can all be classified as affective responses, as these were responses that were emotional in nature and involved the visitors' feelings. Absorption, on the other hand, is a cognitive response, as it was largely subconscious, and involved the visitors' cognitive system – their focus and attention. Lastly, active participation and adversity responses can be described as conative or behavioral responses as they included the visitors' intentions as well as actual behavior. Each of the six response categories is presented in detail in the following section.

R1 Emotional Responses

The category "emotional responses" contained emotional responses of both positive and negative valence recorded among the informants. Positive emotional responses consisted of excitement, enthusiasm, joy, and feeling of mastery, while negative emotional responses included disappointment, frustration, and feelings of inadequacy.

> Participant 25 [Birthday party]: "I love this type of intellectual tasks … And you get such a feeling of mastery when you manage to solve them!"

The analysis showed that positive emotional responses were linked to increases in the participants' involvement, while negative emotional responses were connected to decreases.

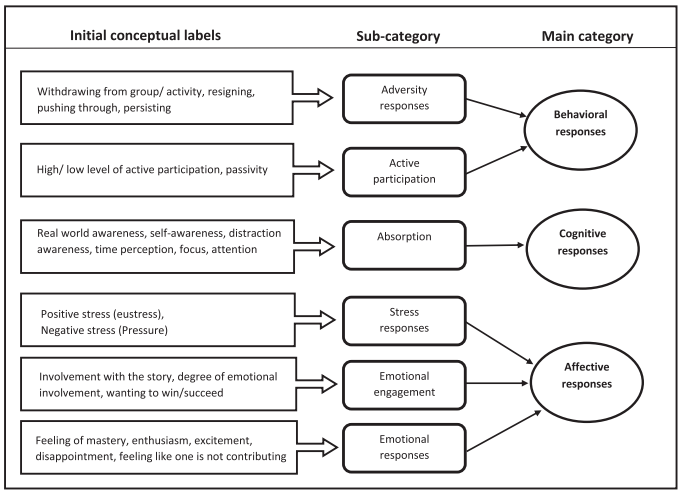

Figure 3. Individual responses: categories, sub-categories and constructs.

Indicating that emotional responses with positive valence facilitate the individual's progression through the immersion process while emotional responses with negative valence hinder it.

R2 Emotional Engagement

The response category "emotional engagement" contained codes pertaining to how emotionally engaged the visitors felt with the experience itself and with the story being presented to them in the escape room. The responses recorded in this category could be placed on a dimensional scale ranging from a high level of emotional engagement to low emotional engagement.

> Participant 1 [Friend group]: "I wanted to succeed, I wanted to win … . If she [the game master] had come in a few minutes too early and not allowed us to continue I would have been pissed".

Analysis of the responses recorded in this category revealed that the level of emotional engagement felt by the visitors had a clear moderating effect on how involved they felt in the experience. A high level of emotional engagement had a positive effect on involvement, while low or lack of emotional engagement influenced the visitors' involvement with the experience negatively.

R3 Stress Responses

"Stress responses" was another influential response category identified in this study. All the informants reported experiencing at least some level of stress during the course of

experience. This was not surprising, given that time pressure is an integral part of the design of escape rooms. Experience design features such as sound, video and the pacing of the activity are all used to induce a certain level of stress in the participants. How the informants responded to this stress however varied widely. Some informants reported having a positive response to the stress, stating that the stress gave them a rush, leading them to become more focused and involved with the experience. Others, however, responded negatively to the stress, perceiving it as uncomfortable pressure negatively influenced their level of involvement with the experience.

> Participant 20 [Birthday party]: "So, it was kind of a steady rising curve and then, in the end, it got a bit … Stress! And then it got very high, the level of involvement. We have to finish it!"

R4 Absorption

The category labeled "absorption" contained internal responses indicative of the informants' level of absorption into the experience, and included indicators such as level of real-world awareness, self-awareness, focus and attention, time perception accuracy and awareness of distractions. The responses recorded in this category ranged from engrossment (positive involvement effect) on one end of the scale, to detachment (negative involvement effect) on the other end. Low real-world awareness, low self-awareness, low distraction awareness and inaccuracy of time perception paired with high levels of focus and attention was indicative of engrossment or even immersion into the experience. While high self-awareness, high real-world awareness, time perception accuracy and awareness of distractions, together with low focus and attention was indicative of a low degree of absorption or even detachment from the experience.

> Participant 21 [Birthday party]: "I think I am very task-focused, because I practically forget it [distractions]. I didn't notice any of those sounds. I think I just tune in and just step into it and just focus".

R5 Active Participation

The individual response category labeled "active participation" denoted the degree to which the informants responded by participating actively in the experience or by becoming more passive. A strong connection was found in the analysis between active participation and increased involvement, while passivity and low levels of active participation had a similarly strong connection to decreases in involvement.

> Participant 33 [Company group 1]: "And that was why it went down here in the end, because I felt I got pretty passive inside the second room. Because then it kind of became this pressure and I chose to withdraw a bit, so my own involvement goes a bit down there".

R6 Adversity Responses

The final response category identified in the present study was "adversity responses", which contained the visitors' responses to the adversity they were faced with during the experience. Did it cause them to resign, withdraw from the activity/group or did it encourage them to push through and persevere? Unsurprisingly, pushing through had

a positive effect on involvement, while giving up or withdrawing from the activity/group had a negative effect.

> Participant 13 [Childhood friend group]: [While discussing a big drop in his level of involvement] "… and there wasn't enough flashlights and stuff, so then I kind of resigned. I went and did the bonus puzzle instead. So I kind of withdrew from the group and became my own thing".

Each of the six individual response categories identified in the analysis was found to influence the individual visitor's immersion process by moderating their level of involvement with the experience. This influence was independent of phases in the immersion process (ref. Figure 2). Each response category had the ability to induce both increases and decreases in involvement, dependent on the valence of the response. Positive emotional responses, for example, was found to have a positive effect on involvement, while negative emotional responses had a negative effect. Similarly, if the visitor's adversity response had a positive valence (to persevere and push through), it had a positive effect on involvement, while adversity responses with negative valence (to give up or to detach themselves from the experience), had a negative effect. The effect of each individual response type (and their valence) on visitor involvement is illustrated in Figure 4. Involvement is important here, as involvement is seen as the driving force behind the immersion process, and increases in involvement were therefore considered an indication of progression towards a state of immersion, in line with the understanding of immersion as the deepest form of involvement.

The finding that it was the valence of the visitors' responses that influence whether their responses had a positive or negative effect on their immersion process raised another important question. What are the underlying antecedent factors that influence the valence of the visitors' individual responses?

Antecedents and their influence on individual responses in the immersion process

By analyzing the relationship between the individual responses identified in this study and the remainder of the categories that emerged during our analysis, we were able to identify six antecedent factors that were found to influence the visitors' individual responses: (A1) "group composition", (A2) "experience design features", (A3) "prior experience", (A4) "personal pre-dispositions", (A5) "expectations" and (A6) "perception of challenges". The constructs included in each category is shown in Figure 5. It is important to note that these were factors that were antecedent to the visitors' responses, not necessarily to the experience itself.

Each of the antecedent factors presented in Figure 5 was found to influence several of the individual responses identified in this study. The relationship between these antecedent factors, the individual responses, and the visitors' immersion process can be illustrated with an example from one of the groups that were interviewed: Group 7 was faced with an intellectual challenge during the experience. While participant 33 and 34 responded by participating actively in the task of trying to solve the challenge, participant 35 responded with a low level of active participation. The analysis showed that this response was influenced by a combination of her own personal pre-dispositions (insecure

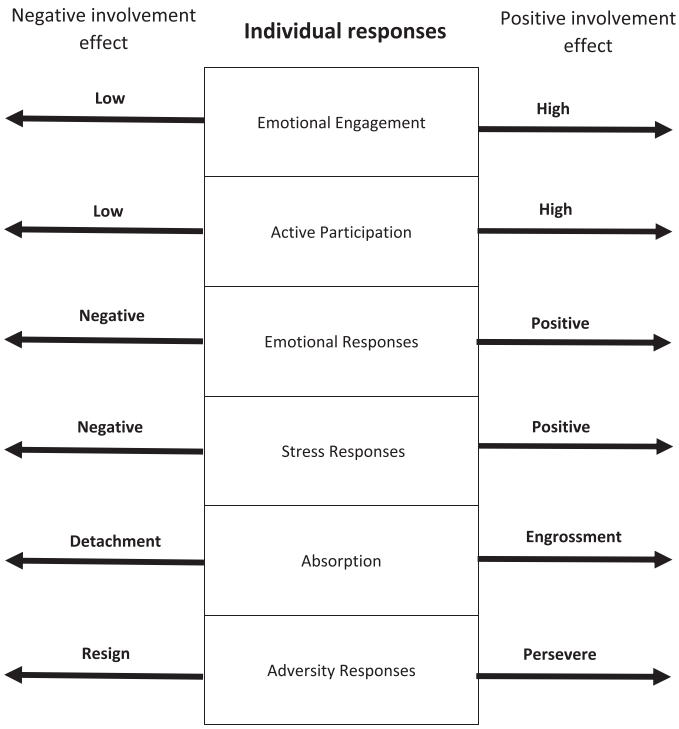

Figure 4. Individual responses and the influence of their valence on visitor involvement.

and not feeling comfortable in the situation) and the group composition (dominant group members "taking over"). Leading to a temporary decrease in her involvement with the experience and limiting her progression deeper into the immersion process. This example is a simplification as the visitors' responses were also influenced by previous responses, involvement triggers, etc. that occurred earlier in the experience. In the majority of instances, the visitors' responses were influenced by more than one antecedent factor. In the following section, the relationship between the individual responses and the antecedent factors that influenced them are described in more detail.

Antecedent factors influencing emotional responses

Our analysis showed that in the context of this case study, the visitors' emotional responses were influenced by both social, personal and external factors, as well as by the visitors' own appraisal of the challenges they were faced with. The positive emotional

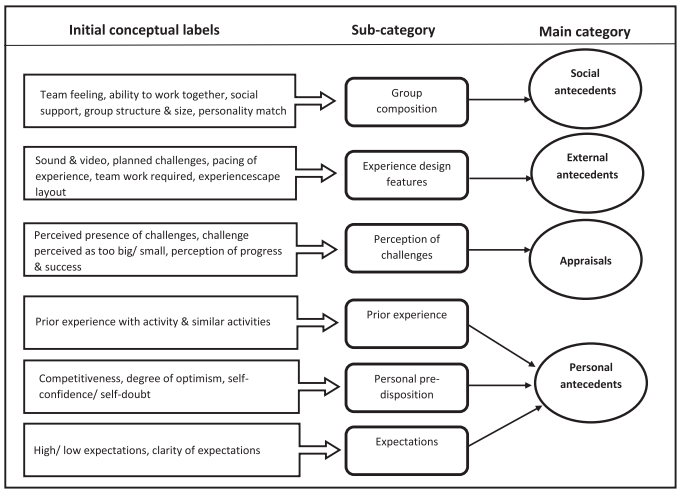

Figure 5. Antecedents: categories, sub-categories, and constructs.

response, feeling of mastery, was for example directly related to the visitors' perception of the group's progression & success (perception of challenges). If the visitor felt they were not progressing or succeeding with their task, it lead to a feeling of disappointment. Whether the visitor's emotional response had a positive or negative valence and how strongly they were felt was also moderated by personal factors, including personal pre-dispositions (competitiveness and self-confidence), the visitors' prior experience with similar situations/activities and the visitors' expectations going into the experience. If the visitors lacked prior experience with the activity, it could lead to a feeling of inadequacy and the feeling that they were not contributing to the group. Unclear expectations, on the other hand, could lead to positive emotional responses such as joy, excitement and a positive sense of surprise.

Antecedent factors influencing emotional engagement

Findings indicated that the visitors' emotional engagement with the experience was influenced by both social and personal factors. Group composition played a key role, as teamwork, the group's ability to work together and high experienced level of social support within the group were found to influence the visitors' emotional engagement positively. In terms of personal factors, personal pre-dispositions such as competitiveness and self-confidence were found to have a moderating effect. Low self-confidence, for example, influenced emotional engagement negatively, while competitiveness could have both positive and negative effects depending on the circumstances: facilitating emotional engagement when the visitor felt they were making progress and limiting it when the visitors felt they were not making sufficient progress.

Antecedent factors influencing stress responses

Whether the informants' stress responses had a positive or negative valence was in the present study found to be moderated by the social antecedent group composition, including group structure, group size, and social support within the group. The visitors' stress responses were also influenced by their individual perception of the intellectual challenges they were faced with (appraisals). Time pressure, which was an integral feature in the experience design of the escape room, lead to a moderate level of stress. However, when this base level of stress mixed with a low level of social support within the group or a high level of social pressure, the stress tended to become overwhelming leading to a negative stress response in the participants. The analysis also found that personal pre-dispositions, in the form of optimism, had a moderating effect, as informants who described themselves as optimists were less inclined to respond negatively to the stress they experienced than those who did not describe themselves as such.

Antecedent factors influencing absorption

The responses in this category were mainly influenced by the social antecedent group composition and external experience design features such as planned challenges. If the visitor, for example, felt socially safe, received social support from the group and worked well with their fellow visitors, they were more likely to become engrossed in the activity. The participants' competitiveness (personal pre-disposition) and appraisal of the challenges they were faced with also played an influential role. Their appraisals would facilitate absorption when they felt they were making good progress and that the intellectual challenges were manageable, but hinder it when the challenges were perceived as too big and they felt they were not making sufficient progress.

Antecedent factors influencing active participation

How actively the visitors participated in the experience was mediated by social factors as well as personal factors. Group structure and personality match within the group could hinder or facilitate active participation dependent on if the group had a favorable group composition or not. If the group, for example, contained members that were very dominant, they could push other less dominant members into passivity. Consequently, changes in group dynamics during the experience could have positive involvement effects for some group members if it entailed dominant group members becoming more passive (and less dominant) during the course of the experience. Teamwork was also found to play a key role as lack of teamwork was directly connected to low active involvement and passivity. In terms of personal factors, competitiveness, prior experience, and clear expectations facilitated active participation, while unclear expectations and lack of experience hindered it.

Antecedent factors influencing adversity responses

The visitors' responses to adversity were largely moderated by their perception of the group's progress & success (appraisals). Did they feel like they were making *some* progress or did they feel like they were not making any progress at all? The visitors' adversity responses were also indirectly affected by experience design features, as time pressure and sound effects could enhance the visitors' perception of a lack of progress. Personal

pre-dispositions in the form of competitiveness were also found to affect the visitors' ability to persist through adversity, as highly competitive participants seemed more inclined to give up when they felt they were not making sufficient progress than those who did not describe themselves as competitive. Prior experience and expectations also played a role as participants with some prior experience with the activity seemed to be expecting to succeed and therefore resigned more easily when they were met with unexpected adversity.

An overview of the relationship between the identified antecedent categories described above and the individual responses are presented in Figure 6.

Discussion

This study set out with an open, explorative approach based on a single case study and the categories identified in this study are hence data-driven, but context-specific and therefore cannot readily be transferred to a wider experience context. When comparing findings from the present study with existing experience-oriented literature however, a number of conceptual connections emerge, indicating that the findings could hold validity outside the present experience context.

The dynamic nature of the immersion process

Similar to the findings of previous research (Blumenthal & Jensen, 2019; Hansen & Mossberg, 2013) in the context of tourism, the immersion process was also in the present case context found to be dynamic in nature. With visitors fluctuating in and out of different levels of involvement throughout the process. This fluctuation was found to be influenced by the visitors' individual responses to the different incidents and occurrences (involvement trigger and involvement world) that arouse during their time in the escape room.

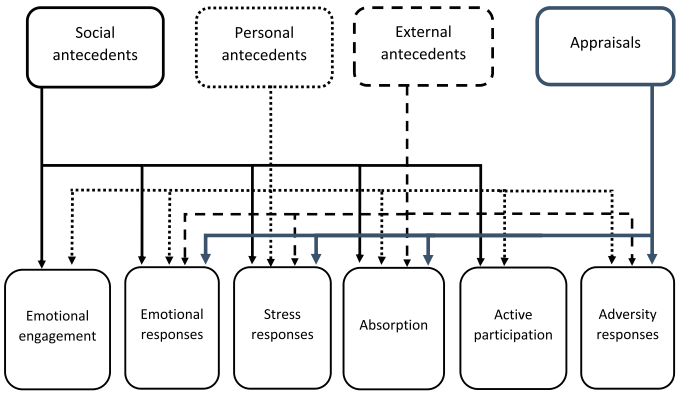

Figure 6. Antecedent categories and their influence on individual responses.

Individual responses have also previously been identified as a moderating factor in the immersion process (Blumenthal & Jensen, 2019), but previous research has offered limited insights into how these individual responses influence the process and how these responses are influenced by antecedent factors. The present study thereby contribute to expand our understanding of the subjective nature of the immersion process.

Antecedents and immersion in previous research

In the present study, six antecedent factors were found to influence the visitors' individual responses and as a consequence, the visitors' level of involvement and progression through the immersion process. These antecedents were categorized into four main categories: social antecedents, external antecedents, personal antecedents, and appraisals. This link between social antecedents and involvement has previously been established by Zatori, Smith, and Puczko (2018) who argued that social aspects, such as group atmosphere, perception of fellow visitors' company and level of interaction within a group were key dimensions in what they described as "experience involvement". The role of external antecedents, such as the layout of the experiencescape, as important factors influencing individual responses, has also previously been established in the tourism and service-design literature (Bitner, 1992; Mossberg, 2007; Pine & Gilmore, 1999).

In addition to the social and external antecedents, three personal antecedents were identified in the present study: prior experience, expectations, and personal pre-dispositions. Prior experience has been identified as a facilitating factor in several studies on immersion (Carù & Cova, 2005; Hansen & Mossberg, 2013; Jennett et al., 2008), but exactly how it influences the immersion process is somewhat disputed. On one side, Carù and Cova (2005) argue that having prior experience can fast track consumers into a state of immersion, while inexperienced consumers require a period of familiarization before being able to become immersed. Hansen and Mossberg (2013) however, argued that the novelty of an experience could facilitate immersion, as it heightens the potential for awareness and emotional involvement. In the present study, no connection was found between prior experience and emotional involvement. Instead, lack of experience with the activity was found to influence involvement negatively because it was associated with negative emotions and withdrawal from the activity. The influence of the two remaining personal antecedents is less controversial as both personal pre-dispositions and expectations have been found to moderate tourism experiences in previous studies (Adhikari & Bhattacharya, 2015; Walls, Okumus, Wang, & Kwun, 2011). The contribution of the present study, however, lays in detailing how different expectations influence individual responses in relation to the immersion process. Pointing to how clear expectations seem to facilitate active participation (which had a positive effect on involvement), while unclear expectations seemed to hinder it. Unclear expectations could however also have a positive effect on involvement, as it could facilitate positive emotional responses such as joy and excitement. The final influential antecedent identified in the present study was the visitors' perception or appraisal of the core aspects of the experience product (the intellectual challenges). This finding is supported by cognitive appraisal theory, which postulates that an individual's appraisal of the stimuli they are exposed to influence how they respond to that stimulus, both affectively and behaviorally (Watson & Spence, 2007).

Individual responses and immersion in previous research

Out of the six individual response categories identified in this study, three have been positively linked to immersion in previous studies: emotional engagement (Brown & Cairns, 2004; Hansen & Mossberg, 2013; Jennett et al., 2008), active participation (Hansen & Mossberg, 2013) and absorption (Brown & Cairns, 2004; Carù & Cova, 2007; Hansen & Mossberg, 2013; Mainemelis, 2001). Certain types of emotional responses have also previously been linked to immersion in the existing literature. Carù and Cova (2005) for example, found that negative feelings increased the distance between the consumer and the experience, which they argued hindered participants from becoming immersed. While not focusing on the valence of the emotional response, Hansen (2014) found that high emotional intensity could facilitate immersion. The present study did not go into the intensity of emotions experienced, but lend support to the notion that negative emotions have a negative effect on immersion.

In previous research, adversity has been identified as a factor hindering immersion (Hansen, 2014). Findings from the present study, however, suggest that it is not adversity in itself that hinders immersion, it is the visitors' *response* to this adversity that can hinder it. Visitors who responded to adversity with resignation and withdrawal did indeed experience a decline in involvement, the opposite was however true for visitors whose response was to persevere and push through, as they experienced an increase in involvement. Our findings thus indicate that adversity can both hinder and facilitate the immersion process dependent on how the visitors respond to the adversity they are faced with.

The only individual response category identified in this study that has not previously been linked to immersion in the existing literature is stress responses. In the present study, positive stress (eustress) was found to facilitate immersion, while negative stress (distress) could hinder it by negatively influencing involvement. The term eustress was first coined by Selye (1974), who considered positive stress to be favorable because it was associated with positive feelings and healthy bodily states. Negative stress (distress), on the other hand, was associated with negative feelings and unhealthy bodily states. While the present study did not focus on bodily states, it was clear that positive stress was connected to more positive emotions than negative stress. The unfavorable effect of negative stress on the immersion process might therefore be explained by the negative connection previously found by Carù and Cova (2005) between negative emotions and the immersion process.

While the individual responses identified in this study were largely supported by existing literature, the contextual limitations of their applicability must not be ignored. Stress responses might for example not be as relevant to the immersion process in a low-stress experience context such as a museum visit. Similarly, other experience contexts might expose new influential individual responses that were not identified in the present study. The list of individual response sub-categories presented here is therefore neither definitive nor exhaustive. On a higher level of abstraction however, our findings indicate that cognitive, affective and behavioral responses all play an influential role in the immersion process, suggesting that the immersion process, while being a subjective cognitive process, also activates affective and behavioral responses in the consumer. More research is however needed to determine the relative importance of these different types of responses in the immersion process.

Conclusion

The main contribution of the present paper is the identification and categorization of individual responses and antecedent factors that influence the immersion process, which provides insights into the subjective nature of the immersion process. By incorporating these findings into the immersion process model proposed by Blumenthal and Jensen (2019), a more inclusive, holistic model of the immersion process emerge (see Figure 7). This extended model illustrates how affective, cognitive and behavioral responses moderate the visitors' progression through the different phases in the immersion process, from involvement triggers to involvement worlds and from involvement worlds to immersion. The model also illustrates the role of antecedent factors in influencing these individual responses, demonstrating that the visitors' personal, social and external factors, as well as their appraisal of the core aspects of the experience, all have the potential to influence their responses. The findings of this paper hence contribute to expand our understanding of the immersion process and the factors that influence it.

Limitations and future research

Although the findings presented here are grounded in the data and developed on the basis of clear methodological procedures, they are based on a single case study and must therefore be interpreted with caution. It is however promising that the existing literature lends support to some of the key findings of this study, adding confidence to the reliability of the findings. More empirical research is however needed to determine the transferability of these findings to a wider experience context. One limitation of this study is that it is based on a case context where the activity is informant steered and where the informants have limited contact with employees. Findings from this study might therefore not be transferable to context with high levels of employee interactions.

Another limitation in the present study is that it is largely based on the informants' retrospective self-reported levels of involvement and immersion, as these states were not measured in real-time. Other, real-time measures of immersion (such as eye-tracking) were considered but were evaluated as less appropriate for this study as they were more intrusive, and therefore considered to be more likely to interfere with the visitors' experience. A further potential limitation of this study is that the interviews were conducted in groups. Enabling informants to potentially influence each other's answers.

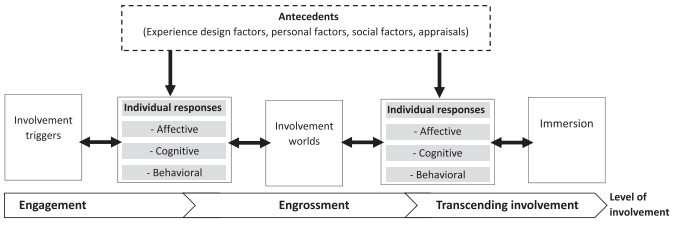

Figure 7. The influence of antecedents and individual response types on the immersion process.

Steps were however taken to reduce this limitation, mainly by triangulating interview data with field notes from the observations and asking informants to draw individual line charts at the very beginning of the interview. The interviews were furthermore conducted directly after the experience had ended, which could be a limitation as it gave the informants little time to reflect on their experience. This was however considered necessary, as we wanted to interview the participants while they still had the experience fresh in their memory.

Practical implications

Experiences are subjective and arise out of a series of complex psychological processes within the individual (Larsen, 2007). Tourism providers, therefore, cannot create experiences for their customers; they can only facilitate them by designing experiencescapes and circumstances with which visitors can interact to create their own experiences (Campos et al., 2016; Jantzen, 2013). Insights into the factors that facilitate individual responses favorable to the immersion process are therefore valuable to experience designers, as these insights can enable them to design experiencescapes and circumstances that are favorable to visitor immersion. While some of the influential antecedent factors identified in this study are outside the control of the experience provider (personal pre-dispositions, the visitor's prior experience), others can, to some extent be influenced by the experience provider. The antecedent "experience design features" (planned challenges, sound & video, layout of the experiencescape, etc.) which was found to influence individual responses is a great example, as it is largely controlled by the experience provider. Experience providers can also to some extent influence the social antecedent group composition by for example imposing minimum/maximum group sizes and encouraging teamwork and communication within the group. The experience provider also has some influence on the visitors' expectations towards their experience product, which they can seek to influence through advertisements, online marketing, and other communication efforts. Applying the new insights generated from this study to the design of tourism experience products can thereby enable tourism providers to create experience products that facilitate visitor immersion to a greater extent.

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Disclosure statement

No potential conflict of interest was reported by the author(s).

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Appendices

Appendix 1. Descriptive informant data.

Inf. number	Gender	Age	Prior exp. w. escape rooms?	Prior interest in escape rooms	Group no.	Group type	Purpose of visit
1	Male	22	No	Low	9	Friend group	Try something new
2	Female	26	Yes	High	1	Friend group	Bachelorette party
3	Female	25	No	High	1	Friend group	Bachelorette party
4	Female	x	No	High	1	Friend group	Bachelorette party
5	Female	25	Yes	Medium	1	Friend group	Bachelorette party
6	Female	26	No	High	1	Friend group	Bachelorette party
7	Female	29	No	High	1	Friend group	Bachelorette party
8	Female	31	No	High	1	Friend group	Bachelorette party
9	Male	25	No	Medium	2	Friend group	Have fun
10	Male	25	No	High	2	Friend group	Have fun
11	Male	25	Yes	High	2	Friend group	Have fun
12	Male	25	Yes	High	2	Friend group	Have fun
13	Male	24	No	High	2	Friend group	Have fun
14	Male	24	Yes	High	2	Friend group	Have fun
15	Male	58	No	High	3	Two couples	Have fun
16	Female	54	No	Medium	3	Two couples	Have fun
17	Male	63	No	Medium	3	Two couples	Have fun
18	Female	54	No	High	3	Two couples	Have fun
19	Female	25	No	High	4	Friend group	Birthday party
20	Female	25	No	High	4	Friend group	Birthday party
21	Female	24	No	High	4	Friend group	Birthday party
22	Female	21	No	High	4	Friend group	Birthday party
23	Female	25	Yes	Medium	5	Friend group	Birthday party
24	Female	26	Yes	High	5	Friend group	Birthday party
25	Male	25	No	Medium	5	Friend group	Birthday party
26	Female	25	No	Medium	5	Friend group	Birthday party
27	Female	33	No	x	6	Company group	Teambuilding
28	Female	44	No	x	6	Company group	Teambuilding
29	Female	52	No	x	6	Company group	Teambuilding
30	Male	49	No	x	6	Company group	Teambuilding
31	Male	64	No	x	6	Company group	Teambuilding
32	Male	47	No	High	7	Company group	Teambuilding
33	Male	25	No	Low	7	Company group	Teambuilding
34	Male	34	Yes	High	7	Company group	Teambuilding
35	Female	24	No	Medium	7	Company group	Teambuilding
36	Female	23	Yes	High	8	Family and friends	Have fun
37	Male	20	No	High	8	Family and friends	Have fun
38	Male	28	No	High	8	Family and friends	Have fun
39	Male	x	No	Medium	8	Family and friends	Have fun
40	Male	19	No	High	8	Family and friends	Have fun
41	Female	56	No	High	8	Family and friends	Have fun

x = Information not provided.

Appendix 2

Interview guide: Case study of Escape Reality Trondheim*

**The interviews for this study were conducted in Norwegian and this is a translated version of the original interview guide used in the study.*

1. Opening question

Please take an experience line chart and draw a curve of how involved you felt during the course of this experience. From when the employee started their instructions before you entered the room until you were out of the escape room again after your time had ended. When you are done, please walk me through the curve and explain what was going on.

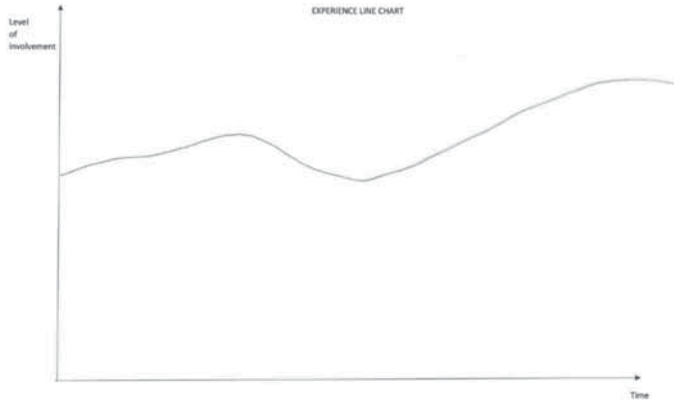
2. Topics to be covered
   - *Context*
     (Purpose of visit, expectations, group type)
   - *Interactions: Fellow visitors*
     (Type & influence: working together/ individually, dependency, team feeling)
   - *Interactions: Personnel*
     (Type, influence)
   - *Interactions: Physical environment*
     (Type, influence)
   - *Interactions: Products/object*
     (Type, influence)
   - *Internal focus: thoughts/feelings*
     (Type, influence)
   - *Safety*
     (Social/personal/ valuables)
   - *Time & place perception*
     (Awareness of time, distractions and "the real world")
   - *Prior knowledge/ interest/experience*
     (With activity, with similar activities, with experience context)
   - *Challenge & mastery*
     (Perception of challenge, perception of group performance, level of focus, degree of active participation, level of involvement)
3. Closing question

Immersion is a state where you become so involved with what you are doing right here, right now that you completely forget everything else that is going on around you, including time, place and your own self-consciousness.

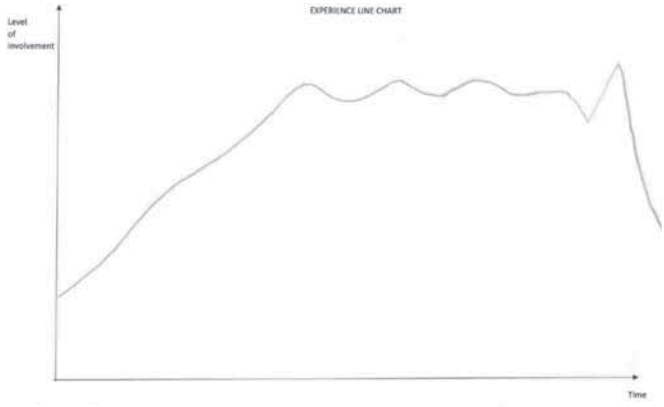
On a scale from 1 to 10, where 1 is the lowest. How immersed did you feel during the course of this experience? Please write down the number on your experience line charts.

Appendix 3

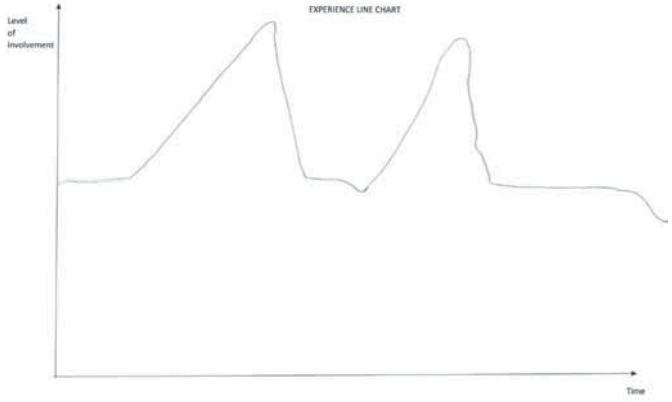
Examples of the informants' Experience Line Charts
Experience line chart – Participant 3



Experience line chart – Participant 2



Experience line chart – Participant 10



Paper III

“You just get sucked into it”: Extending the immersion process model to virtual experiences in managed visitor attractions

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“You just get sucked into it”

Extending the Immersion Process Model to Virtual Experiences in Managed Visitor Attractions

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None

“You just get sucked into it”: Extending the Immersion Process Model to Virtual Experiences in Managed Visitor Attractions

Abstract: Consumer immersion has to date largely been studied within the fields of tourism and Human-Computer Interaction (HCI). Despite the shared interest in immersive experiences and the potential that lay in utilizing findings from both fields to create a better understanding of the immersion process and the factors that influence it, research in the two fields have largely remained separated from one another. This can partially be explained by the lack of a shared understanding of the immersion process between the two fields and this study, therefore, seeks to make a first empirical contribution to bridging this gap, by conducting a study on the immersion process in virtual technology-empowered experiences offered in the context of a managed visitor attraction. To this end, 14 visitors participating in virtual gameplay at a commercial gaming center were interviewed through in-depth semi-structured interviews. Findings indicate that while there are some contextual differences between the factors that influence the immersion process in conventional tourism experiences and virtual technology-empowered experiences, the state of immersion experienced, the nature of the process, and the phases involved in it, are largely similar across both experience types. These findings have important theoretical, as well as practical implications for tourism researchers and experience product designers alike.

Keywords: Immersion; immersive experiences; managed visitor attractions; immersion process; consumer behavior.

1. Introduction

Experiences are today widely recognized as a fundamental part of the tourism industry, and tourism enterprises are increasingly competing with each other to facilitate high-quality memorable experiences for their patrons (Tussyadiah, 2014). Memorability is particularly important for profitability, as memorable experiences have been found to positively influence both re-visitation intentions and word of mouth (Kim, Ritchie, & Tung, 2010). Previous research has shown that consumers who purchase tourism products have a preference for attractions that give rise to positive emotional responses, as experiences that elicit emotional responses tend to be remembered longer (Slåtten, Krogh, & Connolley, 2011). Tourism managers are therefore increasingly seeking to create circumstances and experiencescapes that facilitate enjoyable, immersive experiences for their customers, as immersion has been linked to both emotional engagement and memorable experiences (Blumenthal & Jensen, 2019; Brown & Cairns, 2004; Lunardo & Ponsignon, 2019).

While there have been a few studies on immersion published within the tourism literature (see for example Hansen and Mossberg (2013), Mossberg, Hanefors, and Hansen (2014), Lindberg and Østergaard (2015) and Blumenthal and Jensen (2019)) and a few more related to leisure and work experiences (Carù & Cova, 2003, 2006; Fornerino, Helme-Guizon, & Gotteland, 2008; Mainemelis, 2001), the large majority of scholarly inquiries into immersion

has been conducted within the field of Human-Computer Interaction (HCI) research, were the focus has been on immersion in virtual experiences. HCI researchers have for example studied the immersion process (in computer games) (Brown & Cairns, 2004), the different components involved in immersive gameplay (Ermi & Mäyrä, 2005), the influence of negative emotions on immersion (Jennett et al., 2008), the relationship between social setting and immersion (Cairns, Cox, Day, Martin, & Perryman, 2013), and the influence of game narrative (Qin, Rau, & Salvendy, 2009) and music on immersion (Sanders & Cairns, 2010). Despite the shared interest in immersion among tourism scholars and HCI researchers, findings from the HCI have largely been overlooked by tourism scholars (and vice versa), with the works of Brown and Cairns (2004) and Jennett et al. (2008) as notable exceptions. While there can be multiple reasons for this lack of cross-referencing between the two fields, the literature review conducted for this study indicated that one important reason is the lack of a shared understanding of the nature of the immersion process. In HCI, Brown and Cairns' (2004) ideas of immersion as a sequential and progressive process progressing through the stages of engagement and engrossment before reaching the state of immersion, have received widespread recognition. In the consumer behavior and tourism literature, however, the opposing ideas of Carù and Cova (2005) and Hansen and Mossberg (2013), have both gained recognition. The former argue that the immersion process is either instant or cyclical (dependent on the consumer's prior experience), while the latter considers the immersion process to be dynamic in nature. In two recent articles by Blumenthal and Jensen (2019) and Blumenthal (2020) however, a new model of the immersion process was proposed, incorporating elements from both Brown and Cairns' (2004) and Hansen and Mossberg's (2013) models (see Figure 1).

According to Blumenthal and Jensen (2019), visitors fluctuate in and out of different levels of involvement, ranging from engagement, at the low end of the involvement scale, via engrossment, through to the highest level of involvement - transcending involvement. Each of these increasingly higher levels of involvement were connected to a different phase in the immersion process: 1) involvement triggers, 2) involvement worlds and 3) the state of immersion (Blumenthal & Jensen, 2019). The visitors' progression through the different phases of the immersion process was found to be moderated by the visitors' affective, cognitive and behavioral responses to the involvement triggers and involvement worlds they were exposed to during the course of the experience (Blumenthal, 2020). These individual responses are however also influenced by a number of antecedent factors, including external factors, personal factors, social factors, and the visitors' appraisals of core components of the experience (ibid).

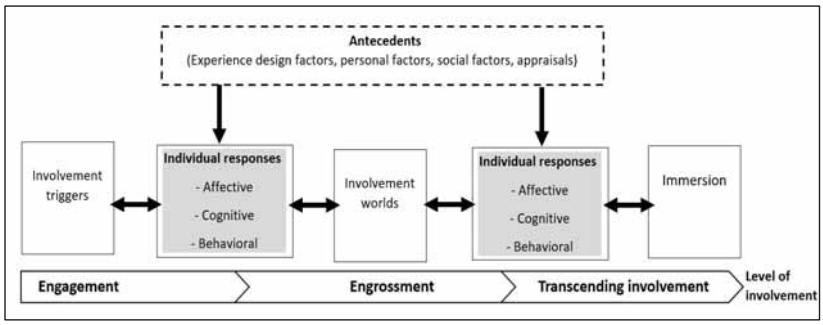

Figure 1: Blumenthal's (2020) model of the immersion process.

Although Blumenthal's (2020) immersion process model incorporates elements from both HCI and tourism literature, it is developed solely on the basis of what Neuhofer, Buhalis, and Ladkin (2014) would refer to as conventional tourism experiences that incorporate technology to a limited extent. Technology-empowered experiences are however on the rise in tourism (Burt & Louw, 2019; Errichiello, Micera, Atzeni, & Del Chiappa, 2019; Tussyadiah, Jung, & Tom Dieck, 2018; Yung & Khoo-Lattimore, 2019) and being able to understand the immersion process in virtual visitor experiences is becoming increasingly more important. This study therefore seeks to explore the immersion process in technology-empowered, virtual visitor experiences, in the intersection between tourism and HCI, in order to expand on, and explore the contextual limits of Blumenthal's (2020) model, by exploring the following research questions:

> *Q1: To what extent is the immersion process model developed by Blumenthal* (2020) *in the context of "real world" tourism experiences applicable to the immersion process in virtual technology-empowered experiences?*
>
> *Q2: What are the similarities and differences between the immersion process in conventional tourism experiences and in virtual technology-empowered experiences?*

Compared to the conventional tourism context in which Blumenthal's (2020) model was developed, the virtual technology-empowered experience context represents an extreme case context, and if the immersion process developed in a conventional tourism context is found to be applicable also in this extreme context, it can have important implications for our understanding of the immersion process. By also investigating the differences and similarities between the immersion process in virtual technology-empowered experiences products and conventional tourism products, this study makes an important contribution to building a shared understanding of the immersion process. An important step in bridging the gap between immersion research in tourism and the more advanced research that has been done in HCI, which at this early stage could be of great benefit to tourism, where research on immersion is in its infancy. According to Kock, Assaf, and Tsionas (2020) tourism lends itself particularly to bridging with other fields as one of the core characteristics of tourism is that it is interdisciplinary and concerned with complex and multifaceted research problems which would often benefit from exploring theories from other disciplines. This study hence seeks to answer

the call for more innovative tourism research (McKercher, 2018; Rodríguez Sánchez, Makkonen, & Williams, 2019), by drawing on existing theories on immersion from both tourism and HCI and by conducting an empirical investigation of the immersion process in the intersection between managed visitor attractions and virtual gaming experiences.

2. Literature review

In the previous section, the lack of a shared understanding of the immersion process was highlighted as one of the key barriers to knowledge exchange between immersion research in tourism and HCI. This is not, however, the only barrier to knowledge exchange between the two fields as issues with heterogeneity in terminology represent another issue. This issue is related not just to definitions of immersion, but also to experience concepts that are similar and to some degree overlap with immersion.

2.1 Immersion and its relationship with related experience concepts

In both tourism and HCI, the term immersion is sometimes used interchangeably or overlapping with other, similar experience constructs such as presence and flow (Calleja, 2011; Hansen & Mossberg, 2013). It is therefore important to clarify the differences between immersion and these closely related constructs.

Presence is a construct frequently used in the study of engaging virtual experiences such as computer games (Calleja, 2011). It is similar to immersion in that it is defined as a sense of "being in" a virtual environment (Slater, Usoh, & Steed, 1994) or as "the sensation of being somewhere else knowing that you are not."(Cairns, Cox, & Nordin, 2014, p. 20). At first glance, this description might appear similar to the immersive characteristic of loss of real-world awareness (Brown & Cairns, 2004) (which is still only one characteristic of immersion), but the difference lays in the relational focus. Where loss of awareness of the real world is about the player's relation to the "real world" and disassociation with it, the "being in" is about the players association to the virtual environment. Presence is thus distinctly different from immersion. Another experience concept closely related to immersion is flow. The concept was first introduced by Csikszentmihalyi (1990, p. 4) who described it as "The state in which people are so involved in an activity that nothing else matter." He listed eight components of flow: clear goals, intrinsically rewarding, high degree of concentration, loss of self-consciousness, distorted sense of time, direct and immediate feedback, balance between ability level and challenge, and a sense of personal control. While some of these components are also a part of immersion (such as distorted sense of time and loss of self-consciousness), other components are not. Jennett et al. (2008) for example argue that it is possible to become immersed while playing computer games, even when the player's skills do not match the challenge level (for example when losing to a boss at the end of a level) or when the player does not receive direct and immediate feedback. Hansen and Mossberg (2013) similarly argued that in the context of tourism, reaching a state of immersion does not require the presence of a challenge, nor does it require a person to use their skills optimally. Immersion is hence not the same as flow, although it can be experienced as a part of a flow-experience, it is one of the underlying components of the higher-level experience concept that is flow (Blumenthal & Jensen, 2019).

2.2 Definitions of immersion in HCI and tourism research

To complicate matters further, there is also heterogeneity in the definitions applied to the term immersion. These definitions can be divided into two main groups: Psychological definitions and perceptual definitions (Carr, 2006). The psychological definitions of immersion consider immersion to be a psychological phenomenon or state, where the focus is on the cognitive features of the experience. In perceptual definitions however, immersion is understood as a perceptual phenomenon and the focus is on technical aspects of the game and how these aspects can monopolize a player's senses and attentional resources (Jennett, Cox, & Cairns, 2009). These two types of definitions hence refer to different, but related concepts: Immersion as a psychological state (psychological definitions) and immersion as a feature of a technology (perceptual definitions).

In the tourism literature, psychological definitions of immersion dominate. Hansen and Mossberg (2013, p. 212) for example, defined immersion as: “a form of spatio-temporal belonging in the world that is characterized by deep involvement in the present moment. Immersion involves a lack of awareness of time and loss of self-consciousness.” Pine and Gilmore (1999, p. 31) on the other hand offer a more simplistic definition of immersion, defining it as the feeling of “becoming physically (or virtually) a part of the experience itself.” While this definition is rather simplistic, it is one of the few definitions from tourism that takes into account that immersion can also occur in virtual environments. The majority of definitions used in computer game research can, however, be classified as what Carr (2006) refers to as perceptual definitions. Slater and Wilbur (1997, p. 604) provide an excellent example of such a definition: “Immersion is a description of a technology, and describes the extent to which the computer displays are capable of delivering an inclusive, extensive, surrounding, and vivid illusion of reality to the senses of a human participant.” There are however also examples of psychological definitions of immersion being applied to the study of computer games (see for example Witmer and Singer (1998), Jennett et al. (2008), and Cairns et al. (2014)). When conducting comparisons across the tourism and HCI literature, it is therefore important to remain conscious of the definitions being used, to avoid drawing faulty conclusions based on studies utilizing incompatible conceptualizations of the term immersion.

In line with the majority of immersion research in tourism, this study is based on a psychological definition of immersion, following Mainemelis’ (2001, p. 557) definition of immersion as “the feeling of being fully absorbed, surrendered to, or consumed by an activity, to the point of forgetting one's self and one's surroundings”.

3. Method

This study was conducted as a single case study, utilizing an extreme case design based on a purposive sampling strategy (Creswell, 2014). The case study approach was chosen as it enables the exploration of the immersion process within its real-life context, and is considered particularly applicable for the study of a contemporary phenomenon that is closely connected to the context in which it occurs (Andersen, 2013; Yin, 2003). The single-case design was selected, as it allows a deeper exploration of the case context (Yin, 2003), which was key to the

present study which uses contextually embedded empirical data to expand an existing theoretical model by introducing it to the study of a type of experience that differs significantly from the experience context in which it was originally developed. The case selected for this study was chosen based on three criteria: 1) It should be a virtual gaming experience; 2) it should be offered within the context of a managed visitor attraction and 3) it should be offered in an experiencescape that is themed, enclaved and safe. The latter criterion was added as prior research has shown that experiencescapes (a combination of physical and social surroundings) (Mossberg, 2007), that are perceived by visitors as themed safe and enclaved can facilitate immersion (Carù & Cova, 2007).

The case selected for the purpose of this study was House of Nerds Oslo (HoN), a commercial gaming center located in Oslo, Norway. The center attracts a combination of local residents, day-trippers, and tourists (see Appendix 2) and can be categorized as a managed visitor attraction (MVA) according to Jensen's (Jensen, 2015) definition. That defines a managed visitor attraction as: «a phenomenon and/or theme in a presented form with the purpose of creating specific types of experiences for visitors. It will also offer supplementary services and service systems that supports and expands the total visitor experience." (Translated from Jensen (2015, p. 274)). HoN fulfills the criteria of this definition, as it represents a theme (gaming) in a presented form, managed for the purpose of creating specific types of experiences for their visitors. It also offers support services including a kiosk selling food and snacks, a bar, and a lounge area. House of Nerds furthermore fulfilled the criteria of offering an experiencescape that is clearly limited in time and space and is likely to be perceived by visitors as safe. The gaming theme is also consistently enhanced throughout the attraction, though gaming posters, life-sized game characters, TVs continually showing live gaming streams, and a separate "nostalgia" room equipped with old gaming consoles and TVs. The attraction offers a wide variety of virtual games that are available through different gaming consoles (including computers, gaming consoles, and VR-googles).

3.1 Data collection

The immersion process is highly individual and subjective and can therefore be difficult to measure (Mainemelis, 2001). This difficulty is enhanced by the lack of self-awareness involved in immersion. In previous studies, researchers have investigated immersion non-intrusively through retrospective interviews (see for example Brown and Cairns (2004), Hansen and Mossberg (2013), and Blumenthal and Jensen (2019)) or by utilizing physiological measures such as eye-movement tracking (Cairns, Cox, Berthouze, Dhoparee, & Jennett, 2006; Jennett et al., 2008). Both of these approaches have their weaknesses, but since physiological measures were considered more intrusive, and therefore more likely to interfere with the visitors' experience. The choice was made to investigate immersion through the use of retrospective semi-structured interviews in combination with "experience line charts", which have previously been employed successfully to the study of the immersion process (Blumenthal & Jensen, 2019; Hansen, 2014). These line charts were used to guide the interviews towards peak moments of involvement, in line with the understanding of involvement as the driving force behind the immersion process (Blumenthal & Jensen, 2019; Hansen & Mossberg, 2013) and a high level

of involvement as a potential indicator of immersion (Brown & Cairns, 2004). Informants were also asked to indicate how immersed they felt during the experience on a scale from 1 to 10 after being provided with a definition of immersion. An approach that was inspired by Jennett et al. (2008), whose findings indicated that consumers were able to quite accurately determine their own level of immersion in an experience on such a scale.

The interviews were conducted directly after the informants had ended their gaming session, while their experience was still fresh in their memory. During the interviews, informants were probed about their experienced level of involvement, prior experience with the game and the gaming center, their thoughts about the game, social interactions during the game, different antecedent factors, and their responses to the incidents that occurred during their gaming session. The interview guide is attached in Appendix 1.

The data collection was conducted over the course of one week and only visitors who were over the age of 18 and participated in gameplay while visiting the facility were asked to participate in the interviews. Informants were initially selected based on a random sampling strategy, which gradually progressed into a more targeted theoretical sampling strategy. As the emergent theory pointed to new directions worth pursuing, informants from different game settings (tournament, alone, online, with friends), game categories (e.g. action vs. strategy), prior experience (inexperienced, experienced, first-time visitors, repeat visitors), and play duration were sampled (see Appendix 2 for descriptive informant data). A total of 14 informants, spread across ten interviews, were interviewed for the purpose of this study. The interviews lasted between 40 and 62 minutes. The data collection ceased when a sufficient level of saturation had been reached and the interviews no longer yield any new theoretical insights (Gibson & Hartman, 2014).

3.2 Data analysis

The data analysis consisted of three phases. Following the framework of Spiggle (1994), the first phase was devoted to categorization and abstraction, the second to comparison, iteration, and dimensionalization, and the third to integration and refutation. The first phase was conducted independently by the two authors and can be described as a semi-open coding process, as each author set out with four pre-defined categories: engagement, engrossment, transcending involvement, and immersion. The coding process in this phase consisted of repeated line-by-line coding of data, where new and emerging codes were compared to previous codes in a circular process of coding and re-coding. Both authors set out with a pre-determined focus on involvement levels (increases, decreases, and peaks) and the factors influencing these changes. In the second phase of the analysis, the axial coding, the authors discussed and compared the codes and sub-categories that had emerged during the individual analysis, with the goal of reaching consensus. In the third phase of the analysis, the selective coding, the authors moved beyond the identification of themes, towards the identification of relationships between the identified sub-categories and the pre-defined involvement levels. That was then analyzed and compared with the categories and relationships identified in Blumenthal and Jensen's (2019) and Blumenthal's (2020) immersion process model. This process lead to the identification of new sub-categories and categories, resulting in the emergence of an extended immersion process model (Figure 2).

While described here sequentially, the data was analyzed through the circular, constant comparative coding process characteristic of the grounded theory approach, where emergent codes and categories were constantly compared in order to refine, redefine and re-code identified codes and categories (Blaikie, 2000; Strauss & Corbin, 1990)

4. Findings

The coding process described above resulted in the identification of 21 sub-categories that were found to influence the immersion process in the present case context. By analyzing the relationship between these sub-categories, the pre-defined involvement levels, and Blumenthal's immersion process model, we were able to develop a context-specific immersion process model containing six main categories: (1) "involvement triggers", (2) "involvement worlds", (3) "immersion", (4) "individual responses", (5) "antecedents", and (6) "pre-existing involvement". Each of the main categories, their sub-categories, and their codes are presented in Table 1 and will be presented in more detail in the following section.

[Insert Table 1 here]

Category 1: Involvement triggers

In the present study, five involvement triggers were identified (see Table 1). These were factors that could trigger the visitors' initial involvement in the experience. Out of these five, three (memories, personal resource utilization, and challenges) have previously been identified as involvement triggers in the context of conventional tourism experiences. Social interactions and having a stake represented novel involvement triggers.

The feeling of having a stake could arise from external influences, such as competition. The player could, for example, feel as though their prestige was on the line, or the game could be a ranking match, the outcome of which would determine the league the player would get to play in in the future. Or it could arise from internal factors such as having set a goal for oneself while playing the game or from having invested time and effort into the round.

> *Informant 6: "If it is a long game and I kind of commit a lot of energy into it, then…. Then I kind of get a stake. Because then it stings more when you lose."*

Social interactions, in this context, consisted of both verbal and non-verbal (high-fives, exchanging looks, etc.) communication with both teammates and opponents. Similar to "having a stake", these interactions could lead to an increase in involvement in the game and an increase in the focus and attention the players devoted to the gaming experience.

Category 2: Involvement worlds

Three involvement worlds, which represented different paths to immersion, were identified in the present study: "Involvement with the present", "Involvement through personal life narrative", and "Emotional involvement with game narrative and/or characters". The two

former have both been identified in the context of tourism experiences previously (Blumenthal & Jensen, 2019), while the latter, "Emotional involvement with game narrative and/or characters" is novel to the present case context.

Several of the informants reported feeling a strong emotional connection with the characters in the game. For some, this arose from having played with the same character for many years or from having positive childhood memories connected to a character. For others, this emotional involvement came through having followed the character(s) through the narrative of the game and thus having both influenced and followed their growth and development.

> *Informant 7: "You kind of get like a relationship with the dragon. Because it was kind of like you get the dragon as an egg, and then it hatches, and then you played with her when she was little and then she just gets bigger and bigger…".*

Some informants also described an emotional involvement that was more connected to the general story unfolding in the game, rather than to specific characters.

Category 3: Immersion

Nine of the fourteen informants reported experiencing a state of immersion during their visit to the gaming center. This state was characterized by engrossment in the game, lack of self-awareness & self-consciousness, distorted perception of time, and a lack of awareness of "real-world" surroundings and distractions. It was connected to a feeling of absorption into the game and was closely connected to concentration and focus peaks. It was described by informants as both a feeling of *"zoning in"* to the game (informant 4) and as *"blacking out"* from everything around them (informant 8).

> *Informant 8: "Then I can easily focus in on the game and the stuff that are happening in the game. Then I get kind of like this blackout from everything around me in a way."*

> *Informant 5: "It is kind of like, if you get really engaged. Then, when you are done, you notice that. Oh, where am I? You know? It just like, you just kind of go completely into it."*

Category 4: Individual responses

Seven individual responses moderating the visitors' progression through the immersion process were identified in the present study. These responses were both affective, cognitive, and behavioral, and while the majority of them have been identified previously in the context of tourism, presence was identified as a novel individual response unique to the present experience context. The informants described presence as a sense of being present in the game. Of going out of oneself and feeling like one is actually present in the game as if they were the character they were controlling in the game.

Informant 10: "You place yourself in the character. Very much so. So, it's kind of like, when you get hit by something. I mean you don't feel it, feel it. But you kind of feel it."

This sense of presence arose as a response to the different incidents that occurred during the game. It had a positive effect on the visitors' focus and concentration, and positively influenced their level of involvement in the experience.

Category 5: Antecedents

In the present study, four antecedent factors that were found to influence the visitors' individual responses were identified: the visitors' perception of the challenges they were faced with, the visitors' personal factors, game design features, and the experiencescape. While a variation of these antecedents have all been identified as influential in the context of conventional tourism experiences previously, the two latter have novel characteristics.

In virtual gaming experiences, visitors have to relate to two different experiencescapes. The experiencescape of the managed visitor attraction that surrounds them in the "real world" (including physical and social surroundings) as well as the virtual experiencescape they journey into during their gaming experience (which potentially also includes other social actors). The latter is made up of the game design features, which include graphics, audio, and the players' ability to interact with online teammates and opponents, as well as the pacing of the game, in-game rewards, and the game narrative.

Informant 13: "And when you play with people you don't know; you are a bit more careful and don't take as many risks. Again, that's because a random person can suddenly start yelling straight into your ears, and that's very uncomfortable."

Influential factors in the "real-world" experiencescape included physical factors such as the layout of the gaming room, noise levels, distractive elements in the surroundings, and social factors such as the presence of an audience and teammates and/or opponents present in the room.

Informant 10: "If my friend watches me play, it doesn't really matter. But if it is a large group of people watching, I feel like I perform better."

Both these experiencescapes were found to influence the visitors' individual responses to the different incidents that occurred during their gaming session, and as a consequence, their level of involvement with the experience.

Category 6: Pre-existing involvement

The category, "pre-existing involvement", was the only main category identified in the present study that has not previously been identified in Blumenthal's immersion process model. The category consisted mainly of antecedent factors, but unlike the remainder of the antecedent factors identified in this study, this category had a direct effect on the visitors' level of involvement. Just like the involvement triggers, this category was connected to the engagement phase of the immersion process, but where the involvement triggers functioned as triggers that

could trigger the visitors' involvement during the experience, the pre-existing involvement category worked as a pre-experience booster, positively effecting the visitors' base level of involvement going into the experience. Visitors who had such a prior involvement with the game hence appeared to start their gaming session at a higher level of involvement than visitors who did not have such prior involvement.

The pre-existing involvement category consisted of a combination of factors such as the visitors' prior experience with the game, their tacit competencies (skills and knowledge), their knowledge of the backstory of the game and its characters, and pre-existing relationship with game character(s).

> *Informant 8: "Generally, I feel pretty involved actually. Because I have played this game for a very long time…. It happens very automatically for me, when I play…"*

4.1 The nature of the immersion process in the context of virtual gaming experiences

The immersion process in the present case was found to consist of three stages: Involvement triggers (1), which was connected to the engagement phase of the immersion process. Involvement worlds (2), connected to the engrossment phase, and finally, the state of immersion (3) which was connected to transcending involvement. The visitors' progression from one stage in the immersion process to the next was found to be moderated by the visitors' individual responses (4), which in turn were influenced by several antecedent factors (5). This resulted in visitors fluctuating in and out of different stages of the immersion process throughout the experience, which indicates that the immersion process was dynamic in nature (See appendix 3 for illustrative examples from the informants' experience line charts, showing their fluctuation between different levels of involvement).

The sixth and final main category identified as influential to the immersion process in the present case context was pre-existing involvement (6). This category functioned as an involvement booster, fast-tracking visitors deeper into the immersion process at a faster pace than the visitors who did not have such pre-existing involvement with the game. The relationship between the main categories and the connected involvement levels are illustrated in the context-specific immersion process model presented in Figure 2.

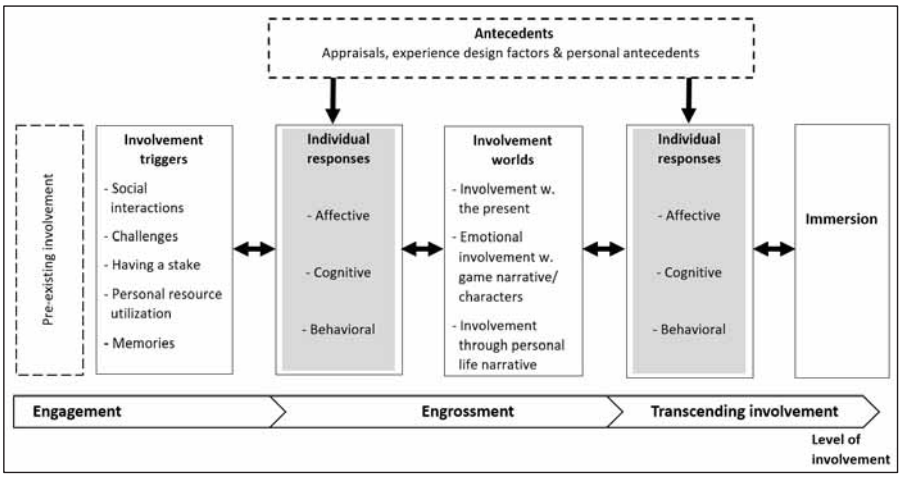

Figure 2: Phases, involvement levels, and factors influencing the immersion process in virtual gaming experiences in the context of a managed visitor attraction.

5. Discussion

The purpose of this study was to use empirical data gathered from technology-empowered virtual gaming experiences to expand existing theories on the immersion process in the context of managed visitor attractions. Our analysis identified six main categories of factors that were influential to the immersion process in these types of experiences. Out of these six, five had previously been identified in the context of managed visitor attractions (Blumenthal, 2020; Blumenthal & Jensen, 2019). Several new sub-categories within the main categories were however identified (see Table 1), indicating that there are some contextual differences between the immersion process in the context of technology-empowered experiences in MVAs and conventional tourism experiences.

Two such novel sub-categories were, “social interactions” and “having a stake”, which were both identified as influential involvement triggers in the present experience context. While social interactions to some extent overlap with Blumenthal and Jensen’s (2019) “group assimilation” involvement trigger (both were largely driven by interactions with fellow visitors), previous studies on immersion in conventional tourism experiences have not identified an equivalent to "having a stake”. The involvement triggering effect of having a stake can, however, be explained with reference to self-determination theory (SDT).

SDT theorizes that human motivation can be divided into three main categories: intrinsic motivation (doing something because it is enjoyable, optimally challenging, or aesthetically pleasing), extrinsic motivation (doing something because it leads to a separable state), and amotivation (the state of lacking intention to act) (Deci & Ryan, 1985, 2000, 2012). In the present context, extrinsic motivation is perhaps present to a greater extent than what one might

expect to find in most tourism experiences, as the performance of each individual is measured explicitly through either point systems, scoreboards, or direct competition with other players. We do however also find intrinsic motivation to be present in this experience context as some informants reported experiencing the feeling of having a stake as the result of having set a self-imposed goal for the gaming session. Previous studies in tourism have highlighted the relationship between motivation and involvement in the context of destination experiences (e.g., Prebensen, Woo, Chen, and Uysal (2013)), but there is a need for more research on how self-determination theory relates to visitor involvement and immersion in the context of managed visitor attractions.

Another influential factor identified in the present study was the narrative of the game. For some of the informants, it was the game's narrative that ultimately leads them to become immersed through the involvement world "emotional involvement with game narrative and characters". Storytelling and narratives have also been considered important to the immersion process in conventional tourism experiences, where themed experiencescapes have been considered a pre-requisite for immersion (Carù & Cova, 2007; Hansen & Mossberg, 2013), and where guides use storytelling to create a thematic frame around the experience (Hansen & Mossberg, 2016). In both contexts, the narrative emerges through a co-creational process between the visitor and the offerings of the experience providers (in the form of tour guides, experiencescapes, game design features, and game characters). Narratives hence seem to play an important role in both conventional and technology-empowered tourism experiences.

It is also interesting to note that some of the informants reported experiencing presence in the game as a part of their immersion process. As we discussed in section 2.2, the term presence is often used interchangeably with immersion in the HCI literature (Calleja, 2011), but our findings indicate that while presence can be a part of the immersion process, it is but one element in the process. And it does not need to be present for players to experience a sense of immersion in the game. The informants' description of presence matched Cairns et al. (2014, p. 20) definition of presence as "the sensation of being somewhere else knowing that you are not." The experience of presence can be seen as an indication of the duality visitors have to deal with when taking part in virtual experiences, as they have to relate to two, interconnected experiencescapes - the virtual and the "real world" experiencescape. The influence of these two experiencescapes on the immersion process in virtual experiences do, however, seem to be similar to the role of experience design features (including the experiencescape) in the immersion process in conventional tourism experiences (Blumenthal, 2020).

In terms of the main categories identified in this study, pre-existing involvement was the only main category not previously identified in the context of managed visitor attractions (Blumenthal, 2020; Blumenthal & Jensen, 2019). Drawing on the broader immersion literature, we are however able to identify conceptual linkages between the "pre-existing involvement" category and Carù and Cova's (2005) "classical music connoisseurs". Experienced classical music attendees who became immersed instantly as they were plunged into the experience, in contrast to inexperienced visitors who were not familiar with the context or the work being performed and therefore required a process of familiarization before they could become immersed. In the context of nature-based tourism, Frochot, Elliot, and Kreziak (2017) similarly

found that prior experience could speed up ski-tourists' immersion process, as tourists with prior experience with skiing became immersed quicker than those who did not. This stands in contrast to Blumenthal's (2020) study of the immersion process in Escape Rooms, where prior experience was found to play only a minor role.

Our findings indicate that a pre-existing relationship with the game's character(s) and prior experience (e.g. game skills, prior knowledge of the game plot, and general gaming competences) which combined constitute pre-existing involvement, may boost the visitors' level of involvement going into the experience. It seems that having a pre-existing involvement enables participants to draw on several facets of the experience, since they may use their tacit knowledge, apply a wider range of tacit skills, and use their general gaming competencies to immerse themselves in the gaming experience. We did not, however, find support for the notion that such pre-existing involvement could lead experienced visitors to become immersed instantly (Carù & Cova, 2005). It could enable them to progress through the process faster, but they still moved through the same stages of the immersion process as inexperienced visitors without such pre-existing involvement.

The reason for the discrepancy in the identified influence of prior experience across the present study and the studies of Carù and Cova (2005), Frochot et al. (2017), and Blumenthal (2020) could be due to contextual differences. The majority of the visitors in our sample had previous experience with the virtual game they played while visiting House of Nerds. They had experience with the type of challenges that would arise in the game, they were familiar with the narrative of the game, the game controllers, and the different ways in which the game could unfold. Visitors to a classical music venue can be familiar with the music pieces being performed and might have visited the same music venue previously. Skiers make themselves familiar with the activity through regular practice, gaining more tacit skills and competence with each skiing session. For an Escape room, however, it is an essential pre-requisite that the visitors have not visited the same Escape room previously, as they upon a second visit would already know the solution to the room. One of the characteristics of Escape rooms is that the same room can only be experienced once. This points to a need for more research to systematically investigate how pre-existing involvement influences the immersion process in different experience contexts.

6. Conclusion

With the exception of the new category "pre-existing involvement", our empirical data lends support to the existing main categories of the immersion process model developed by Blumenthal and Jensen (2019) and Blumenthal (2020). This may be seen as an indication that the immersion process in itself, including its different phases, its dynamic nature, and the role of moderators, is to a large extent similar in both what Neuhofer et al. (2014) would describe as conventional tourism experiences and in technology-empowered experiences. The informants' description of the state of immersion in the present context also seems to match the descriptions of immersion from previous studies on immersion in the context of tourism, which indicates that visitors experience the same state of immersion in both contexts. It is, however,

important to note that there may be different factors that influence the immersion process in different contexts, as several new sub-categories, with different dimensions, were identified in the present case study (see Table 1).

6.1 Limitations and implications

While the findings presented in this paper are grounded in the data and developed on the basis of clear methodological procedures, this is an exploratory study based on a single case-design, and its findings should, therefore, be interpreted with caution. More empirical research is needed to validate the applicability of the extended model to a wider context of technology-empowered tourist experiences.

Despite these limitations, the present study has contributed to expanding our understanding of the differences and similarities between the immersion process in virtual, technology-empowered experiences and conventional visitor experiences. The many similarities between the immersion process in these different types of experiences products identified in this study is an important finding, as it makes a vital empirical contribution to bridging the gap between how the immersion process is understood in virtual and "real-world" experiences as exemplified by the HCI and tourism literature. It also opens up opportunities for extending findings from the HCI literature to the study of tourism experiences. Previous research on immersion in the context of computer games have for example showed that music (Cairns et al., 2014), time pressure (Cairns et al., 2014; Jennett et al., 2008), and the (perception) of playing against human opponents (Cairns et al., 2013) have a significant positive influence on the experienced of immersion in computer games. Since our findings indicate that the immersion process in virtual experiences is comparable to conventional tourism experiences, it could be hypothesized that time pressure, haptic cues, and the presence of other visitors, may play an influential role in the immersion process in tourism experiences as well. In terms of practical implications, the finding that pre-existing involvement can act as an involvement booster positively influencing the visitors' immersion process, can have implications for tourism experience providers seeking to facilitate immersive experiences for their visitors. Since it indicates that they might be able to boost their visitors' level of involvement in the experience by activating the visitors' tacit competencies (skills or knowledge) during the experience. This does, however, require that the experience provider understand the many facets of the experience they are co-creating with their visitors and can detect the types of skills or knowledge that could potentially be activated during the consumption of their experience product.

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Main category	Category	Sub-category
Involvement triggers	Social interactions	Verbal communication with teammates/opponents, non-verbal communication with teammates/opponents
	Challenges (physical & intellectual)	Controller proficiency, hand-eye coordination, tactile speed, strategy development and execution, understanding the game, balance between challenge and skills
	Having a stake	Having invested time and effort into the game, social stake (prestige), external goal (ranking/placement), competition, personal goals
	Personal resource utilization	Utilizing prior experience and skills, utilizing explicit and tacit knowledge, utilizing personal resources and creativity
	Memories	Feelings of nostalgia, childhood memories, relating current experience to past experiences
Involvement worlds	Involvement with the present	Intense focus (on the present), attention directed at the task at hand - the "here and now"
	Involvement through personal life narrative	Intense focus (internal), attention directed towards internal reflections, connecting the present experience to personal life story
	Emotional involvement with narrative/characters	Intense focus, feeling emotionally connected to the characters, identifying with character(s), being invested in the game narrative and/or characters, emotional involvement with the game
State of immersion	Immersion	Lack of self-awareness and self-consciousness, distorted perception of time, blacking out/zoning in, lack of awareness of distractions and "real world" surroundings
Individual responses	In-game (behavioral) responses	Taking risks & testing new strategies, playing creatively (freeplay), taking on a leader role, not playing "seriously"
	Adversity responses	Pushing through, adjusting strategy, self-reflection, reflection of one's performance, resigning, adjusting expectations

	Presence	Feeling of being (present) in the game, going out of oneself, “I feel like I am the character”
	Absorption	Engrossment, concentration & focus peaks, lack of awareness of distractions, surroundings, and the “real world”
	Emotional engagement	Being emotionally involved, feeling an emotional connection with character(s), involvement with the story, wanting to progress/succeed/win
	Emotional responses	Excitement & adrenalin, feeling of mastery, enthusiasm, positive surprise, enjoyment, feeling socially secure, feeling/not feeling comfortable or safe, boredom, disappointment
	Stress responses	Positive stress (eustress), negative stress (pressure), not feeling stressed
Antecedents	Personal factors	Motivation, mental state going into the experience, prior interests, prior experience, expectations, personality traits, competitiveness
	Game design features	Game script, graphics & audio, game narrative, game requiring focus and concentration, opportunity to interact with other online players
	Experiencescape	Physical experiencescape, distractive elements, physically present teammates/opponents, presence of other players, presence of an audience,
	Perception of challenges	Challenge perceived as too big/small, appraisal of opponents, perception of progress and success, challenge perceived as an opportunity to learn
Pre-existing involvement	Pre-existing involvement with the game	Prior experience with the game, tacit competences, knowledge of the backstory of the game/characters, pre-existing relationship with game character(s)

Table 1 - Findings: Main categories, their sub-categories, and codes

Appendix 1

Interview guide: House of Nerds Oslo*

**The interviews for this study were conducted in Norwegian and this is a translated version of the original interview guide used in the study.*

1. **Opening question**

Please take an experience line chart and draw a curve of how involved you felt while you were playing now. From when you sat down and started playing until you finished. When you are done, please walk me through the curve and explain what you were doing and what was happening in the game.

2. **Topics to be covered**

- ***Personal antecedents***
  (Prior experience and interest, expectations, Purpose of visit, personal pre-dispositions)

- ***Social antecedents***
  (Who you are playing with/against, social play/ individual play, team feeling, social support)

- ***External antecedents***
  (Game design, sound & graphics, teamwork required, pacing of the game, game characters)

- ***Appraisals***
  (Challenges, perception of progress and success)

- ***Involvement triggers***
  (Specific incidents/ factors/ thoughts that triggered you to become more involved)

- ***Involvement worlds***
  (Incidents/ thoughts/ factors that you focused on particularly)

- ***Affective responses***
  (Emotional responses, emotional engagement, stress)

- ***Behavioral responses***

(Active participation/passivity, responses to adversity)

- ***Cognitive responses***
  (Self-awareness, awareness of time, distractions and “real world” awareness, focus, attention)

- ***Immersion/ peak level of involvement***

3. **Closing question**

Immersion is a state where you become so involved with what you are doing right here, right now that you completely forget everything else that is going on around you, including time, place, and your own self-consciousness.

On a scale from 1 to 10, where 1 is the lowest. How immersed did you feel while you were playing right now? Please write down both the maximum and minimum level of immersion you experienced on your experience line chart.

Appendix 2 Descriptive informant data

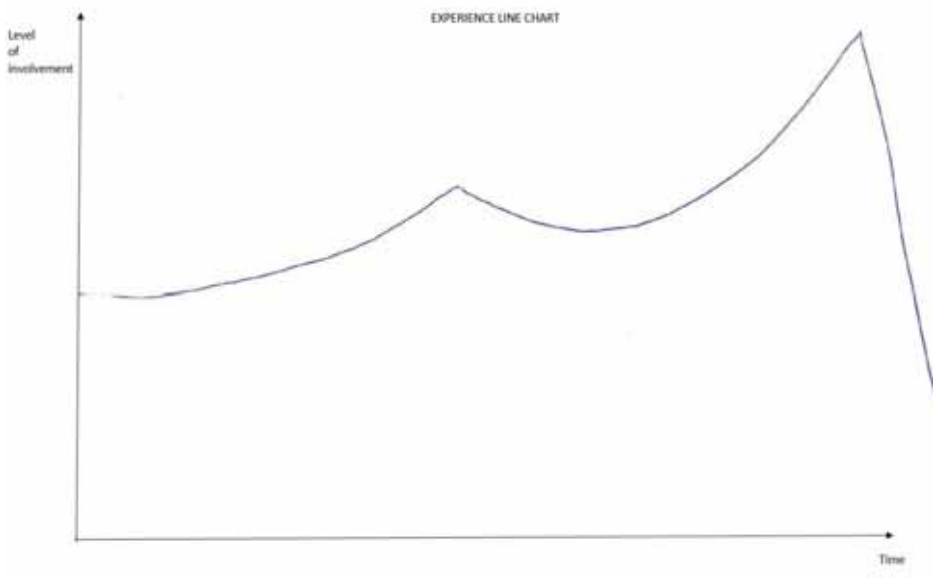
Informant no.	Gender	Age	Game category	Game console	Social context	Opponent	Visitation context	First time visitor?
1	Male	27	Action	Nintendo NES	Playing with a friend	The game	Tourist (VFR*)	Yes
2	Male	27	Action	Nintendo NES	Playing with a friend	The game	Local resident	Yes
3	Male	23	Strategy	PC	Playing on a team with friends	Online opponents	Local resident	No
4	Male	18	Strategy	PC	Playing on a team with friends	Online opponents	Local resident	No
5	Male	35	Strategy	PC	Playing on a team with friends	Online opponents	Tourist (business)	Yes
6	Male	33	Strategy	PC	Playing on a team with friends	Online opponents	Tourist (business)	Yes
7	Male	24	Strategy	PC	Playing on a team with friends	Online opponents	Tourist (business)	Yes
8	Male	27	Action/ fighting	GameCube	Playing against friends	Online opponents	Local resident	No
9	Male	21	Action/ fighting	GameCube	Tournament	Present in room	Daytripper	No

10	Male	22	Action/ fighting	GameCube	Tournament	Present in room	Daytripper	No
11	Male	18	Action/ fighting	GameCube	Tournament	Present in room	Daytripper	No
12	Male	25	Action/ fighting	GameCube	Tournament	Present in room	Local resident	No
13	Female	22	Action	PC	Playing With strangers	Online opponents	Local resident	No
14	Male	32	Sandbox/ survival	PC	Playing alone	The game	Tourist (VFR)	Yes

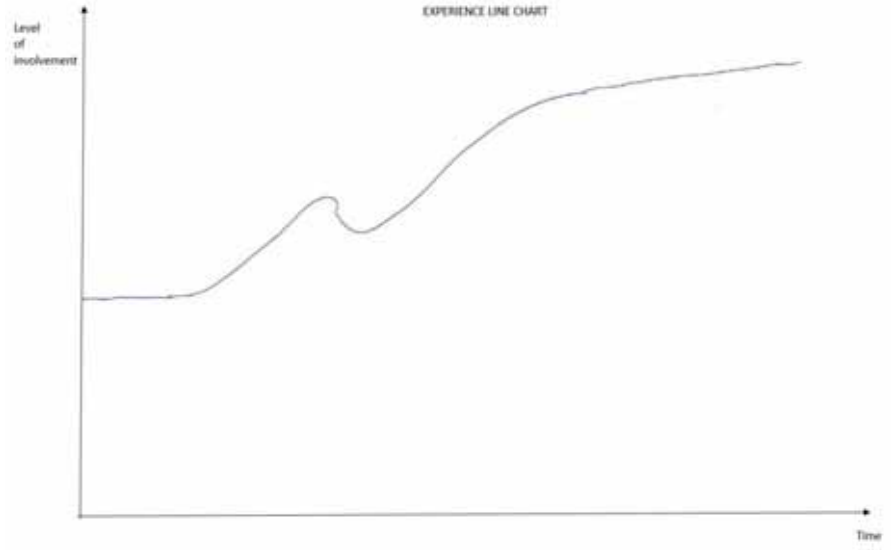
VFR = Visiting friends and relatives

Appendix 3: Examples from the informants' experience line charts

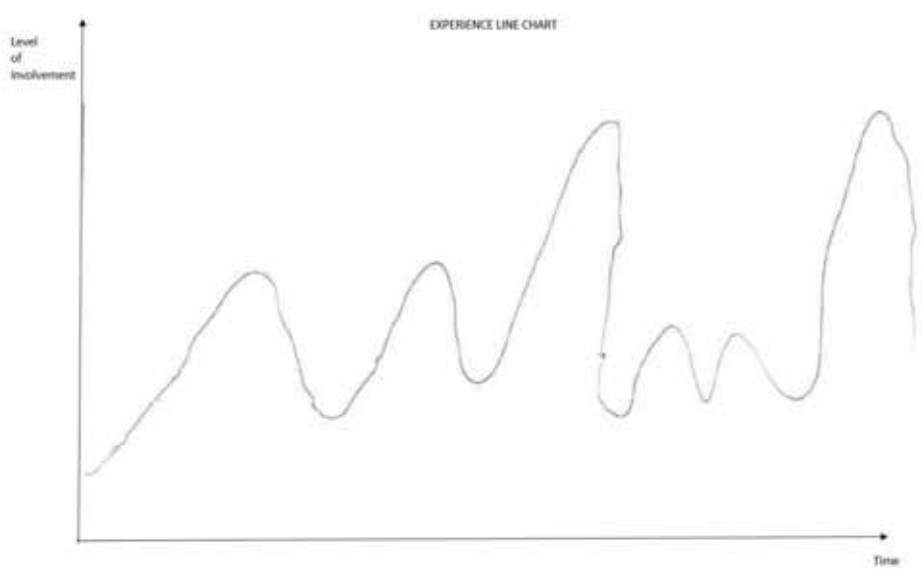
Experience line chart: Informant 9



Experience line chart: Informant 1



Experience line chart: Informant 10



Appendices

Appendix 1: Informant group description

Group number	**Group size (+ informant no.)**	**Group composition/ relationships**	**Tourist status**	**Travel type/ purpose of visit**
Roskilde				
1	16 (1,2)	Couple + strangers	International tourists	Vacation
2	10 (3,4)	Couple + strangers	International tourists	Vacation
3	16 (5,6)	Couple + strangers	International tourists	Vacation
4	10 (7)	Company outing/ colleagues	Daytripper	Teambuilding
5	12 (8,9)	Couple + strangers	International tourists	Vacation
6	8 (10)	Colleagues	Local resident	Teambuilding
7	16 (11,12)	Couple + strangers	International tourists	Vacation, birthday celebration
8	8 (13)	Solo traveler + strangers	International tourists	Vacation
Escape reality				
1	7 (2-8)	Friend group	Locals & natio. tourists**	Bachelorette party (VFR*)
2	6 (9-14)	Friend group	Natio. tourists	Have fun (VFR)
3	4 (15-18)	Two couples	Day trippers	Have fun
4	4 (19-22)	Friend group	Locals	Birthday party

Group number	**Group size (+ informant no.)**	**Group composition/ relationships**	**Tourist status**	**Travel type/ purpose of visit**
5	4 (23-26)	Friend group	Locals	Birthday party
6	5 (27-31)	Colleagues	Locals	Teambuilding
7	4 (32-35)	Colleagues	Locals	Teambuilding
8	6 (36-41)	Family & friends	Locals & day trippers	Have fun
9	3 (1)	Friend group	Locals	Have fun
House of Nerds				
1	2 (1,2)	Friend group	Local & natio. tourist	Have fun (VFR)
2	2 (3,4)	Friend group	Locals	Have fun
3	3 (5,6,7)	Colleagues	Natio. tourists	Have fun (work trip)
4	6 (8)	Friends	Locals	Relaxation
5	X (9)	Tournament	Day tripper	Tournament
6	X (10)	Tournament	Day tripper	Tournament
7	X (11)	Tournament	Day tripper	Tournament
8	X (12)	Tournament	Locals	Tournament
9	1 (13)	Solo visit	Local	Relaxation
10	1 (14)	Solo visit	Natio. tourist	Have fun

*VFR = Visiting friends and relatives

**Natio. tourist = National tourists

Appendix 2: Category overview

Case study 1

C-level category (Sub-category)	**B-level category (Category)**	**A-level category (Main Category)**
C1 Active participation C2 Perceived challenge C3 Sense of mastery	B1 Physical challenge	A1 Involvement triggers
C4 Experience of connection with fellow passengers C5 Perceived common goal C6 Team feeling	B2 Group assimilation	
C7 Pre-existing interest in activity C8 Opportunity to practice/ demonstrate prior skills C9 Using prior knowledge and experience to interpret current situation	B3 Personal resource utilization	
C9 Interpreting observations C10 Gradual understanding of connections and relationships C11 Observing elements in experiencescape interact C12 Use of multiple senses to observe and understand	B4 Intellectual challenge	

C-level category (Sub-category)	**B-level category (Category)**	**A-level category (Main Category)**
C13 Relating past experiences to current experience C14 Emotional engagement C15 Nostalgic feelings towards activity C15 Elevated meaning attached to objects	B5 Memories	
C16 Active use of imagination C17 Letting one's thoughts drift beyond the present C18 Connecting present experience to past experiences	B6 Imagination	
C19 Intense focus (external) C20 Attention directed towards the "here and now"	B7 Involvement with the present	A2 Involvement worlds
C21 Intense focus (internal) C22 Attention directed towards internal reflections	B8 Involvement through personal life narrative	
C23 Lack of awareness of time C24 Loss of self-consciousness C25 Lack of awareness of "other" elements in the experience-scape	B9 Immersion	A3 State of immersion

Case study 2

C-level category (Sub-category)	**B-level category (Category)**	**A-level category (Main Category)**
C1 Withdrawing from group and/or activity C2 Resigning C3 Pushing through C4 Persisting	B1 Adversity responses	A1 Behavioral responses
C5 High level of active participation C6 Low level of active participation C6 Passivity	B2 Active participation	
C7 (Degree of) real world awareness C8 (Degree of) self-awareness C9 (Degree of) distraction awareness C10 Time perception C11 Focus C12 Attention	B3 Absorption	A2 Cognitive responses
C13 Positive stress (eustress) C14 Negative stress (Pressure)	B4 Stress responses	A3 Affective responses
C15 Involvement with the story C16 Degree of emotional involvement C17 Wanting to win/succeed	B5 Emotional engagement	

C-level category (Sub-category)	**B-level category (Category)**	**A-level category (Main Category)**
C18 Feeling of mastery C19 Enthusiasm C20 Excitement C21 Disappointment C22 Feeling like one is not contributing	B6 Emotional responses	
C23 Team feeling C24 Ability to work together C25 Social support C26 Group structure & size C27 Personality match	B7 Group composition	A4 Social antecedents
C28 Sound & video C29 Planned challenges C30 Pacing of experience C31 Teamwork required C32 Experiencescape layout	B8 Experience design features	A5 External antecedents
C33 Perceived presence of challenges C34 Challenge perceived as too big/ small C35 Perception of progress & success	B9 Perception of challenges	A6 Appraisals
C36 Prior experience with activity & similar activities	B10 Prior experience	A7 Personal antecedents
C37 Competitiveness C38 Degree of optimism C39 Self-confidence/ self-doubt	B11 Personal pre-dispositions	

C-level category (Sub-category)	**B-level category (Category)**	**A-level category (Main Category)**
C40 High/ low expectations C41 Clarity of expectations	B12 Expectations	
C42 Solving puzzles C43 Understanding the "game" C44 Seeing connections C45 Interpreting clues C46 Completing tasks	B13 Intellectual challenges	A8 Involvement triggers
C47 Working together C48 Sharing thoughts and ideas C49 Discussing solutions	B15 Teamwork	
C50 Receiving praise C51 Receiving encouragement from teammates	B16 Receiving social support	
C52 Scripted surprises C53 Uncovering of hidden features	B17 Surprises	
C54 Dominant group members becoming more passive C55 Changing roles within the group	B18 Changes in group dynamic	
C56 Intense focus C57 Attention directed at the task at hand - the "here and now"	B19 Involvement with the present	A9 Involvement worlds

Case study 3

C-level category (Sub-category)	**B-level category (Category)**	**A-level category (Main Category)**
C1 Verbal communication with teammates/opponents C2 Non-verbal communication with teammates/opponents	B1 Social interactions	A1 Involvement triggers
C3 Controller proficiency C4 Hand-eye coordination C5 Tactile speed C6 Strategy development and execution C7 Understanding the game C8 Balance between challenge and skills	B2 Challenges (physical & intellectual)	
C9 Having invested time and effort into the game C10 Social stake (prestige) C11 Wanting to keep position C12 Personal goals C13 Competition	B3 Having a stake	
C14 Utilizing prior experience and skills C15 Utilizing explicit and tacit knowledge C17 Utilizing personal resources and creativity	B4 Personal resource utilization	

C-level category (Sub-category)	**B-level category (Category)**	**A-level category (Main Category)**
C18 Feelings of nostalgia C19 Childhood memories C20 Relating current experience to past experiences	B5 Memories	
C21 Intense focus (on the present) C22 Attention directed at the task at hand - the "here and now"	B6 Involvement with the present	A2 Involvement worlds
C23 Intense focus (internal) C24 Attention directed towards internal reflections C25 Connecting the present experience to personal life story	B7 Involvement through personal life narrative	
C26 Intense focus C27 Feeling emotionally connected to characters C28 Being invested in the game narrative and/or characters C29 Emotional involvement with the game C30 identifying with character(s)	B8 Emotional involvement with narrative/characters	

C-level category (Sub-category)	**B-level category (Category)**	**A-level category (Main Category)**
C31 Lack of self-awareness and self-consciousness C32 Distorted perception of time C33 Blacking out/zoning in C34 Lack of awareness of distractions and "real world" surroundings	B9 Immersion	A3 State of immersion
C35 Taking risks & testing new strategies C36 Playing creatively (freeplay) C37 Taking on a leader role C38 Not playing "seriously"	B10 In-game (behavioral) responses	A4 Behavioral responses
C39 Pushing through C40 Adjusting strategy C41 Self-reflection C42 Reflecting on one's performance C43 Resigning C44 Adjusting expectations	B11 Adversity responses	A5 Cognitive responses
C45 Feeling of being (present) in the game C46 Going out of oneself C47 "I feel like I am the character"	B12 Presence	

C-level category (Sub-category)	**B-level category (Category)**	**A-level category (Main Category)**
C48 Engrossment C49 Concentration & focus peaks C50 Lack of awareness of distractions, surroundings & the "real world"	B13 Absorption	
C51 Being emotionally involved C52 Feeling an emotional connection with character(s) C53 Involvement with the story C54 Wanting to progress/succeed/win	B14 Emotional engagement	A3 Affective responses
C55 Excitement & adrenalin C56 Feeling of mastery C57 Enthusiasm C58 Positive surprise C59 Enjoyment C60 Feeling socially secure C61 Feeling/not feeling comfortable or safe C62 Boredom C63 Disappointment	B15 Emotional responses	
C64 Positive stress (eustress) C65 Negative stress (pressure) C66 Not feeling stressed	B16 Stress responses	

C-level category (Sub-category)	**B-level category (Category)**	**A-level category (Main Category)**
C67 Motivation C68 Mental state going into experience C69 Prior interests C70 Prior experience C71 Expectations C72 Personality traits C73 Competitiveness	B17 Personal factors	A4 Personal antecedents
C74 Game script C75 Graphics & audio C76 Game narrative C77 Game requiring focus and concentration C78 Opportunity to interact with other online players	B18 Game design features	A5 External antecedents
C79 Physical experiencescape C80 Distractive elements C90 Physically present teammates/opponents C91 Presence of an audience	B19 Experiencescape	
C92 Challenge perceived as too big/small C93 Appraisal of opponents C94 Perception of progress and success C95 Challenge perceived as an opportunity to learn	B20 Perception of challenges	A6 Appraisals

C-level category (Sub-category)	**B-level category (Category)**	**A-level category (Main Category)**
C96 Prior experience with the game C97 Tacit competences C98 Knowledge of the backstory of the game/characters C99 Pre-existing relationship with game character(s)	B21 Pre-existing involvement with the game	A6 Pre-existing involvement