The Museum's Online Audience

A Public Perspective on Social Media of Dutch Art Museums

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ABOUT

**Master Thesis
MA Cultural Economics and Entrepreneurship**

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Erasmus University Rotterdam

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Date:
June, 2014

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Museum Het Rembrandthuis
May 18

If you can show us an older duckface than this almost 400 year old selfie by Rembrandt, than you win something from the museum shop

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ABSTRACT

Social media became one of the most recent trends among museums, especially the social networking site Facebook proved to be useful and promising. However, previous studies show that its use is still problematic and inefficient. Thus far, only few studies focused on the demand side of social media. The demand side is understood as reasons and expectations of the online audience. This research investigates quantitatively what influences the engagement of individuals in social media of museums with the aim to find out whether social media indeed creates a better communication. In total, 169 surveys were collected from Facebook pages of art museums in the Netherlands - a pioneer in social media use in Europe. The results show that by using social media, museums partly achieve to reach new audiences and strive for an online community. However, online content creation and a democratization of the online content remain problematic.

Keywords: **social media, social networking site, art museum, online audience, demand, museum marketing**

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Being a student of cultural economics and entrepreneurship and a social media user, my aim is to engage into these seemingly opposing views and to find out whether and how museums can be integrated into technological change and especially into new forms of communication. From the beginning until the end, this master thesis involved hard work and many challenges. However, looking at the result, I am proud to see that I developed not only academically, but also personally, by finding out my strengths and weaknesses.

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LIST OF ABBREVIATIONS

AAMU   Museum of Contemporary Aboriginal Art

ICOM   International Council of Museums

ICT   Information and Communications Technology

EGMUS   European Group of Museum Statistics

eWOM   Online Word of Mouth

SNS   Social Networking Site

WOM   Word of Mouth

CHAPTER 1: INTRODUCTION

"Through developing their communicative functions in creative and innovative partnerships with their audiences, art museums can become vital new institutions for the 21st century."

(Hooper-Greenhill, 2000, p.31)

1.1. Problem Statement

Museums have not always been intended for the public. In the traditional sense, "[m]useums are created by the elite for the elite" (McLean, 1997, p.24). Even today this perception has not disappeared completely. Academic studies show that many people still feel uncomfortable visiting a museum or have negative experiences with museums from childhood (McLean, 1997). At the same time, this obsolete role of museums is changing slowly. The modernist notion of an elitist and authoritarian museum is questioned and a post-modern view prevails stating that a new museum-public relationship should be created by giving a more active role to the audience (Hooper-Greenhill, 2000; Russo et al., 2006). Moreover, financial cuts by the government force museums to be more competitive and entrepreneurial, which leads to growing consumer- and marketing-orientation (Hooper-Greenhill, 2000).

To be able to deal with these discrepancies, museums start "developing their communicative functions" in order to reach the public (Hooper-Greenhill, 2000, p.31). One of the newest trends is social media, especially the social networking site Facebook. This way, museums can reach a wide audience in an accessible and democratic way, which not only offers a constant insight in the museum's activities, but also allows active participation in museum content (Russo et al., 2008). Theoretically, social media could indeed be a tool to generate "creative and innovative partnerships with the audience" (Hooper-Greenhill, 2000, p.31). Particularly for art museums this is important because they suffer most from an authoritative image (Hooper-Greenhill, 2000). In practice however, studies found out that the majority of museums fail to use social media in an effective way (Russo et al., 2006, 2008; Schick & Damkjær, 2010; Fletcher & Lee, 2012).

To find out why applying social media is still problematic in the museum environment, it is necessary to question its foundations. Is the museum's perception of social media actually consistent with the public's perception? As Peacock and Brownbill (2007) point out: "How can we effectively design, promote and evaluate on-line content

without clear and demonstrable models of user needs, motivations, behaviors and satisfactions?" (p.1). Henceforth, this main research question will guide the research: *To what extent do social networking sites contribute to an enhanced communication between the online audience and art museums?*

While most previous research studied the supply side of social media, this research will investigate the demand side, while focusing on social networking sites. The supply side refers to the cultural content presented by the museum on social media, whereas the demand side focuses on the consumption behavior of this content by social media users. In times where social media is celebrated for its democratic character, this research aims to find out whether social media really creates a museum, which is for the public.

1.2.   Scientific and Societal Relevance

Social media in museums is a complex topic and has not been researched sufficiently yet. Especially studies about the social media audience of museums are very recent and incomplete. The topic can be studied from different disciplines, such as communication studies, museology, media studies and computer science. However, a cultural economic approach is particularly important here because museums are economic organizations, but at the same time convey artistic and cultural values (Fernández-Blanco & Prieto-Rodríguez, 2011). Hence, comparable to commercial enterprises, museums use social media as a marketing tool to reach a greater and broader audience. Nonetheless, different than other enterprises, the goal of museums is not merely to generate more income, but to educate the public and to convey their mission. These and other peculiarities need to be discussed in a cultural economic framework.

Furthermore, it is important to discuss the topic from a societal perspective because social media has become an essential communication tool for both, individuals and organizations. For the former it changes how people interact with each other and for the latter it means new ways to reach their audience. For cultural organizations like museums it is especially important because a contact to their audience through social media could enable them to convey artistic and cultural content. In a broader sense, society at large can benefit from an online exposure of arts and culture. To entangle the meaning of social media use by museums is therefore socially relevant because individuals can learn more about

possibilities how to get involved with these organizations. In turn, cultural organizations can learn how to use social media for the society in a more strategic and meaningful way.

1.3. Thesis Structure

This thesis is divided into five chapters. After this introduction, in the second chapter the main relevant concepts and theories are discussed, compared and contested as a literature review. This chapter is divided into four sub-sections, which lay the theoretical foundation in order to understand the research field comprehensively. The third chapter illustrates stepwise how the quantitative research was undertaken. Next to the choice of method, the research question is further elaborated and the hypotheses derived from the literature review are presented. The chapter continues with an operationalization of the variables, which were used in the survey, the data collection and data analysis. In the end of this chapter, the validity and reliability of the research is discussed. Then, in the fourth chapter, the results of the research are illustrated, starting with a general descriptive analysis, followed by a statistical analysis, including hypotheses testing. Finally, in the fifth chapter, the outcomes of this research will be summarized, evaluated and discussed. Then, the main limitations will be pointed out and suggestions for further research are provided.

CHAPTER 2: LITERATURE REVIEW

In this literature review necessary concepts, theories and previous empirical findings are provided. In the first part, museums and their relationship to the public are described. It will become clear that an institutional definition is not appropriate, but that museums should be seen as economic agents. Furthermore, museums are not static organizations, but undergo paradigm shifts and changing values. A recent paradigm shift led museums to focus more on marketing and the creation of a new public-museum relationship. In the second part, social media and its users are defined and explained in the framework of the Web 2.0 phenomenon. Also here, it is important to know that social media entails economic implications for the cultural sector. The following part contrasts the use of social media by museums from a theoretical perspective with previous findings on the actual use of social media. It will become apparent that there is a gap between theory and practice. Finally, this part will also elaborate on the concept of the online audience of museums. Since research about the social media user is yet evolving, evidence for the online audience from similar fields is reviewed. These findings illustrate the scientific challenges to understand the online audience.

2.1. Art Museums and the Public

2.1.1. The Museum as an Economic Actor

In order to be able to start the discussion about art museums on social media, it is first of all necessary to understand museums in general. How can we define museums? According to the International Council of Museums (ICOM), a museum is

> "a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment" (ICOM, 2007).

This definition is already sufficient to point out the basic functions of a museum. However, it is not all-encompassing and as we will see later, the meaning of a museum is not static, but changes over time and depends on the form of the museum (Hudson, 2004). The authors Fernández-Blanco and Prieto-Rodríguez (2011) criticize this institutional definition because it contains some bias. Firstly, it leaves out for-profit organizations and secondly, it denies other activities by the museum, for example tourism or regional economic development. All in all,

the authors claim that a museum should be seen as an economic organization, which cares about maximization of attendance and profits (Fernández-Blanco & Prieto-Rodríguez, 2011).

From an economic perspective, the functions and services of a museum can be compared to a regular firm. A museum has an input, namely labor from specialized and administrative employees and volunteers. A museum also has capital, which comprises the financial resources, the building, the equipment and the collection. Due to the various areas, like conservation, exhibition or research, a museum has a multi-output function. Similar to other firms, a museum has high fixed costs and low variable costs, which can also lead to economies of scale. Although museums tend to be non-profit, they can be both, privately and publicly owned. They can derive income from several sources, such as sales or admission fees and most museums receive public grants (Fernández-Blanco & Prieto-Rodríguez, 2011; Frey & Meier, 2006).

Moreover, art museums have an important function in the art market in general. Since the art market is determined by uncertainty and objective evaluation of art is not possible, it is economically important to have museums as gatekeepers, next to galleries, auction houses, art dealers and art critics. This form of art expertise prevails uncertainty of risk by determining the value of art works in the market, which is only possible because of its high level of education and experience. Finally, museums as art experts reduce information asymmetries (Arora & Vermeylen, 2012).

2.1.2. Transformation to the Post-Museum

Museums have not always been considered as places of business, but their values and structure have changed reflecting societal, political, economic and cultural forces (Hudson, 2004). The most prominent discussions surround the impact on museums of the transition from a modernist to a post-modernist period, whereby most authors approach this development from a communication studies' point of view (McLean, 1997; Hooper-Greenhill, 2000; Kidd, 2010; Russo et al., 2008).

From the Enlightenment era onwards, museums were seen as gatekeepers, providing professional knowledge about art (Verboom & Arora, 2013). The traditional modernist role of the museum can thus be described as authoritative, informative, and museums are seen as "their own best judge of what counts as appropriate professional practice" (Hooper-Greenhill, 2000, p.10). The modernist museum follows a 'transmission model' of

communication, which means that an authoritative source (the museum) transmits information to an uninformed viewer (the audience) (Hooper-Greenhill, 2000). This traditional image is still present in many museums, especially among art museums. Although the museums provide 'access' for the public, their character remains elitist because the public remains a passive observer (McLean, 1997).

From the 1970s and 1980s, however, museums faced several changes, such as competition from the leisure industry, shifting cultural policies and the reduction of funding. 'New museology' was created, which means that museums shifted from object- to consumer-orientation, allowing multiple narratives (Verboom & Arora, 2013). The traditional transmission model was replaced by a constructivist learning approach, meaning that "knowledge is constructed through active interpretations of experience" where the individuals are actively involved in this process (Hooper-Greenhill, 2010, p.24). Different than the modern museum, the 'post-museum' tries to find new ways to integrate the audience. Museums are focusing more and more on how to consult, collaborate and engage with the audience. Especially for art museums this break is challenging because it is based on the epistemological perspective of art history, which is already given. Traditionally, the curator was the only one able to research art history extensively and could represent a narrative in an exhibition. In the post-modern perspective, instead of authority and grand narratives, there is a growing emphasis on dialogue, conversation and democracy (Kidd, 2010; Hooper-Greenhill, 2010; Russo et al., 2008).

As a result, museums become more marketing-oriented, focus more on education and try to create a new museum-public relationship in multiple ways (Verboom & Arora, 2013; Hooper-Greenhill, 2000). Firstly, the lone expert curator is extended to new professional roles with specialist knowledge, also called "'professionalism' among the museum employees" (Hudson, 2004, p.89). For example the educator and the marketing officer aim to make the museum experience relevant, educational and inspirational (Hooper-Greenhill, 2000). Secondly, the audience is identified as differentiated and exhibitions are planned to satisfy different interests (Hooper-Greenhill, 2000). Thirdly, new voices are introduced and museums need to respond to new demand and expectations (Hooper-Greenhill, 2000). Finally, new narratives form a new education system. "[T]oday's learners want a range of ways of learning, to include facts and the voice of experts, but not exclusively limited to this" (Hooper-Greenhill, 2000, p.30). Whereas in the modernist view,

the research function of the museum was equated with the education function, in the post-modern world, research and education became separated. Research became a scholarly concern and education was adapted to the audience, for example by bringing in entertainment (McLean, 1997).

2.1.3. The Museum and its Public

To come back to the definition of the ICOM, this means that museums are not only 'open to the public', but nowadays collaborate with the public. How the museum-public relationship is developed and sustained is a question of marketing and museum communication. However, also economics plays an important role again. After all, a museum can generate more income through successful relationship maintenance.

The individuals and groups, who hold a relationship with a museum, are called stakeholders. Stakeholders can have a direct or indirect impact on the museum and form private or public demand (McLean, 1997; Frey & Meier, 2006). However, this research focuses exclusively on the private demand and on individuals who have an indirect impact. Thereby, the term 'visitor' refers to individuals who already visited the museum. However, also individuals, who did not visit the museum yet, may have a demand for the museum. Hence, the term 'audience' is a much broader term including non-visitors. It derives from broadcast media and implies a passive subject population "waiting, perhaps eagerly, for something which they can attend" (Peacock & Brownbill, 2007). Private demand of a museum reflects the individual utility maximization and is thus sensitive to the preferences and constrains of the individual, for example time and money (Fernández-Blanco & Prieto-Rodríguez, 2011).

Several empirical studies have been devoted to the private demand of museums. For example, they found out that museum demand is price inelastic (Frey & Meier, 2006), which means that people would attend museums even if admission fees were higher. Visitors can furthermore be classified into different groups. This is important because different groups evoke different externalities (Fernández-Blanco & Prieto-Rodríguez, 2011). Tourists, for instance, are very peculiar. They spend more time and money and they are rather attracted to 'blockbuster' exhibitions. However, they are mostly one-time visitors and have high expectations (Kotler & Kotler, 1998). Furthermore, they are also beneficial for the service industry, like hotels or restaurants, and museums have to compete with other leisure

industries (Kotler & Kotler, 1998; Fernández-Blanco & Prieto-Rodríguez, 2011). Another example is that self-employed or wealthy people have a higher opportunity cost of time than people with low income or people with fixed working hours. This means that the former have less time to visit a museum (Frey & Meier, 2006).

Especially early studies deal with the demographic characteristics of the museum audience. Schuster (1991) for example, gives an extensive overview on the audience for art museums in the United States, using the Survey of Public Participation in the arts from 1985. The results show how variables like "income, education, age, gender, race, geographic distribution, and occupation" are related to participation in art museums (p.1). He found out that the majority of visitors are between 35 to 44 years old, female and professional (Schuster, 1991). One of the main and most debatable findings about visitors, however, is that attendance increases with higher level of income and education of the individuals (Schuster, 1991; Kotler & Kotler, 1998; Stylianou-Lambert, 2009).

One of the first attempts to explain this phenomenon was provided by the theory of Pierre Bourdieu (1986). The sociologist argues that cultural capital is a form of capital, which can be acquired by an individual over a lifetime and is also inherent in the social class. This would mean that individuals from a higher social class, with higher education and higher income have more cultural capital, but also individuals, who experienced a lot of culture throughout their life. Cultural capital also enables a certain 'cultural competence' and thus it becomes possible to understand objects, such as art works (Bourdieu, 1986; McLean, 1997; Stylianou-Lambert, 2009). However, the reasons to visit a museum can also be influenced by other factors. Starting from this idea, empirical research followed with different outcomes. Subjectivity, individual psychology, rational thought, as well as socio-cultural characteristics can all play a role in the decision to visit a museum (Stylianou-Lambert, 2009).

In his research, Stylianou-Lambert (2009) tried to bring the socio-cultural and the individual factors together by studying the museum 'perception' of visitors and non-visitors. Perception is hereby the way in which individuals make sense of the museum in relation to their own lives. Through interviewing 60 persons, he found eight different ways of perceiving a museum, which influence the visiting frequency. One of the 'filters' through which individuals perceive the museum is the 'professional filter', meaning that art is already integrated in the person's life and work. The emphasis of these individuals is on the art knowledge of the museum. Individuals with an 'art-loving filter' have a similar passion for

art, but on a more personal and emotional level. Due to the 'self-exploration filter' "people can discover and expand themselves, learn, see and experience new things, form opinions and satisfy their self-image" (Stylianou-Lambert, 2009, p.149). People, who perceive the museum as a place to meet others, use the 'social visitation filter'. Two more negative perceptions of museums are the 'rejection' and the 'indifference filter'. People using the former have a negative image of the museum and reject a visit. Finally, people using the latter have no interest in museums at all.

As regular firms, museums can maintain the relationship to their audience through marketing. According to Kotler & Kotler (1998), museum marketing serves to research the right museum audience. This can be done through market segmentation. For museums, marketing seems to be even more important because there is no natural demand for museums. Instead, museums have to generate demand by trying to attract a very large target group, namely the public as a whole (McLean, 1997). However, according to McLean (1997), marketing in museums is still alien and underestimated.

Marketing started to become apparent in museums when competition started to grow, not only through the growth of other museums, but also other leisure activities (McLean, 1997). Furthermore, the government started to put pressure on museums when the budget for cultural institutions started to decline. Although marketing is a complex activity, for most museums it is still merely associated with an increase in visitor numbers and a higher income generation. Different than in commercial companies, marketing of museums should not be market-driven, but should have a clear goal. Marketing does not define, but follows the mission of the museum (McLean, 1997). Museums can choose from a variety of marketing venues. One of the newest trends in marketing is social media because it has many benefits. It does not only reach a large audience, but it is also cost-efficient (Fletcher & Lee, 2012). Before elaborating more on how museums can benefit from social media, I will first introduce the concept of social media in general.

2.2. The Meaning of Social Media

2.2.1. What are Social Media?

Which are the societal, political, economic and cultural changes that force museums to change? The most important changes reflecting post-modernism are globalization and technological development. The best example for these transformations is the Internet.

Through the Internet, it becomes possible to communicate without time or space constraints and it has become an indispensible application of our everyday lives. In June 2012, 34.3 percent of the whole world population was using the Internet. In Europe, 63.2 percent and in North America even 78.6 percent of the population was online (Internet World Stats, 2012a).

However, the development did not stop with the plain invention of the Internet. Only with the introduction of social media the Internet became a communication medium from 2000 onwards. What are social media? Kaplan and Haenlein (2010) define social media as a group of applications based on the Internet, which work according to the ideology of Web 2.0 and allow user generated content. Whereas other media, like the telephone, are designed for one-to-one messaging, social media are "designed *primarily* as network communication tools" and thus provide a many-to-many communication model (Russo et al., 2008, p. 22; Van Dijck, 2013).

In this context, it is also important to understand what Web 2.0 means. It is a rather broad term and includes different technical, economic and social developments. Although Web 2.0 differs from its predecessor Web 1.0, it is misleading to think that it is a completely new invention. Instead, in Web 2.0 already existing technologies are used, but in a new way (Henten & Tadayoni, 2011; Anderson, 2007). Through Web 2.0, it becomes possible to access content from professionals, but also from non-professional users online (Manovich, 2009). Web 2.0 includes applications and technologies, which make communication and participation possible. These applications are also known as social media (Henten & Tadayoni, 2011). The most common services and applications, which are used in Web 2.0, can be summarized as follows (Anderson, 2007):

- *Social Networking Sites (SNSs)*

Anderson (2007) called SNSs the "newer Web 2.0 services and applications" (p.12), but they are already well established nowadays. SNSs "enable users to connect by creating personal information profiles, inviting friends and colleagues to have access to those profiles, and sending e-mails and instant messages between each other" (Kaplan & Haenlein, 2010, p. 63). Besides text-based communication, other forms of information can be included, such as photos, videos, audio files and blogs. The degree of interaction is easily understood and is used by individuals and firms (Kaplan & Haenlein, 2010). One of the most famous SNSs is Facebook with over one billion users in 2014 (Statistic Brain, 2014). Other examples for SNSs

are MySpace, LinkedIn or various national or local online communities, like Hyves in the Netherlands.

- *Blogs*

The web-log or blog is a webpage, which consists of short posts containing opinions, information, personal entries, links, photos or videos. These are arranged chronologically, beginning with the most recent one and can be commented by others immediately. The overall term for this phenomenon is blogosphere and the activity, where views are exchanged is called blogging. The most common website based on the idea of blogging is Twitter.

- *Wikis*

A wiki is a webpage, which can be edited by anyone, who can access it. All pages are linked by a simple hypertext-style, which serves for navigation. Wikis have a history function, meaning that also previous versions can be accessed. The most famous website for wikis is Wikipedia.

- *Tagging and Social Bookmarking*

A tag is a keyword that can be added to a digital object. The creation of lists with 'favorites' or 'bookmarks', which can be shared with others, is called social bookmarking. These bookmarks can be tagged and categorized, also in more than one category. The outcome of tagging is called folksonomy. It is "a conflation of the words 'folk' and 'taxonomy' used to refer to an informal, organic assemblage of related terminology" (Trant, 2009, p.1).

- *Multimedia Sharing*

Webpages, like Youtube, Flickr or Odeo allow to store and share multimedia content, such as videos, photographs or podcasts (audio recordings of talks, interviews or lectures). These webpages are based on the idea of user-generated content (Van Dijck, 2013).

- *RSS and Syndication*

RSS are formats, which enable to find out updates about RSS-enabled webpages. The information is collected within a feed and 'piped' out. This process is also called syndication.

2.2.2. Economic Patterns of Social Media

Relevant design patterns made Web 2.0 as unique and successful as it is nowadays. These can be brought into a cultural economic perspective and also imply why Web 2.0 and social media are particularly interesting for the cultural sector. Most of them were already

introduced by O'Reilly in 2005, who coined the term 'Web 2.0', and complemented by Anderson (2007) amongst others.

Web 2.0 works with open standards, like open source software, free data, reuse of data and open innovation. It also contains an architecture of participation, which means that the design of a service can improve and facilitate participation (Anderson, 2007). Through these characteristics, Web 2.0 enhances individual production and user generated content (Anderson, 2007). User generated content means all possible ways in which social media can be used, which make the creation and exchange of new content possible (Kaplan & Haenlein, 2010). Since the Internet has low barriers of entry, everyone who has Internet access can participate. In comparison to broadcast media, where the audience is passive, in Web 2.0 everyone has a voice (Anderson, 2007; O'Reilly, 2005). These changes in Information and Communications Technologies (ICTs) have implications on products themselves, how products are transported and communicated and on the relationship between users and producers. Digitalization can be called a convergence process because it blurs the lines between producer and user and between the different sectors within an industry (Henten & Tadayoni, 2011).

Moreover, Web 2.0 can exploit the power of the crowd (Anderson, 2007). This means that users can add new content and new sites, which will be integrated into the structure of the Web by others, who link to it. This process grows organically through a collective activity (O'Reilly, 2005). "Hyperlink is the foundation of the Web", which is comparable to synapses of a brain and is thus also called the "intelligence of the crowd" by O'Reilly (2005). The most successful companies, like Google, Yahoo!, eBay and Amazon, use this pattern as their business model. The competitive advantage of eBay and Amazon for example grows as more people participate. Also individual production, like blogs, is more successful and powerful if other bloggers pay attention as well. Value is only created through collective participation (O'Reilly, 2005).

This growing value accrued through growing participation is called network effect. According to Anderson (2007), it can be argued that Web 2.0 services are inherently a network effect. Network effect means that there is an "increase in value to the existing users of a service in which there is some form of interaction with others, as more and more people start to use it" (p.20). Good examples for network effects are SNSs. Other people benefit when one additional person joins the network. If the network grows in popularity, the

product also gets stronger on the market place. A network effect can also result in a 'lock-in effect', which means that it becomes more difficult to switch to another product or service (Anderson, 2007). Network effects also appear individually on the SNS Facebook through the 'like' function, where individuals can click on a 'like' button, when they appreciate something. Those reactions "favor instant, gut-fired, emotional, positive evaluations" and a high quantity of 'likes' has the potential to become a trend (Van Dijck, 2013, p.13).

In terms of cultural consumption, many facets of Web 2.0 follow a power law distribution, also called the 'long tail', a term coined by Chris Anderson in 2004. A long tail can be illustrated in a curve, which is constantly decreasing (see Graph 2.1). On the one end of the curve, there is a small number of high-yield events and on the other end there is a very large number of events that have a low probability to occur. Thus, the curve has a long tail; it never reaches zero, but extents to infinity (Anderson, 2007).
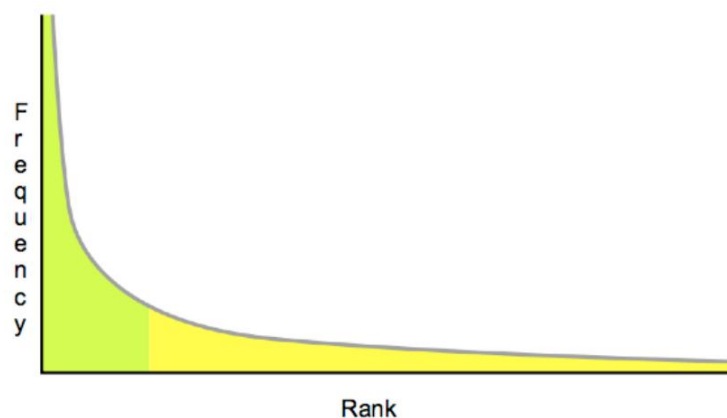
Graph 2.1: *The long tail curve extents to infinity* (Anderson, 2007)

In simple words this means that there are a few highly popular products on the Internet, which get the most attention and a lot of less popular products, which get less attention, but at least some demand. In the end, this enables many niche markets to develop, which also matter. Thus, the traditional supply and demand model does not apply here, but a new economic model is created. This is not limited to physical objects, but can offer everything for everyone because of digitalization (Anderson, 2004; Anderson, 2007).

As a consequence, there is data on an epic scale. However, it is not clear who the owner of this data is (O'Reilly, 2005). A lot of data is collected and managed by big firms, such as Google, Amazon or Ebay, which gain competitive advantage the more knowledge on consumer behavior they accumulate (Anderson, 2007; O'Reilly, 2005). Problems arise, when issues about privacy and copyright come up, which are not regulated yet (O'Reilly, 2005).

Especially firms, who own particular social media platforms, create an ambiguity. On the one hand, individuals gain the possibility to connect with each other by spreading ideas, thoughts and content throughout a huge network, but on the other hand, these networks also determine what these individuals think (Van Dijk, 2013). According to van Dijk (2013), social media platforms are 'automated systems', which can create and manipulate connections. "Companies tend to stress the first meaning (human connectedness) and minimize the second meaning (automated connectivity)" (Van Dijk, 2013, p.12).

2.2.3. The Social Media User

After laying down the foundation for social media, it is still crucial to explore who uses social media and why. As with the museum audiences, much research about the reasons to use social media exists already. Most studies deal with the most famous SNS Facebook and try to correlate its use with demographic information, motivation, personality and perception amongst others.

Among the various studies on personality, Correa, Hinsley and Gil de Zúñiga (2009) for example studied how social media use and personality traits intersect. They found out that extraverted people and those open to experiences interact more on social media than introverted individuals. Thereby, the former group consists of young adults and the latter of older adults. Furthermore, men and women have equal results here. However, emotionally instable men are using social media more often. Additionally, Muscanell and Guadagno (2011) investigated not just the frequency of social media use but also the motivations behind it. They found out that gender indeed plays an important role in using SNSs. After surveying 238 undergraduate students, they show that men use SNSs to find new relationships, whereas women use SNSs to maintain already existing relationships.

A more general question about SNSs is asked by Brandtzæg and Heim (2009): "What motivates people to use online SNSs" (p. 144)? By surveying 5,233 people through the main four SNSs in Norway they could identify 12 main categories. The most three important motivations to use SNSs are "to get in contact with new people", "to keep in touch with [. . .] friends" and "general socializing" (Brandtzæg & Heim, 2009, p. 143). From a longitudinal perspective, Lampe, Ellison and Steinfield (2008) study how the perception of Facebook changes over time. In the years 2006, 2007 and 2008 they surveyed and interviewed undergraduate students. Their results show that Facebook use does not change considerably

over time. However, individuals are likely to change their attitudes and perceptions when new members enter the SNS.

Although these results give us insights into the general behavior of the social media user, they are still lacking a lot of information. It is for example interesting to find out on which specific pages of the SNSs the users interact, how they use these sites and why. These questions are relevant because not only individuals use SNSs, but also groups, firms and many others. The most interesting question for this research is how individuals use SNSs for cultural exchange and in turn, what SNSs mean for cultural organizations.

2.3. The Debate around Museums on Social Media

2.3.1. Social Media in Museum Marketing

So far we discussed that through the transformation from the modernist to the post-modernist period marketing has been recognized as an important and effective function of the museum. With decreasing subsidies, museums find themselves in the market sphere and start to compete with other industries for people's leisure time. More and more, the survival of museums is dependent on relationships to stakeholders. Thereby, social media provides the possibilities to reach many actors at the same time in a cost-efficient way (Fletcher & Lee, 2012).

How and why should museums use social media in their marketing strategy? Social media is based on the idea of the network effect. This means that the more people join, the more get attracted to join the network. This way, not only the museum, but also the users can reduce transactions costs. This principle can be connected to word of mouth (WOM) referral marketing, which is an informal communication about the characteristics of a product. However, different than direct WOM, namely a conversation between individuals, online WOM or eWOM is not limited to space and time (Steffes & Burgee, 2009). In short, through social media, museums can create a network effect by using eWOM, which exceeds geographical and personal borders.

Furthermore, social media have low barriers of entry, which means that museums can reach audiences different than the typical visitor, who is assumed to be older, with a high income and a high education. Especially the first factor is important because a young audience might be the future generation of visitors. However, communication with other niche audiences is also valuable (Russo et al., 2008; Verboom & Arora, 2013; Fletcher & Lee,

2012). Not only possible visitors are relevant for the museum, but relationship management also comprises possible donors or other individuals and groups, who can support the museum financially. All in all, through the long tail of the Internet, even very specialized museums can find a matching target group. This is particularly relevant in the post-modern time when museums start to specialize more because a small and specialized museum involves lower financial investment and risk (Hudson, 2004).

In contrast to other marketing tools, social media enables organizations to directly engage with the consumer. "This makes Social Media not only relevant for large multinational firms, but also for small and medium sized companies, and even nonprofit and governmental agencies", like museums (Kaplan & Haenlein, 2010, p.67). Replying directly to audiences fosters the relationship between the museum and the public. The quickest communication tool is the 'like' application on Facebook. Finally, social media does not involve costs for participation and maintaining and it has no space limitations for online storage (Fletcher & Lee, 2012).

2.3.2.   Museum Authority in Question

There is more to social media than mere economic benefits. Through the emergence of social media, the role of museums gets questioned. Are museums still as authoritative as in the modernist period? Arora and Vermeylen (2012) argue that since the emergence of social media, there are new voices in the art world, which could replace the traditional role of experts, such as the curator in the museum. Whereas museums are assumed to have high barriers of entry, social media has low barriers of entry. Is this "the end of the art connoisseur?" (p.1). They show that throughout the history of art expertise, this kind of development was already common: new technologies were introduced, for example printing, and the art world adapted to this new market structure. As a result, experts are changing and increasing in numbers, but they do not vanish because of their knowledge and because of their institutional linkages (Arora & Vermeylen, 2012).

How do art experts work with social media then? Studying ten cultural blogs, Verboom and Arora (2013) could identify three different kinds of experts: the traditional museum expert, museum professionals and amateur experts. Thereby, also the individuals in the last category are real experts. In contrast to the other forms of experts, they are even more powerful because their autonomy allows them to express criticism towards the art

world. In fact, art experts might become even more important due to the rise of social media and the overload on online voices. As a result, the art market becomes even more uncertain (Arora & Vermeylen, 2012; Verboom & Arora, 2013).

An even more critical thought of Arora and Vermeylen (2012) on social media is that it is not necessarily positive and inherently democratic. Instead, social media can be seen as a platform for institutions, like museums, for marketing and entertainment. While public subsidies for museums are decreasing, the museum managers are forced to adapt to the market in order to survive. This change entails that the public as a whole is now seen as potential customers, who have to be attracted, engaged and entertained (Arora & Vermeylen, 2012).

Similarly, Manovich (2009) argues that what was called 'mass consumption' is becoming 'mass cultural production'. According to him, user-generated content can be seen as an effect of the powerful 2.0 companies that offer social media. Although it seems as if social media is completely open and creative, the platforms are designed by the big companies. What is left for the individuals is to customize the content. As a result, "details of everyday lives of hundreds of millions of people who make and upload their media or write blogs became public" (Manovich, 2009, p.324). All in all, democratization is not the case because in the end, powerful companies, like Facebook collect and control data. As Anderson (2007) claims, although there is data on an epic scale, it is managed by the big companies.

The authority of the museum does not need to be intimidating, but can be used in an effective way in social media. Museum authority should not vanish, but should in turn be strengthened (Russo et al., 2008). Through a many-to-many communication with the online users, museums can provide reliable information (Arora & Vermeylen, 2012; Russo et al., 2008). Traditionally, museum authority came from the curator, who collects, stores, displays and interprets objects and thus form a one-to-many communication model. This way, the museum provides authenticity because the collections are organized according to narratives and the relationship between visitor and object is mediated. With social media, a two-way communication model is needed and the sole authority of the curator is questioned. If social media is used successfully, museums can extent authenticity by letting the user participate in the debate. This however, requires a 'radical trust' of the museum (Russo et al., 2008).

2.3.3. Open Window for Participatory Learning

Social media can provide a more democratic form of engagement with museums. Instead of the transmission model, which was dominant in the modernist period, social media incorporates the constructivist learning approach, in which the learner is involved in the process (Hooper-Greenhill, 2000). Whereas teaching was a part of the expertise of the museum curator before, the new approach separates science and learning to be able to create a separate learning process, which is more adequate for the learner (McLean, 1997). This might also involve that learning becomes more entertaining. However, this is still debatable (McLean, 1997).

Museum learning in general is a social learning, be it on-site or on-line. It is a "process of co-participation within a social context" (Russo et al., 2008). According to Parry and Arbach (2007), simultaneously to the paradigm shift, also museum learning is changing due to "user-driven software, learner-centered education and visitor-led museum provision" (p.290). It becomes "*localized, personalized*, and *constructivist*" (p.290). Whereas traditionally, the museum building was an integral part of the learning experience, with online learning, the museum enters the space of the learner, who becomes a distance-learner. Thus, there is not one single space, but a variety of *localized* spaces. This means that museums cannot control the surroundings anymore. Museum learning becomes *personalized* in the sense that the online learner becomes a user and can use the new technology for better connectivity, mobility and individualization through customized products. Finally, learning becomes *constructivist* because the learner is a producer at the same time. Instead of accumulating knowledge, the learner can construct his/her own meaning. The learning process can be shaped while the 'teacher' corresponds to the learner's interests and experiences through a dialogue (Figure 2.2) (Parry & Arbach, 2007).
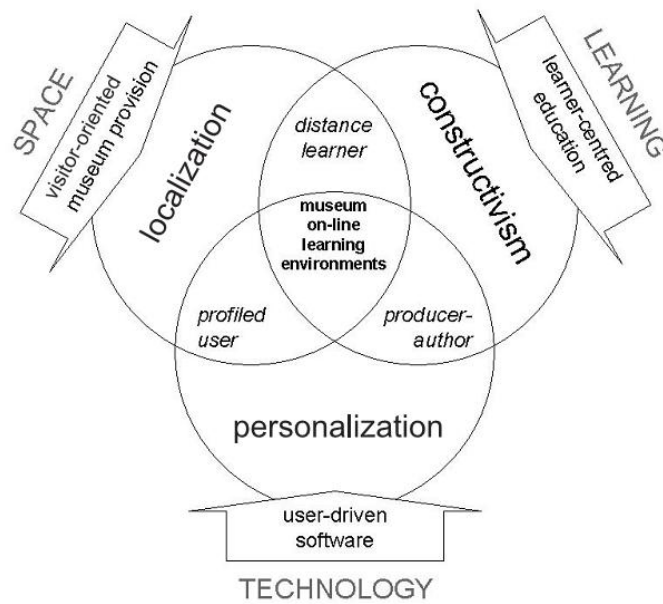
Figure 2.2: *User-driven software, learner-centered education and visitor-led provision leveraging the creation of museum online learning environments* (Parry & Arbach, 2007)

This co-creation of museum content requires a new mentality of the user. "Participants on Social Media applications have the desire to actively engage and to become both producers and consumers of information, so-called 'prosumers'" (Kaplan & Haenlein, 2010, p.66). This is not only the case for individuals. 'Community co-creation' means that whole communities can consume and create digital content (Russo & Watkins, 2007). According to Russo and Watkins (2007), the co-creation programs are only possible with Digital Cultural Communication, meaning that the users are empowered to co-create and new community audiences can be attracted. This requires that the audience has a ground understanding of the new literacy, like skills or strategies, because "providing access does not simultaneously create supply and demand for digital products and services" (Russo & Watkins, 2007, p.150).

Providing digital products or services does not mean that museums are starting from scratch. In fact, the museum environment is always 'remediated', which means that new media technologies follow up and improve already existing technologies. Thus, existing practices are not removed, but completed. This again demonstrates that museums are not the center of knowledge, but only the facilitator (Russo & Watkins, 2007). One way for museums to engage the users is *social tagging*. Social tagging "is the public labeling or categorizing of resources in a shared environment. The resulting aggregation of tags form a

'folksonomy'" (Trant, 2009, p.1). Tagging is a personal meaning-making and shows how the public perceives the museum. Furthermore, it can enhance access to museum collections online (Trant, 2009).

In addition to that, through this new problem-solving approach to learning, visitors can have insight in the debates within the museum and have possibilities, which they can choose from. "Finding ways to integrate audiences and their worlds means finding new ways of balancing power and knowledge" (Hoopper-Greenhill, 2000, p.31).

2.3.4. A Problematic Liaison

Due to the many benefits of social media, which were described in the previous sections, museums started to use different social media: social tagging, social networking (like Facebook), blogging (like Twitter) or multimedia sharing (like YouTube or Flickr). However, in practice, most museums still have problems to deal with social media (Russo et al., 2008; Schick and Damkjær, 2010; Fletcher & Lee, 2012).

One attempt to understand participation in a Web 2.0 environment was done by Trant (2009). With a group of art museums in the US the project *steve.museum* was founded, where a selected group of users should tag museum collections. The objective was to find out whether the scholarly documented descriptions of museums match the multiple perspectives of the online users with the aim to enhance the access of online museum collections. Indeed, the results show that around 70 percent of the tags did not match. As a conclusion, the author argues that although museum terminology is still necessary, more collaboration with the museum audience is needed (Trant, 2009).

Studying the Facebook use of state-subsidized Danish art museums, Schick and Damkjær (2010) found out that instead of using Facebook as platform for interaction, most museums hold an online 'monologue', using social media as pure marketing tool. The problems are that they use it as a homepage and post messages rarely. However, as O'Reilly (2005) explains, such software is not a product, but a service. Thus, "software will cease to perform unless it is maintained on a daily basis" (O'Reilly 2005). The conclusion is that museums are still authoritarian and self-promoting (Schick and Damkjær, 2010). Also Fletcher and Lee (2012) found similar results studying social media use of 315 museums in the US. Although most museums consider being involved in social media as important, most

use social media as one-way communication for posting events, reminders or promotional messages.

One of the main challenges for all kinds of companies, not only museums, is to measure and evaluate the impact of social media (Fletcher & Lee, 2012; Etlinger, 2012). Studying commercial firms, Etlinger (2012) found out that only a small number claims to be 'very effective' or 'extremely effective' at connecting social media with, for example revenue generation. In the same vein, Fletcher and Lee (2012) found out that most museums perceive their social media use only as 'somewhat successful'.

Part of the problem is that social media can have different meanings to different organizations and it cannot only be measured in numbers. It seems possible to measure Facebook 'likes', for example. However, Van Dijck (2013) argues that 'like' buttons do not include quality assessment, but their quantity can easily be manipulated through a network effect. Qualitative outcomes, like a stronger relationship with the user, user insight and satisfaction are considered to be more important (Fletcher & Lee, 2012; Etlinger, 2012). Therefore, organizations need to consider both 'soft and hard benefits' and then decide on a measurement strategy (Etlinger, 2012). Finally, social media should be measured in various ways, both quantitatively and qualitatively (Etlinger, 2012; Bensen, 2008).

2.3.5. Who is the Museum's Online Audience?

Although we have seen that there is a growing focus on the online audience, it remains still questionable who these individuals are and why they use social media. As Russo and Watkins (2007) already state, "[c]ultural institutions should consider the desires of the audience before committing significant public funds to ICT investment" (p.150). A summary of first approaches, which have been made to research the online audience, can be found on the website of the European Group of Museum Statistics (EGMUS) (EGMUS, n.d.). In the "Handbook on Cultural Web User Interaction" by MINERVA EC (2008), for example, an extensive overview of cultural institutions, users, online platforms and measurement possibilities is provided. However, not much is stated specifically about the social media users of art museums.

According to Peacock and Brownbill (2007) the individuals operating in the online museum context are still missing a clear definition and categorization. The terms, which are used commonly, like *audience*, *visitor*s, *consumers* and *users* are not appropriate because

they derive from different paradigms, like audience and visitor studies, marketing, evaluation and usability analysis. *Audience* for example comes from broadcast media and is inherently passive. This is contradictive because the online audience is empowered to participate. It is also problematic to take marketing concepts and equate the visitor with a mere consumer. All in all, the authors argue that museums mix up the wrong concepts. From a cultural view, they perceive the audience as passive and provide them with information. From an economic view, however, they are becoming more market-oriented and are forced to see the visitor as consumer. In the end, they fail to understand the demand (Peacock & Brownbill, 2007). Despite the criticism of Peacock and Brownbill (2007), the term 'online audience' will be used in this research. The reason is that no alternative concept was proposed by the authors. Thus, the term online audience is most adequate because it includes all individuals, who are actively or passively interested in the museum and are online.

Peacock and Brownbill (2007) show that already existing contexts are not appropriate to understand the environment of digital cultural content. Thus, it is necessary to investigate the reasons and assess existing assumptions about the individuals in this environment (Peacock & Brownbill, 2007). The main problem, so Kidd (2010), is that museums do not understand how the online conversations are framed. Thus, the use-value for both, the institution and the user remains unclear. Using a frame analysis, she identifies three frames from her example museums. The detailed meaning of these frames is summarized in Table 2.1. All in all, most social media frames rather "serve the agendas" of the museums, instead of addressing the "nature, vibrancy, tone or 'use-value' of their users' contributions" (Kidd, 2010, p.66).

Table 2.1*: Three organizing frames for social media (Kidd, 2010)*

	Marketing Frame	**Inclusivity Frame**	**Collaborative Frame**
Description	Social media is seen as a marketing activity.	Social media helps to build and sustain communities of interest.	Social media lets users co-create museum content.
Use-value for the museum	Museums can inform about upcoming events. It is easily understood. Hope to reach publicity between and around individuals and	Conversation with the user, about visits, but also about success factors.	The web is useful to host 'amateur' narratives. In the museum itself nothing has to change.

	communities.		
Use-value for the user	It is not the user interpretation of the medium.	Museums are transparent.	Co-produce the narratives of the museum, more radical and profound.
Problems	Marketing should give the museum a face, but with social media it is problematic to define who 'talks'. Descriptions for relationships between museum and user, like 'friending' are deceiving.	A community is not created by itself. Only a small group of users interact and create content. Museums need to think carefully how to maximize participation.	Often no curatorial guidance how to approach and organize the content. Not all content can be archived and can lead to a feeling of exploitation.

Although no research has been done for social media users of art museums, examples can be derived from museum website research. The Museum Victoria in Melbourne, Australia, for example used visitor surveys and focus groups to generate information. In the end, four types of online visitors could be identified: 22.7 percent were visitors (plan museum visit), 47.9 percent were searchers (find subject-based information), 15.6 percent were browsers (part of browsing activity) and 13.8 percent were transactors (interact or transact with museum) (Peacock & Bownbill, 2007). According to Peacock and Bownbill (2007), this is a good example of how a website can be created by using extensive user research over many years.

Through online museum websites, Bowen (1999) conducted a survey research as a project by the University of Leicester to find out the reasons why people use museum websites. The three main reasons are "to explore a personal interest", "to learn about a museum not in your locality" and because "it's fun and interesting". Notably, for website use, communication with the museum is not important (Bowen, 1999). Haley Goldman and Schaller (2004) took a step further and researched the motivations of online museum audiences. Six museum sites were researched[1]. The most answered motivations why people visited websites were "searching for information" and "an interesting place to explore" (Haley Goldman & Schaller, 2004).

Chadwick (1999) tried to find out whether online museum users are the same as museum visitors in their behavior and whether online museum users are groups or individuals. The results show that it is more common to visit a museum website individually,

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[1] also a zoo and a historical site were included as museum

whereas it is more common to visit a museum as a group. Different than individuals, groups are also more likely to visit a website with a specific reason, but still show a browsing behavior (Chadwick, 1999).

Although these studies provide some explanations about the online user of museum content, online behavior differs among the online platforms. For instance, museum websites cannot be equated with social media of museums because of its peculiar characteristics. Social media can be seen as primarily for communication, whereas websites are primarily used to retrieve information.

2.4.   Conclusion

The literature review has revealed some interesting facts and theories about the social media use in museums and the online audiences in particular. We have seen that museums are economic actors, comparable to other firms. This is why marketing and the use of social media can be relevant functions to attract wider audiences, to save costs and time and to maintain and manage relevant relationships. This insight became more and more prominent since the 70s and 80s, when subsidies for museums started to decline and competitive pressure from other industries started to grow.

At the same time this break illustrates the transformation from the modernist to the post-modernist period. Museums start to become democratic and allow people to partake in their decision making process. Instead of being authoritative, omniscient and elitist, museums try to become more open to the public and allow new voices. Social media provides a good opportunity to achieve this goal.

How this new (online) role of the museum should look like in practice is still debatable. One question is how much authority museums should give up. From the Enlightenment era onwards, museums functioned as gatekeeper and reduce the uncertainty of risk in the art market. Thus, some authority of the museum is still required, but in a new way. Another problem is the teaching function of the museum. The museum should act as mediator, not as authority, but this requires a mutual understanding of the museum and its audience. One last problem is how to measure the effects of social media. A pure quantitative measurement is not effective, but a qualitative measure is very complex. We can conclude that at the bottom of these discrepancies is the social media user. It is one of

the largest uncertainties because there is no clear understanding of the social media user

and what the online audience expects from social media of a museum.

CHAPTER 3: METHODOLOGY

In the literature review, we have seen that there are still many discrepancies concerning museums on social media. To narrow down the overall topic, this thesis investigates one specific part, namely the online audience using social media. This chapter is devoted to the methodology. In other words, it will be discussed how this research was constructed. Step by step, each part of the research is explained. First of all, the objectives of the research are pointed out. These include the aims and research questions, followed by the expectations and hypothesis guiding the research. Second, the choice of method is discussed, using relevant sources to support the argument. Then, in the operationalization, the variables used in the survey are explained and the way they were measured is illustrated. Finally, the sampling method is introduced as well as possible validity and reliability issues.

3.1. Objectives

The literature review demonstrated that social media can indeed be economically and culturally beneficial for museums. However, most empirical evidence shows that museums are weak in implementing and using social media effectively. Also measuring social media remains problematic. Since it is difficult to find out whether a mere supply of social media guarantees the expected results, it is necessary to investigate the demand site of social media.

3.1.1. Aims and Research Questions

Social media is made for the audience in the first place. In order to continue research on this topic it is useful to start from the beginning and to ask who the online user is and how he/she actually perceives social media of museums. In line with Peacock and Brownbill's (2007) suggestion, this research investigates whether the existing expectations of the online user are actually true. By testing and questioning the characteristics and behavior of the online audience it becomes possible to find out whether social media fulfills the functions it is aimed for. As already stated in the introduction, the following main question guides the research.

RQ: *To what extent do SNSs contribute to an enhanced communication between the online audience and art museums?*

To make the research more concrete and feasible, it focuses on Dutch art museums only and social media is reduced to SNSs. Art museums were chosen because this form of museum is undergoing the most radical change of values from being authoritative to being collaborative (Hooper-Greenhill, 2000). In particular, Dutch art museums were selected for several reasons next to proximity. Firstly, most Dutch art museums use SNSs to communicate with online audiences and, after a first review of the Facebook pages of museums, their representation seem to vary considerably. There are museums interacting frequently while others update their representation irregularly. Additionally, Dutch museums also vary in their communication language where some museums tend to communicate solely in Dutch and others present themselves either bilingual (English-Dutch) or completely in English. Secondly, the Netherlands has a highly developed Internet connectivity vis-à-vis other European countries. According to Internet World Stats (2014), 92.2 percent of the Dutch population has access to the internet and among them 45.2 percent have a profile in the SNS Facebook. Lastly, the Netherlands has a rich art history and thus an increased interest to stay representative online and on-site.

Facebook serves as good example for SNSs because it is one of the most popular sites nowadays, which is expanding enormously. In 2012, 28.5 percent of the European population was using Facebook and 49.9 percent of North America (Internet World Stats, 2012b). Whereas in 2008, 100 million people were using Facebook in total, in the beginning of 2014 the monthly number of active Facebook users expanded to over one billion (Statistic Brain, 2014). It is also one of the most common social media used by museums. Different than blogs, which have an individual point of view, Facebook can represent the museum's identity and still, the communication is taking place on a personal level (Flecher & Lee, 2012).

We have seen that existing literature mostly provides information about the supply side of social media. Thus, two further sub-questions help to answer the main research question from a demand perspective.

SQ1:   *Which factors influence the engagement of the online audience in SNSs of art museums?*

SQ2:   Which assumptions are expressed in the attitudes of the online audience towards
SNSs?

The first sub-question is directed at the characteristics and the behavior of the online audience, which can influence the engagement on SNSs and is thus essential for the communication between audiences and museum. The second question is referring to the perception of the online audience. As the literature suggests, there are certain expectations why individuals would use social media. This question therefore investigates whether the expectations of museums and the actual attitudes of the online users converge.

3.1.2. Hypotheses

The review of existing literature provided some theoretical and empirical approaches how to understand social media in the museum sphere. However, specific research about the online audience of museum social media is still emerging. Therefore, this research is rather exploratory and attempts to establish first empirical insights in this field. Whereas the second sub-question is only descriptive, the fist sub-question can also be tested statistically. In total, 11 hypotheses were created to help understanding the factors, which influence engagement on SNSs of art museums (see a summary in Table E.1, Appendix E). Due to a deficit of previous theoretical and empirical findings about the online audience of museum social media, these hypotheses are not based on a grand theory, but are derived from theoretical assumptions about museum's use of social media or different studies, for example museum audience studies or studies about social media users in general.

H1:   Younger people engage with museums on SNSs more often than older people.
The first hypothesis stems from the assumption that museums can reach a new audience by using social media, which is different than the regular museum visitor (Russo et al., 2008; Verboom & Arora, 2013; Fletcher & Lee, 2012). Indeed, social media studies prove that rather young people use social media (Correa et al., 2009; Social Bakers, n.d.). Since the regular museum visitor is middle aged or older (Schuster, 1991), the assumption is that museum social media attracts rather younger people.

H2:   Females engage with museums on SNSs more often than males.

Slightly more females are visiting art museums than males (Schuster, 1991). In this hypothesis it is assumed that this fact holds true also for virtual visits and other forms of engagement.

H3:   (Self-) employed people engage with museums on SNSs more often than people with
*   another employment status.*

According to previous research, self-employed people are expected to have less time to visit museums than people with fixed working hours, and thus have a high 'opportunity cost of time' (Frey & Meier, 2006). However, these people might be equally interested in museums. SNSs provide an opportunity to engage in the museum activities online without spending a lot of time. However, I further argue that the same applies for employed people with fixed working hours, who in comparison to students or retired people might have less time to visit the museum as well.

H4:   Higher educated people engage with museums on SNSs more often than lower
*   educated people.*

Again, this hypothesis is derived from museum audience studies, which found out that the average museum visitor is higher educated (Kotler & Kotler, 1998). A high education is one factor, which speaks for a higher social class (Kotler & Kotler, 1998). Furthermore, this assumption can be related to Bourdieu's theory, which states that only individuals who have a high cultural capital are willing to consume art and culture. This cultural capital can be found in higher social classes (Brourdieu, 1986; McLean, 1997; Stylianou-Lambert, 2009).

H5:   People with a high income engage with museums on SNSs more often than people
*   with a low income.*

This hypothesis is based on the same assumptions as H4. Higher income is likewise related to a higher social class and museum attendance grows with a higher income (Schuster, 1991; Frey & Meier, 2006).

H6:   Local people engage with museums on SNSs more often than tourists.

The assumption of this hypothesis is that tourists cannot build up a deep relationship to museums from specific countries. They are also rather one-time visitors (Kotler & Kotler, 1998) and thus do not engage in further activities of the museum.

H7:   *People with more cultural experiences engage more often with museums on SNSs than people with less cultural experiences.*

Cultural capital can not only be gained through a higher social class, but also through a high cultural engagement (Bourdieu, 1986). In this hypothesis it is assumed that a high amount of cultural experiences leads to more cultural capital and a higher online museum engagement.

H8:   *People who visit a museum more often engage more often with the respective museum on SNSs than people who visit the museum less often.*

Also this hypothesis illustrates the new audience assumption: Museums use social media to reach people different from the average museum visitor (Russo et al., 2008; Verboom & Arora, 2013; Fletcher & Lee, 2012). However, I assume that it is difficult to attract individuals, who never visited the museum before because it is more difficult to find out about it.

H9:   *Members of a museum engage more often with the respective museum on SNSs than non-members.*

 People who are 'friends with the museum' already have a high loyalty status to the museum. Thus, I assume that these people also engage more often online.

H10:   *People who 'like' a museum online engage more often with the respective museum on the SNS than people who do not 'like' the museum.*

This hypothesis is specifically directed at Facebook, which has the 'like' function. 'Liking' the museum is already a form of commitment and entails updates about newest information of the museum on the main page of the respective individual. Thus, I assume that this is a relevant precondition to engage in the Facebook page more often.

H11:   *People who use SNSs more frequently engage more often with museums on SNSs than people who use SNSs less frequently.*

I assume that a thorough understanding of social media is a precondition for engaging more often in SNSs of museums. This assumption is derived from the argument of Russo and Watkins (2007), who state that in order to be able to consume and create digital cultural content, Digital Cultural Communication is needed. This knowledge can be gained though a frequent use.

To sum up, the expectations from this research can be summarized from three points of view. From an economic perspective, museums achieve to use social media as a marketing tool. Thereby, the goal of social media is to attract new audiences and motivate individuals to visit the museum. Furthermore, if social media attracts more online audiences, a network effect can be created, which entails that even more people join. As a consequence the museum can enhance its reputation and eventually gain more revenues through a growth in attendance.

From a social point of view, museums can create a community through social media. Moreover, if this community includes a more differentiated and more critical audience, museums need to satisfy different interests and thus create more diversity in the museum. The result would be that the museum moves away from the traditional authoritative image and becomes more open-minded, diverse and proactive.

As a final point, enhancing a direct dialogue to the audience can benefit the cultural side of the museum. If museums can create an interactive atmosphere and enable content creation from their audience, museums can get a more vital image and be more open-minded towards creativity and innovation. Thereby, not only the museum decides what is good art and culture, but the audience can be involved as well. In the end, through interaction museums can convey knowledge, but also learn from their audiences.

3.2. Research Method

Like the research questions and hypotheses, also the choice for an appropriate research method is derived from the literature review. As Kotler and Kotler (1998) claim, a "museum learns about its visitor characteristics through surveys" (p.100). Since surveys are an established method used by previous studies researching the museum audience, but also the use of new media, also this research will operate in a quantitative way using a survey. Examples of survey studies can be found in research about websites of museums (see

Bowen, 1999; Chadwick, 1999; Haley Goldman & Schaller, 2004), the use of social networking sites in general (see Correa et al., 2009) or the use of social media in the museum setting (see Fletcher & Lee, 2012; Museum Next, n.d.).

However, both qualitative and quantitative research methods have benefits and disadvantages. A qualitative study, like a case study, using interviews can provide an in-depth insight about a certain phenomenon. It is mostly inductive, which means that a theory is elaborated and can be used for studying topics, which are new and not explored yet. However, since qualitative studies focus on one specific case, the results are mostly not generalizable and thus can only be used as examples. In contrast, most quantitative studies can be generalized to the pre-defined population. Since they work with numbers, they can describe or explain a certain phenomenon statistically. Most studies are deductive, which means that they test a theory, which already exist. Consequently, surveys are more appropriate to describe a large population (Babbie, 2010).

Although this study is rather exploratory, a survey method was chosen because this research tries to find out certain characteristics, patterns and behavior of individuals using social media sites of museums, compared to segmentation. According to Peacock and Brownbill (2007), dynamic segmentation is the best way to find out consumer's needs, attitudes and behavior. Furthermore, Kotler and Kotler (1998) argue that there are different forms of segmentation used in museum marketing. Three of them are relevant for this study: geographic, demographic and behavioral. The matching variables for these segmentation practices will be discussed in the next part.

There are two possibilities to conduct a quantitative research. A longitudinal study would analyze the behavior of online users over a period of time and thus also capture eventual changes in behavior. However, due to the restricted time frame of this research, a longitudinal study is not possible. Thus, the research is a cross-sectional study, which means that the observations are made at one point in time (Babbie, 2010). This enables to capture a phenomenon in detail and makes it possible to analyze several units at the same time.

3.3. Operationalization

A survey with 22 questions was created. To be able to apply the theoretical concepts discussed in the literature review in the survey and analyze them afterwards, measurement of these concepts is needed. Since the research is quantitative, the measurement

instruments for this research are scales, which are used in the survey. To sum up, two levels of measurement were used, namely nominal and ordinal scales. The answer possibilities included categorical answers, multiple choice, open questions and a Likert-scale in a matrix table. An example of the complete survey can be found in Appendix A.

The survey contains variables proposed by different scholars, which are changed, extended and adopted to the online audience of museums' social media. Kotler and Kotler (1998) for example describe different segmentation practices used in museum marketing. Some variables are derived from Stylianou-Lambert (2009), who defines different forms of perceiving a museum. The following part shows how the variables were developed according to topics. The variables can also be found summed up in the Table B.1 in Appendix B.

Dependent Variables

There are two dependent variables, which represent engagement in the SNSs of museums: *Facebook visit*, which is rather passive and *Facebook contribution*, which is more active. Whereas visiting a Facebook page does not say much about the stay, for example what the person does or how long she/he stays, contribution is more qualitative because it implies that the person dealt with the Facebook page in some way.

The first of the two variables is measured with the question "How often have you visited this museum on Facebook?" The scale is ranging from "this is my first time" to "more than 10 times". The question for the second variable is "How often did you write comments/post something on the Facebook page of this museum?" with a scale from "never" to "more than 10 times". Since there are different forms of contribution on Facebook, 'write comments and post something' were combined as the most common options.

There is no timeframe for these questions because I assume that the public profile of museums is not used on a regular basis and thus it is important to find out whether people visited or contributed at all. Since visiting and commenting on the Facebook page is not a regular activity next to other activities on Facebook, the maximum of 10 times seems realistic.

Demographic information

Demographic categorization it is the most common practice used in surveys and divides groups into different variables (Kotler & Kotler, 1998). The survey in this research includes *age, gender, employment status, education* and *income* as demographic information. Notably, *age* is divided into age groups, starting from "13-17" and ending with "65 or older" because 13 is the minimum age to use Facebook and 65 is the official pension age in the Netherlands. The variable *income* asked for gross annual income to make estimation easier and to facilitate the answer of individuals with an irregular monthly income. The other variables used common questions and answer possibilities on a nominal and ordinal scale, as can be found in various surveys.

Geographic information

Geographic information can categorize the respondents into different locations, for example local and long-distance audiences (Kotler & Kotler, 1998). In this survey, the variable *place of residence* defines the geographic location. It is limited to the Netherlands and its neighboring countries because individuals from these countries are most likely to know about the selected museums. The option "other, specify" is half-open and gives respondents from other countries a possibility to respond.

Behavioral information

This part "divides consumers into groups on the basis of their knowledge, attitude, or use of a given set of products or services" (Kotler & Kotler, 1998, p.128). One of the variables is *loyalty status*, which describes the degree of loyalty to the museum. It is asked with the question: "Are you a member of the museum of this Facebook page?". On the one hand, membership is a strong loyalty sign, but is dependent on for example higher monetary contributions. "How often have you visited the museum last year?" is the question, which contains the variable *museum visit*. The choices range from "never" to "more than 5 times", which is considered as an appropriate amount to visit a museum in a year.

Related to loyalty is the variable *like status*, which shows whether the individuals like the museum on Facebook. A related question is "About how many museums do you currently 'like' on Facebook?" with a scale from "None" to "I 'like' more than 10" (Museum Next, n.d.). This shows whether the individual already established a relationship to the museum online and whether she/he is culturally active online. Another variable is *cultural*

experience with the questions "How often have you visited other cultural events/institutions last year (. . .)?" Since it is very likely that individuals visit multiple cultural events or institutions, the maximum answer is set to "more than 10 times".

Facebook use shows whether the respondent is familiar with Facebook and its use. It is tested with the question "How often are you online on Facebook?" with a scale starting from "This is my first time" and "Less than once a week" and ending with "More than 3 times a day". Although in other studies about Facebook use a scale with a daily use is more common, I assume that a major part of the museum Facebook users do not necessarily use Facebook on a daily basis. The second question is "Which Facebook functions do you use on a regular basis?" with a multiple-choice scale of possible answers.

Network effect is asked with the question "Would you be more likely to visit the museum if a friend recommended it on Facebook?" An indicator about whether there is a network effect is also the question "How did you find out about this museum Facebook profile?" with categorical answers.

Attitudes towards Museum Social Media

To leave the respondents the opportunity to state their attitude about contribution on Facebook openly, the open question "If you ever commented or posted something, why did you choose to do so?" was asked, which is labeled *open attitude.* It is an exploratory question because especially contribution to SNSs of museums is a new phenomenon and has not been researched yet.

The further variables about the attitudes of the respondents were posed in statements on a Likert-scale. Thereby, a question was asked and respondents should rate how much they agree or disagree on a proposed statement ranging from "strongly disagree" to "strongly agree". The first question is "What do you think is the 'like' button of the museum Facebook profile intended for?", the second question is "What should the museum use Facebook for?" and the third question is "What should the comment function on the Facebook profile of the museum be used for?" Similar questions can be found in a research of Museum Next (n.d.), which used a categorical scale or an open question. However, since all possibilities are likely to apply at the same time, a Likert-scale is used in this research. I used the results of the open question from Museum Next (n.d.) to form statements for the

third question. A further question including the Likert-scale is "How should the museum present itself on Facebook?"

The variable *practical attitude* is related to the theory that Facebook is used to promote the museum and tested with the statements "to learn about new exhibitions or events", "to get discounts or special offers", "update about newest events and exhibitions", and "to ask questions about practical information (. . .)".

Professional attitude relates to the first primary 'filter' through which individuals perceive the museum in the research of Stylianou-Lambert (2009). It means that art is already integrated in the person's life and work. The emphasis of these individuals is on the art knowledge of the museum (Stylianou-Lambert, 2009). This variable is tested with the statements "to get informed about artists and other interesting facts", "provide background information and news about developments in the art field", "professional", "to ask questions about background information (the artist, current exhibition etc.)".

Social attitude means that people perceive the museum as a place to meet others (Stylianou-Lambert, 2009). This variable is tested with the statements "to show that a visit was impressive and let friends know about it", "engage with the audience", "to communicate with other people who are interested in art" and "open-minded". The variable *learning attitude* is tested with the statements "to teach about the museum" and "educational". People with a *critical attitude* are critical about the museum, which is tested with the statement "to criticize a comment/photo/video". In contrast, people with a *participatory attitude* want to have a dialogue with the museum and perceive the online environment as enjoyable to discuss interesting topics. This variable is tested with the statements "to enter a dialogue with the museums where I can tag/'like'/comment/post", "encourage everyone to participate in the online discussions", "Entertaining", "to express interest in a comment/photo/video".

Another variable already used by Stylianou-Lambert (2009) is *self-exploration attitude.* According to the author, due to the 'self-exploration filter' "people can discover and expand themselves, learn, see and experience new things, form opinions and satisfy their self-image" (Stylianou-Lambert, 2009, p.149). It is integrated in the statements "to show that the museum reflects my views and taste" and "original and inspiring".

Finally, people with the *art-loving attitude* have a passion for art, but on a more personal and emotional level (Stylianou-Lambert, 2009). This variable is tested with the

statements "to show support for the museum", "to promote culture", "to express appreciation for the museum".

3.4. Sampling

The data was collected online using purposive sampling, which allows targeting the selected sample. The sample in this research is on a micro level, namely individuals, who use the Facebook sites of the selected Dutch museums. The research therefore has a population of individuals, who use social networking sites of museums.

3.4.1. Data Collection

Since the survey was posted online, it is difficult to control and reach the right sample. Thus, it was necessary to post the survey on the museum Facebook pages. To limit the number of museums, a selection of art museums in the Netherlands was needed. In order to have a common type of museum, the following criteria were created:

1. contains visual art aspects[2]
2. in the Netherlands
3. recognized museum
4. a permanent collection
5. has an active Facebook profile[3]
6. allow participation on Facebook

The museums were chosen from the Website www.museumserver.nl, which offers an overview of all museums in the Netherlands. Thereby, a total of 261 museums are art museums. According to the previously stated criteria, 82 museums were selected. To narrow down the museums to a reasonable number, a further selection criteria was included, namely Facebook 'likes'. Only museums with more than 1000 Facebook 'likes' were chosen. The reason for this selection criterion is that the museums with a higher number of Facebook 'likes' are already established online. However, this does not mean that the museums are larger, but the sizes of the museums varied. Furthermore, the probability that more individuals would answer the survey on these Facebook pages was higher. All in all, 45 museums remained and were contacted. Contact was established via email and phone. The

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[2] The categorization between different art styles is not relevant here because the research is focused on the communication and relationship between users and museum and not the content.
[3] Active means that the oldest post is not older than from March 2014.

museums were first emailed about the survey and a follow-up call confirmed the participation or vice versa. Finally, 13 museums participated in the research and thus 13 surveys were distributed. More detailed information about the museums can be found in Table C.1 in Appendix C.

The survey was created through the survey program Qualtrics and posted at different times online from April 29 to May 21, 2014 on the museums' Facebook page. The first three surveys were posted by the researcher herself on the Facebook page of the museums. However, since there is little visibility for posts of individuals, other than the museum, there were little responses in the first two days. Therefore, in the further course of the research, the museum staff was asked to post the survey on their own Facebook page. If this was not possible, the researcher still posted the survey on the Facebook page herself (Appendix C).

The response rate of the individuals who filled out the survey is difficult to trace and calculate. However, an important factor in this research is the response of the museums, which participated. From a total of 45 museums, 13 participated in the research, which is 28.9 percent. A smaller amount of museums declined participation (15.6 percent) and the largest amount of museums did not respond (55.5 percent). Some museum staff explained the reasons for declining participation: the survey is too long, it is not in Dutch, the line of questioning is not fitting with the museum's vision and it is not possible to post information from third parties on the museum's Facebook page. Especially the last reason shows that some museums might not yet be open-minded towards external information.

Posting the survey on the museum page as third party and posting the survey through the museum implies that individuals are differently contacted. They could either find it randomly through purposefully visiting the Facebook page of the museum; this would be the preferable way, but is less likely. However, if they already liked the museum on Facebook, they could also find it through an update status from the museum on the first page. This page appears automatically when Facebook is opened. Since this way is more likely, the research includes more people who already like the museum on Facebook (87.3 percent) than people who do not like the museum (12.7 percent).

3.4.2. Data Analysis

To be able to analyze the data, the responses were transcribed into SPSS and evaluated. In total, 244 respondents started the survey. However, some respondents dropped out from

the survey meaning that they did not answer blocks of questions. These were removed from the data set, causing a 30.74 percent dropout rate.

Lastly, 169 respondents completed the survey and were analyzed. However, in the completed surveys, still some data was missing. To make sure that this missing data would not cause bias, it was analyzed with the Data Missing Completely at Random (MCAR) test in SPSS. Indeed, the results of the MCAR test show that data is missing in a random way ($p >$ .05). The missing data was not imputed since the amount was not high (maximum 5.9 percent). However, since missing values might cause altered results when performing statistical tests, these values will be specifically mentioned in the analysis.

Since all variables used for statistical testing are on a categorical or dichotomous scale (Appendix B), thus nominal or ordinal variables, a non-parametric test was chosen. A chi-square test for independence was selected to be most appropriate because it "is a statistical procedure used to determine whether frequencies observed at the combination of levels of two categorical variables are similar to frequencies expected" (Privitera, 2012, p.560). In short, the chi-square test proves whether there is a relationship between two variables or not.

However, a chi-square test does not determine the direction of the results. Furthermore, it does not specify or filter out groups with a small respondent rate. Hence, a second non-parametric test was used, namely the Mann-Whitney U test, to complete the analysis. A table with complete results from this test can be found in Table E.1 Appendix E. The Mann-Whitney U test is used to compare differences between two independent groups when the dependent variable is either ordinal or continuous, but not normally distributed (Field, 2009). The test holds the following assumptions (Field, 2009):

1) The populations do not follow any specific parameterized distributions
2) The populations of interest have the same shape
3) The populations are independent of each other

In the end, these two tests might lead to different results because the chi-square test includes all groups and tests them against each other, also groups with a very low response, whereas in the Mann-Whitney U tests specific groups that could be chosen and filtered out. Since the second test is more precise, only these test results were taken into consideration. However, if the results from the chi-square test matched the other test, it can be seen as a proof of the strength of the result.

The survey included one open question: "If you ever commented or posted something, why did you choose to do so?" To be able to code the open question, the answers were categorized in 17 topics. Some answers included multiple categories. Appendix D shows the categorization of the complete list of answers. This method was motivated by Brandtzæg and Heim (2009), who studied the motivations of individuals to use SNSs. In order to do so, they asked one open question in a survey and categorized the answers in meaningful topics. To illustrate the results, a word cloud was created using the program Worlde, which can be found on the website http://www.wordle.net/. There, the respective number of words representing the topics was written down in the text field. As a result, the program produces a word cloud, which emphasizes more frequent words with a larger size.

3.5.   Validity and Reliability

Validity and reliability shows the criteria of measurement quality (Babbie, 2010). Since this research is quantitative, it tends to be more reliable than valid. To start with, validity can be described as "the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration" (Babbie, 2010, p.153). There are some validity threats in this research, which should be pointed out. First of all, many variables are adapted specifically to this research and do not conform to previous valid criteria. Second, categorical and dichotomous questions do not allow covering a broad range of meanings of a given concept (Babbie, 2010). To avoid this, the survey includes one open question, where respondents can add criteria about attitudes towards contribution, which were not comprised by the survey. Lastly, the use of nominal and ordinal variables in non-parametric tests does not show whether there is a spurious relationship between independent variables, nor can it be evaluated whether one variable precedes another.

In contrast, the research has a high reliability. Reliability means that "the same data would have been collected each time in repeated observations of the same phenomenon" (Babbie, 2010, p.150). Having categorical answer possibilities, reliability is ensured because respondents can chose between options. Second, a small number of categories and realistic options were chosen, so that the respondents can relate to the different situations. Third, the sampling method was kept homogenous, thus the setting does not change.

However, there are also reliability threads. First of all, there is a high dropout rate. It shows that the survey might have been too long or that repetitive questions lead to an increasing disinterest of the respondents. Second, since the research is a cross-sectional study and only in one point in a time, generalization is problematic (Babbie, 2010). Furthermore, the sample size is small in relation to the large population. However, it remains problematic to reach enough respondents because the use of museum Facebook pages is very specific.

3.6. Conclusion

As already mentioned in the literature review, the methodology part has once more revealed that researching social media in the museum setting is quite new and not established yet. The most appropriate form of research is the survey design, which follows segmentation in museum marketing and allows analyzing the characteristics, the behavior and the different attitudes of the respondents. Thereby, much insight can be gained from previous studies on the supply side of museums' social media, from museum audience studies and from social media studies in general.

It must be noted that the research strongly depends on the cooperation of the selected museums and the technology of Facebook, which cannot be easily influenced. These factors entail consequences, which hint to first insights. First of all, more people who like the museum participated. Second, the high number of museums, which declined participation, shows that there is still a low willingness to cooperate with third parties. Lastly, due to the exploratory nature of this research, a few validity and reliability threats occur. With developing research strategies, however, these can be avoided.

CHAPTER 4: RESULTS

In this chapter of the thesis the results of the research will be analyzed and discussed. To start with, the data, which was collected through the surveys, will be presented in two ways. Firstly, a descriptive analysis will be provided in order to show the main characteristics of the online audience and their perception towards the Facebook page of the museum. A statistical analysis will follow, which shows the correlations between specific variables and tests the previously created hypotheses. This part will reveal which factors behind using the Facebook pages are statistically significant. Finally, in the last part these results will be discussed in the theoretical framework, which was provided before. In the end also the research question and possible answers will be addressed. A summary of the results from the hypotheses testing can be found in Table E.1 (Appendix E).

4.1.   The Museum Facebook Pages

Before analyzing the online audience, it is important to look at how the museums are presented on Facebook. Since this might influence the engagement on Facebook, it is necessary to show the characteristics of the online appearance. Although the form of visual art did not matter in this research, the museums differ considerably in using Facebook, which should be pointed out with some examples from May 2014. These observations resemble the supply side of Facebook use of art museums.

First of all, it is noteworthy to mention that the participation of the museums in this research took place in two different ways. For the one group of museums it was only possible to post the survey as a Facebook user, whereas for the second group of museums an employee posted the survey on the respective Facebook page (see Appendix C for more details). The difference hereby is that the individual posts appear under the 'recent posts by others' section of the Facebook page, which is rather small and not particularly visible in first place. Furthermore, people can give a review to the museum likewise in a side section on the page. However, individuals can comment on the information posted by the museums themselves. This information is the most visible and ordered chronologically.

The second difference between the Facebook pages is that the museums post information in different frequencies. The more a museum posts on Facebook, the more reactions it can expect. Only one museum posts information every day, namely the Van Gogh museum. The largest group of museums posts information frequently, but not

regularly. Most museums post something every day, but sometimes are not active for two to four days, for example the museum Beelden aan Zee, the Cobra Museum for Modern Art or the Dordrechts Museum. There is also one museum, which posts information not frequently at all, sometimes only once a week or once in two weeks, namely the museum Willet-Holthuysen.

A third characteristic is that the museums communicate either in Dutch or in English with their online audience. The majority of museums communicate in Dutch, for example the Groninger Museum or the Fries Museum. Apparently, these museums try to attract a national or local audience. Three museums, namely the Rembrandthuis, Escher in het Paleis and Museum Beelden aan Zee use both languages. Two museums use only English to communicate on Facebook: the Museum of Contemporary Aboriginal Art (AAMU) and the Van Gogh Museum.

Finally, the content of the Facebook pages matters. For most museums, the content is a mix of a report of past events, upcoming events and current exhibitions. All museums also post messages about the art and artists exhibited in the museum and sometimes the opening hours are mentioned. Some information consists of general information about art and culture or the museum. Fletcher and Lee (2012) found similar results studying social media use of museums in the US: Most museums use social media for posting events, reminders and promotional messages.

Rarely, museum posted special pieces, where people could interact. The AAMU, for example asked their online audience: "Help us find a name for our permanent exhibition" (AAMU, 2014). Another example from the Van Gogh museum is: "VanGoYourself is live! Go and have a look at http://www.vangoyourself.com/ and start recreating your favorite artworks!" (Van Gogh Museum, 2014). These are good examples of how people can actively engage in museum content. Other posts are related to special offers of the museum: "Visit the AAMU with your very own mother and enjoy a cup of coffee or tea for free in our museum cafe!" (AAMU, 2014). Another example can be seen on the Facebook page of the museum het Rembrandthuis: "If you can show us an older duckface than this almost 400 year old selfie by Rembrandt, than you win something from the museum shop." (Museum het Rembradthuis, 2014). The most commented posts are the ones where artists are shown or where the museums provoke participation.

Notably, museums, which represented only one artist, namely the Van Gogh museum, Museum het Rembrandthuis or Escher in het Paleis, post more information about the artist presented or related information on him. This is why this content varies more compared to the other museums. The latter museum posted for example: "Today a visitor proudly showed us his Escher tattoo!" (Escher in het Paleis, 2014). The post was also showing a picture of the visitor and his tattoo.

4.2.   Engagement with the Museum on Facebook

The structure and characteristics of the museum Facebook pages already might influence the online behavior of the museum audience. However, to find out who these people are, why they use social media of museums and what they think about this form of media, it is necessary to look at the results from the survey. Are the efforts made by the museums actually well received? Since the precondition of the survey is that the respondents visit a Facebook page of a museum, they all resemble the online audience and already engage by visiting the Facebook site. Thus, it is more interesting to find out how they engage with the museums and what influences this engagement.

In this research, the frequency of visiting the museum on Facebook was considered as one form of engagement. Visiting is a rather passive engagement because people can observe what is on the Facebook page, but do not have to be actively involved. In the end, the results show a quantity of visits, but not why the individuals visited or how long they visited. Still, this information is valuable because it is more common to be passive than active online, at least when we compare the Facebook page with a regular website of a museum (Bowen, 1999). People, who visit a museum Facebook page frequently, are important because they are already interested in the museum and could be possible visitors.

In Graph 4.1 it is illustrated that most people visited the Facebook page of the museum at least two times and can thus be considered as frequent visitors. The largest group of people visited the Facebook page already more than ten times (29 percent) and 19.5 percent of the respondents visited the Facebook page six to ten times. People, who visited the museum Facebook page two to five times is the second largest group with 27.8 percent. The group of people, who visited the Facebook page once before (10.65 percent) or for the first time (13 percent), is comparably small.
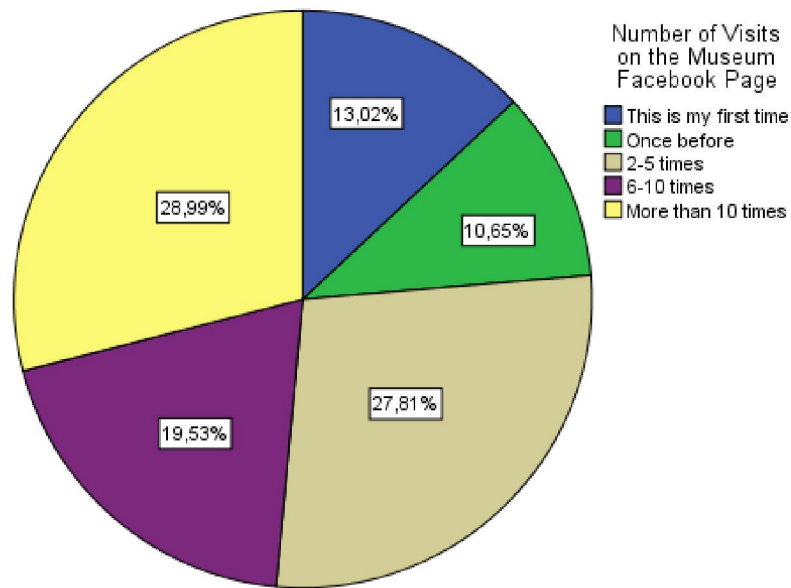
Graph 4.1: *Frequency of visits on the Facebook page of the museum*

Contribution in form of commenting or posting on Facebook is the active form of engagement. It shows that people not only observed the content, but dealt with it as well. Thus, contribution automatically implicates a form of quality. For museums a high amount of contribution is important not only to catch attention, but to create a conversation with and between the online audiences.

The overall frequency of comments or posts on the Facebook page of the museum is rather low. The majority (66.7 percent) answered that they never commented or posted something and 11.3 percent answered that they contributed once. All in all, the overall group of frequent contributors is small. Only 5.4 percent commented or posted something more than ten times and 1.2 percent contributed six to ten times. In comparison, the group of people who posted or commented two to five times is relatively large (15.5 percent) (Graph 4.2). Although these first observations about the engagement on the Facebook pages of museums are already insightful, it is still not clear what influences this behavior. The following parts discuss possible answers.
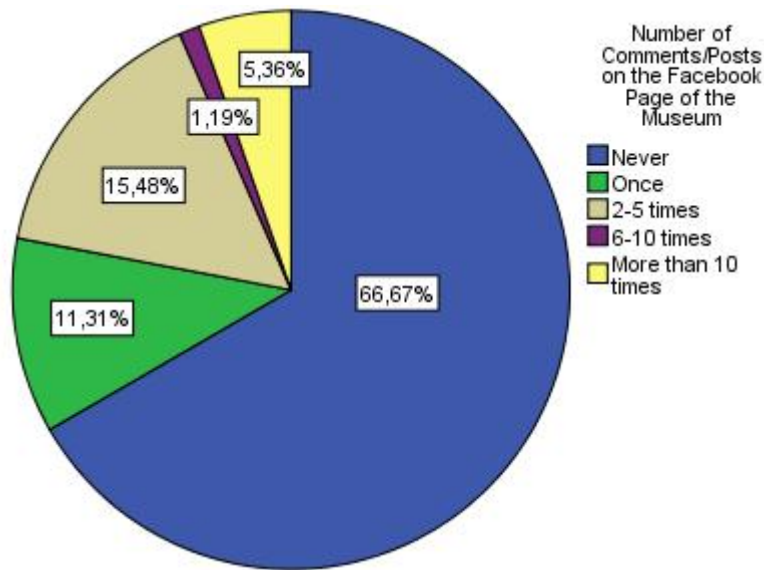
Graph 4.2: *Frequency of contributions on the Facebook page of the museum*

4.3. Characteristics of the Online Audience

Some of the factors influencing the engagement on social networking sites stem from the demographic characteristics of the online users. The findings about the characteristics help to answer the first sub-question: *Which factors influence the engagement of the online audience in SNSs of art museums?* More general, they also show who these individuals are and whether they differ from the average museum visitors.

4.3.1. Demographic Characteristics

Age

The age group of the respondents can reveal the 'life cycle factors'. This means that with a change in age, also attitudes, motivations and behavior can change (Kotler & Kotler, 1998). For this research, this means that different age groups might behave differently towards the engagement on the Facebook page of the museums. As we can see in Graph 4.3, the largest age group of the respondents is 45 to 54 years old with 26 percent and the second largest group is 25 to 34 years old with 20.7 percent. These results differ slightly from other social media research, where the average age of the majority of Facebook users in the Netherlands is 24 to 35 years, followed by the age group 18 to 24 years (Social Bakers, n.d.). Compared to the usual Dutch social media user, the majority of online users of the Facebook sites of museums are slightly older.
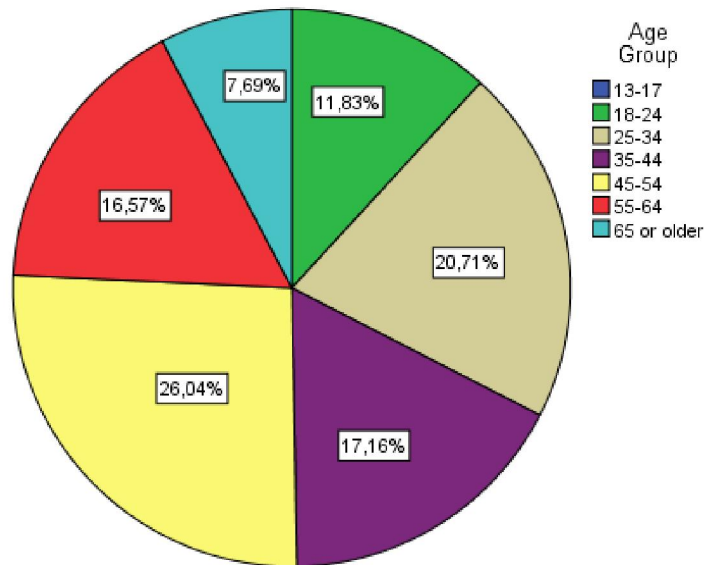
Graph 4.3: *Distribution of respondents by age group*

The age group 13 to 18 is not represented at all in this sample. The reason might be that children and youngsters are not likely to participate in surveys or they are less interested in the online activities of museums. The smallest percentage (7.7 percent) is established by people who are 65 years old or older. This result matches previous research on Facebook use in the Netherlands (Social Bakers, n.d.).

All in all, there is no large dominant age group, so it might be assumed that indeed, a wide range of audiences is represented online. However, whether there is a statistical difference between the age groups in engaging in Facebook can be tested with the first hypothesis: *Younger people engage with museums on SNSs more often than older people.* As already stressed in the methodology, engagement is measured by the number of visits on the page as well as the number of leaving comments or posts there. A chi-square test for independence shows that indeed there are differences in the age groups when it comes to virtual engagement with the museum. Both, the relationship between age and visiting the museum on Facebook, $\chi^2(20) = 169$, $p < .05$, as well as age and contributing on Facebook, $\chi^2(20) = 168$, $p < .05$., is statistically significant.

To explore whether young and old people differ, the Mann-Whitney U test was used. This non-parametric test ranks the scores of two groups and tests thereby whether the mean rank score of each group is significantly different from the other (Field, 2009). In plain words, the group with the lower mean rank engages less with the Facebook website of the museum than the group with the higher one. It should be kept in mind that the hypothesis

predicts that the relationship is directional, which means that the two-tailed SPSS results are divided by two (Field, 2009). Note also that the sample size (n) changes among the different groups and between the two dependent variables.

Since an ordinal scale to measure age was used, a definition of what is meant with 'younger' and 'older' was needed. Firstly, the seven groups were divided into two large groups: people until 34 years and people 35 years or older. Indeed, there are statistically significant differences between these two big age groups on the number of contributions (z = -4.456, p < .01) and on the number of visits of the museum's Facebook webpage (z = -3,790, p < .01). Differently than expected, not younger people engage more with the museum Facebook page but older people. This crystallizes when looking at the mean ranks of younger people for contributing (64.19) and visiting (65.05), which are significantly lower than the mean ranks of older people (94.12 and 94.62 respectively).

To be more precise, another test was undertaken using different age groups. This time the middle aged respondents (35 to 54 years) were left out to show that the gap should be even wider. Also here, the difference between the two groups is still significant on both dependent variables (z = -3.128, p < .01 and z = -2.987, p < .01). I conclude from these findings that young people (until 34 years) are not engaging with the museum through social media more often, but rather middle aged (35 to 54 years) and older people (55 years or older). In the discussion I will elaborate more on this finding especially in the light of the wider audience participation.

Gender

As in research about museum visits (Schuster, 1991), also in this sample, females are dominating: 25 percent of the respondents are male and 75 percent are female. However, these results differ from research about general Facebook use in the Netherlands, where males and females use Facebook in an equal manner (Social Bakers, n.d.). Whether there is also a relationship between gender and engagement online, was tested with the hypothesis: *Females engage with museums on SNSs more often than males.*

Both, a chi-square analysis and the Mann-Whitney U test, revealed that there is no significant difference between gender and visiting the museum on Facebook, $\chi^2(4) = 168$, p > .05 (z = -0.477, p > .05). The same test applied for number of contributions shows likewise no

statistical relationship, $\chi^2(4) = 167$, p > .05 (z = -0.327, p > .05). The second hypothesis can therefore be rejected.

Employment

The majority of people using Facebook pages of museums are employed (49.4 percent). Students (15.5 percent), self-employed (12.5 percent) and retired people (11.9 percent) are rather small groups, but the smallest groups are unemployed people (3.6 percent) and housewives (7.1 percent). Since self-employed people have a high opportunity cost of time (Frey & Meier, 2006), they might see Facebook pages as a time-saving alternative to visiting the museum. The same might be true for employed people. The following hypothesis was tested to see whether these people behave differently on the Facebook pages of the museums than other groups of people: *(Self-) employed people engage with museums on SNSs more often than people with another employment status.* The chi-square test for independence showed that there is no statistical relationship between employment status and visiting the museum on Facebook, $\chi^2(20) = 168$, p > .05. However, there is a statistical relationship when looking at the contributions on Facebook, $\chi^2(4) = 167$, p < .05.

Despite the insignificant result in the first test, as a second step, the Mann-Whitney U test was carried out. Since there is an unequal distribution of respondents among groups, the two tests might show different results. Whereas in the chi-square test, all groups were included, housewives and unemployed people have a very low response and were therefore excluded in the second test. All other groups were tested against each other. Thereby, employed and self-employed were converged in one group. Contrary to the chi-square test, the results of the Mann-Whitney U test showed that (self-) employed people do not comment significantly more than other groups, like students or retired people. However, comparing (self-)employed and other groups in terms of Facebook visits, we can see that in accordance to the hypothesis, (self-) employed people visit the page significantly more often than people with another employment status (z = -1.832, p < .05).

Education

Education is one of the 'social class factors' and can reveal in which social class the respondents can be categorized (Kotler & Kotler, 1998). This in turn, can explain a high cultural capital and a higher frequency in museum activities on-site and online (Brourdieu,

1986; McLean, 1997; Stylianou-Lambert, 2009). Previous research about museum audiences revealed that the average visitor is from the upper-middle class or upper-class and is well educated (Kotler & Kotler, 1998). Indeed, also in this sample we can see that the largest group has a master's degree (34.3 percent), followed by a large group with a bachelor's degree (33.1 percent). The groups of people with an associate degree (10.1 percent), a high school degree (9.5 percent) and some college but no degree (8.9 percent), are relatively small. The two extremes are the smallest groups: people with a PhD degree reach 3.6 percent and only one person (0.6 percent) has less than a high school degree (Graph 4.4).
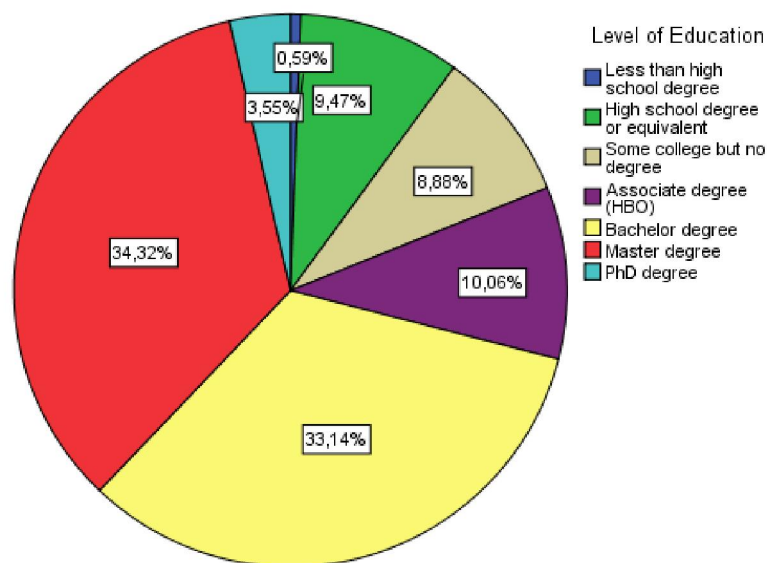
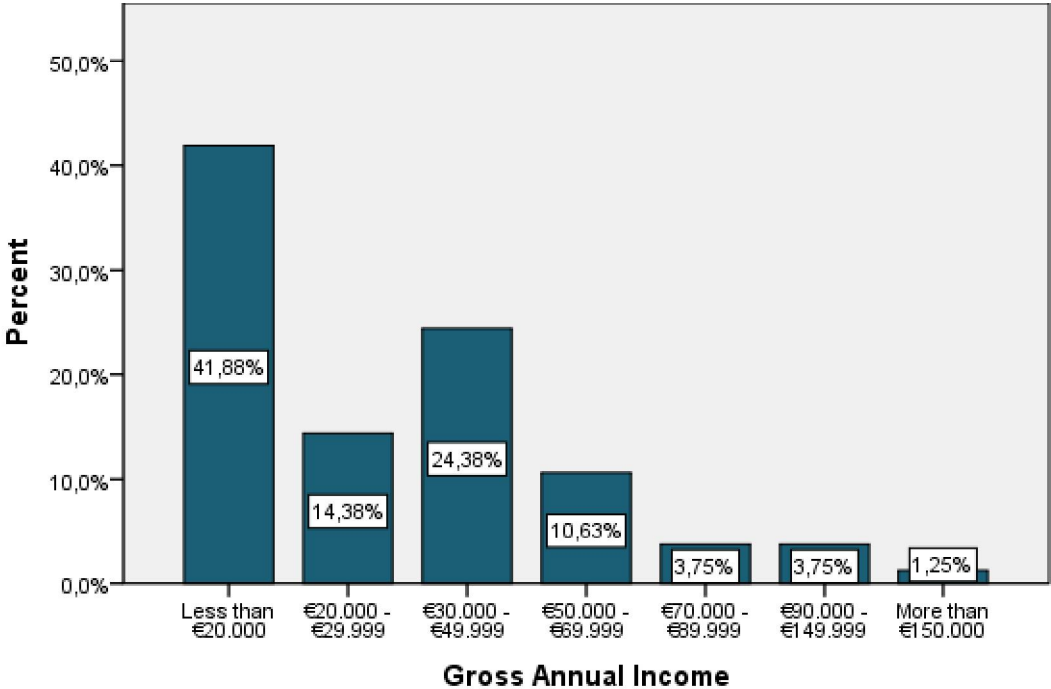Graph 4.4: *Distribution of respondents by education level*

To test whether there is a relationship between education and Facebook engagement the fourth hypothesis was stated: *Higher educated people engage with museums on SNSs more often than lower educated people.* Through the chi-square analysis it became clear that there is no relationship between education and visiting the Facebook page of the museum, $\chi^2(24) = 169$, $p > .05$. Likewise, there is no significant relationship between education and contributing on the Facebook page, $\chi^2(24) = 168$, $p > .05$.

Again, different results can be observed after using the Mann-Whitney U test. Hereby, two groups were created: one group with a university degree (including HBO) and one group without a university degree. The number of visits is significantly higher for people holding no university degree ($z = -1.663$, $p < .05$). Concerning comments or posts, the difference between the groups is statistically not significant. Consequently, having a

university degree does neither mean that people visit a museum page more often nor that they tend to comment significantly more than other education groups. On the contrary, people who do not have a university degree visit museum pages more often than people with a university degree. The fourth hypothesis cannot be approved and has to be rejected.

Income

Finally, the factor 'gross annual income' can be discussed, which also relates to the social class and cultural capital (Brourdieu, 1986; Kotler & Kotler, 1998). In graph 4.5 we can observe that most respondents earn less than 20,000 Euros (41.9 percent) in a year. Notably, the second largest group of people has an annual income of 30.000 to 49.999 Euros (24.4 percent). The third largest group is people with an annual income of 20.000 to 29.999 Euros (14.4 percent). Only one respondent has an income of over 150.000 Euros a year. These results can be related to the employment status of the respondents. The high number of respondents with a low income (less than 20.000 Euros) can be explained by the fact that the majority of people are employed, but their income might be distributed among the different income groups. However, the other employment statuses taken together, for example students or retired people, are still a large group, but have a low income.

Graph 4.5: *Distribution of the respondents by gross annual income*

For the regular museum visitor the attendance increases with higher income (Schuster, 1991). Whether this is true for the online visitor and contributor, income was tested against engagement in the Facebook pages of the museums through the fifth hypothesis: *People with a high income engage with museums on SNSs more often than people with a low income.* Indeed, the chi-square test of independence shows a significant relationship between income and museum Facebook visits, $\chi^2(24) = 160$, $p < .05$, as well as contributions, $\chi^2(24) = 160$, $p < .05$.

In the Mann-Whitney U test, first people with lowest and second lowest income (up to 29.999 Euros) were tested against the other income groups. No significant difference between the two groups could be found on both dependent variables. Then, the two lowest income group (up to 29.999 Euros) were tested against the 30.000 to 49.999 Euros group. Here again, both groups show no statistical significant difference. Finally, the second lowest income group (20.000 to 29.999 Euros) was tested against the group with a 50.000 to 69.999 Euros income. Commenting between the two groups is not statistically significant ($z = -0.202$, $p > .05$). Wealthier respondents do, however, visit the museum page more often than poorer respondents ($z = -1.963$, $p < .05$). Hence, only for these two groups we can say that the sixth hypothesis is true. In general, however, income does not play a big role when engaging in Facebook pages of museums.

As already stated above, the difference between the two tests might derive from an unequal distribution of the groups. For example, in the chi-square test also the group with 150.000 Euros income was included, which only consists of one respondent. In the second test, this group was left out. Furthermore, for this variable the high number of missing values (5.3 percent) needs to be taken into account as well because it might lead to different results.

4.3.2. Geographic Characteristics

Geographic characteristics in the form of place of residence are essential in this research in order to find out whether the respondents are local or international. According to Kotler & Kotler (1998), these can entail 'cultural and ethnic factors', meaning that for example Europeans are more involved in artistic or cultural activities than people from the United States because they have a longer cultural history (Kotler & Kotler, 1998). Notably, 79 persons or 46.7 percent of the respondents answered that they are from other countries.

From these people, 23 (29.1 percent) are from the USA, ten (12.7 percent) from Brazil and eight (10.1 percent) from Mexico, among the most stated countries. Worth mentioning is also that five (6.3 percent) respondents are from Argentina and four (5.1 percent) from France. We can see that the majority of the people from abroad are from the American continent. Since the survey concerned Dutch art museums only, the second largest answered that their place of residence is the Netherlands (41.4 percent). In comparison, the number of respondents from the neighboring countries is rather small (11.8 percent) (Graph 4.6).
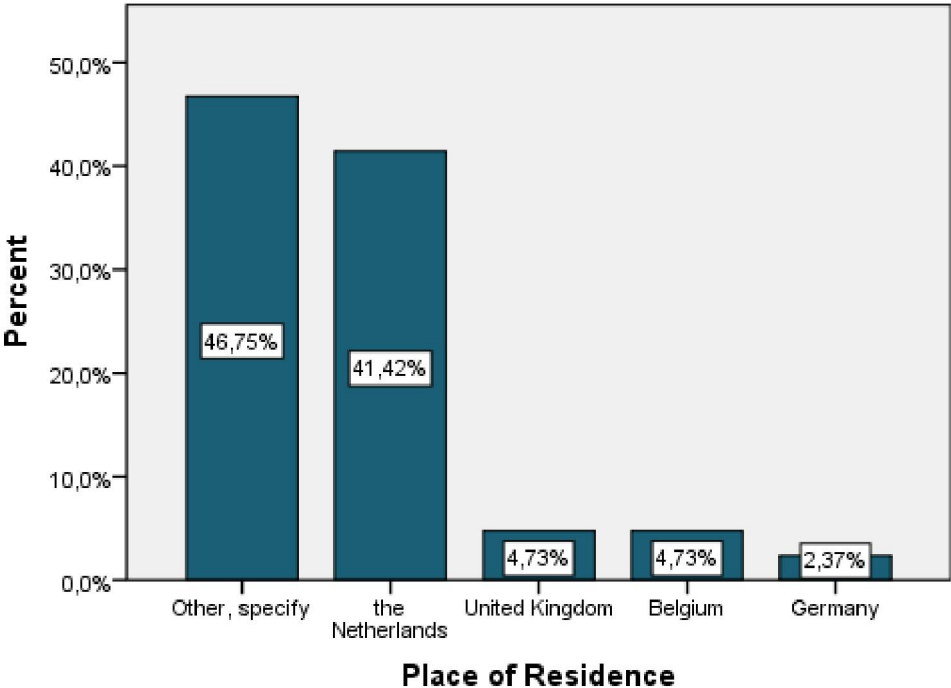
Graph 4.6: *Distribution of respondents by place of residence*

These results show that the amount of tourist is quite high. The big amount of foreign people, who responded to the survey, might have different causes. First of all, a majority of the respondents might have seen the survey on the Facebook page of the Van Gogh museum. This museum seems to be quite popular online because it has the most 'likes' in comparison to the other museums that participated in this research. As already stated above, the Van Gogh museum attracts rather international people. Furthermore, since the survey was written in English, international people might be more willing to fill out the survey than Dutch people.

Having this in mind, these results can be compared to the results from the visitor report of the Van Gogh museum. According to the report, the museum attracted 1.5 million visitors in 2012. The majority of the visitors came from the Netherlands (over 13 percent), the second largest group was from Italy (10.6 percent) and the third largest group from the United States (10.4 percent) (Van Gogh Museum, 2012). Although these numbers do not exactly conform to the results from the research, they might explain the large number of participants from the United States.

To test whether differences in the place of residence also influence the engagement on Facebook, a sixth hypothesis was created: *Local people engage with museums on SNSs more often than tourists.* The results of the chi-square analysis show that there is no significant difference between place of residence and visiting the museum on Facebook, $\chi^2(16) = 169$, $p > .05$. However, when we look at the relationship between place of residence and contribution on the Facebook page, there is indeed a significant relationship, $\chi^2(16) = 168$, $p < .05$.

Through the Mann-Whitney U test we can see clearly that there is a statistically significant difference between local individuals (here Dutch) and all others (neighboring countries as well as others) on both dependent variables, visiting the museum on Facebook (z= -2,741, p < .01) and contributing on the website (z= -3,070, p = .01). The mean ranks of the two groups presented in Table E.1 in Appendix E indicate that foreigners are significantly more engaged in terms of visiting the website as well as commenting or posting. Hence, we can reject H6 since the direction is opposite to the projected one.

4.4.   Behavioral Factors of the Online Audience

Whereas the characteristics of the online audience referred to the socio-economic factors, this part illustrates other factors, which might influence the engagement with museums on social networking sites. Again, this part refers to the first sub-question as already stated above. Other factors presented here are behavioral (Kotler & Kotler, 1998) in the sense that people behave in a certain way concerning culture, technology and other people.

4.4.1.   Cultural Involvement

The following part reveals how much the respondents are involved in culture already. According to Kotler and Kotler (1998), early involvement can influence the decision to visit a

museum, called 'socialization factor'. In this study, cultural involvement is differentiated between online and on-site activities. Both are considered to be essential factors, which can influence the engagement in social media of art museums.

Cultural experience

One part of on-site involvement is cultural experience, identified as the frequency of visits to different cultural events or institutions last year. The majority of the respondents visited cultural activities more than 10 times (37.9 percent), followed by people who visited two to five times (31.4 percent) and six to ten times (22.5 percent). These frequencies reveal a high cultural involvement already and might support the assumption that people with a high interest and experience in art and culture have a high cultural capital (Brourdieu, 1986). These people might also be more likely to engage in the Facebook page of the museum: *People with more cultural experiences engage more often with museums on SNSs than people with less cultural experiences.*

A chi-square test of independence shows no significance for visits, $\chi^2(16) = 169$, p > .05, nor for contribution $\chi^2(16) = 168$, p > .05. For the Mann-Whitney U test, people who visited cultural events never to five times were labeled as 'inexperienced', whereas people who went to cultural events more than 5 times as 'experienced'. The results of the test are different than those for the chi-square test and more ambiguous. Indeed, culturally experienced respondents visit the museum on Facebook significantly more often than inexperienced respondents (z = -1.885, p < .05). However, the relationship between contribution and cultural experience is not significant (z= -.569, p > .05). In conclusion, the hypothesis can partially be confirmed since culturally experienced people visit the Facebook website more often but do not engage with the museum more often through commenting or posting in comparison to culturally inexperienced people.

Museum Loyalty

Cultural involvement is also related to how loyal the respondents are to the respective museum, expressed for example in how often they visited the museum in the year before. It is remarkable that the majority of the respondents never visited the museum before (36.7 percent) or visited the museum once before (32 percent). The rest of the respondents (31.3

percent) visited the museum at least twice (Graph 4.7). Hence, the online audience is not necessarily involved in the on-site museum activities.
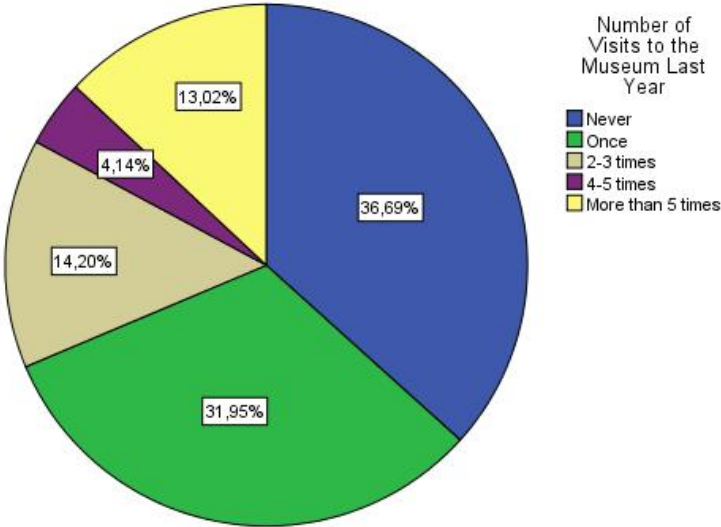
Graph 4.7: *Frequency of visits to the museum last year (2013)*

A chi-square test declines a significant relationship between visits to the museum and Facebook visits, $\chi^2(16) = 169$, $p > .05$ and Facebook contribution, $\chi^2(16) = 168$, $p > .05$. For the Mann-Whitney U test the groups were divided into people who have never or once visited the museum in the last year and people who went to the museum more than once. Like the first test, also this test shows that there is no difference between the groups. Neither do frequent museum visitors significantly more often visit the Facebook page ($z = -.380$, $p > .05$) nor are they commenting more than irregular museum visitors ($z = -.798$, $p > .05$). Therefore, the following hypothesis can be rejected: *People who visit a museum more often engage more often with the respective museum on SNSs than people who visit the museum less often.*

One further step is to find out whether the respondents have a membership with the respective museum, meaning that they are 'friends of the museum'. The data shows that 44.6 percent of the respondents are a member, whereas 55.4 percent are not a member. We can see that this finding contradicts the low visiting numbers to the museum: There are more respondents, who never or once visited the museum than people who are not a member of the museum. A plausible explanation for this result might be that the term 'membership' is misunderstood, especially since many foreigners participated in the research.

However, it was still tested whether this factor is influencing Facebook engagement: *Members of a museum engage more often with the respective museum on SNSs than non-members.* According to the assumption about museum loyalty, individuals who are members of a particular museum will have to prove their loyalty towards the museum not just by visiting the museum but also by engaging with the museum through networking sites like Facebook.

Firstly, the chi-square analysis proves that there is no significant relationship between contributing on the Facebook page of the museum and being a member of the museum, $\chi^2(4) = 167$, $p > .05$. However there is a significant difference concerning visiting the Facebook page, $\chi^2(4) = 168$, $p < .05$. This hypothesis was also tested through the Mann-Whitney U test. As in the first test, also these test results show that only visiting the Facebook website is statistically significant ($z = -1.660$, $p < .05$) with an alpha of five percent, whereas commenting or posting is statistically insignificant between members and non-members ($z = -1,279$, $p > .05$). Therefore, this hypothesis can only be confirmed for visits and not for contributions. All in all, since it can be expected that respondents do not know exactly the meaning of membership, we can only conclude that a stronger relationship to the museum leads to a higher frequency in online visits.

4.4.2. Online Involvement

Talking about the online environment, it is important to find out how much the online audience is involved in online activities in general. It seems self-evident that people, who for example engage in the Facebook page of a museum have to know how Facebook works. However, there might be a difference in the degree of understanding.

Museum 'Likes'

To 'like' the respective museum on Facebook shows the online cultural involvement and can also be seen as a form of engagement. The results show that 'liking' the museum among the online audience is very common: 87.3 percent of the respondents 'like' the museum on Facebook, whereas only 12.7 percent do not. People might be even more culturally active by 'liking' more than just the respective museum online. Indeed, most people answered that they 'like' two to five museums on Facebook (44 percent), followed by people who 'like' six to ten museums (22 percent).

However, as explained in the methodology, this finding might be the result of the sampling strategy because the people who 'like' the museum also receive its newest updates on Facebook. Furthermore, the quantity of 'likes' can be manipulated by a network effect, meaning that the number of 'likes' increases the more people 'like' the museum (Van Dijck, 2013). Thus, 'liking' the museum on Facebook turns out not to be an appropriate measurement of engagement in this study.

Still the assumption that 'liking' the museum has an effect on online engagement was tested: *People who 'like' a museum online engage more often with the respective museum on the SNS than people who do not 'like' the museum.* However, it is very likely that people 'liking' a museum on Facebook will also engage with the museum more often. According to the chi-square test, engagement and 'liking' is indeed statistically significant when we look at visiting, $\chi^2(4) = 165$, $p < .05$, but not significant when we look at contribution, $\chi^2(4) = 164$, $p > .05$. This hypothesis was tested again with the non-parametric Mann-Whitney U test. The results confirm this assumption. In detail that means that individuals 'liking' a museum are visiting the online Facebook page of the museum significantly more often ($z = -5.054$, $p < .01$) and also contribute significantly more often ($z = -2.404$, $p < .01$) vis-à-vis individuals not 'liking' the museum. Consequently, the tenth hypothesis is confirmed on both dependent variables.

Facebook Use

Whether the individuals are frequent Facebook users or not is another factor, which might influence the engagement with the museum on Facebook. Indeed, the majority of respondents use Facebook more than three times a day (40.2 percent) or two to three times a day (36.1 percent). A small number of people use Facebook rarely. Only one person answered that this is her or his first time (0.6 percent) and 1.2 percent of the respondents use Facebook less than once a week. Additionally, a good understanding of the Facebook functions might be a benefit when engaging with the museum online. As shown in Graph 4.8, almost all functions are used frequently, but mostly messages, photos, like pages and wall posts.
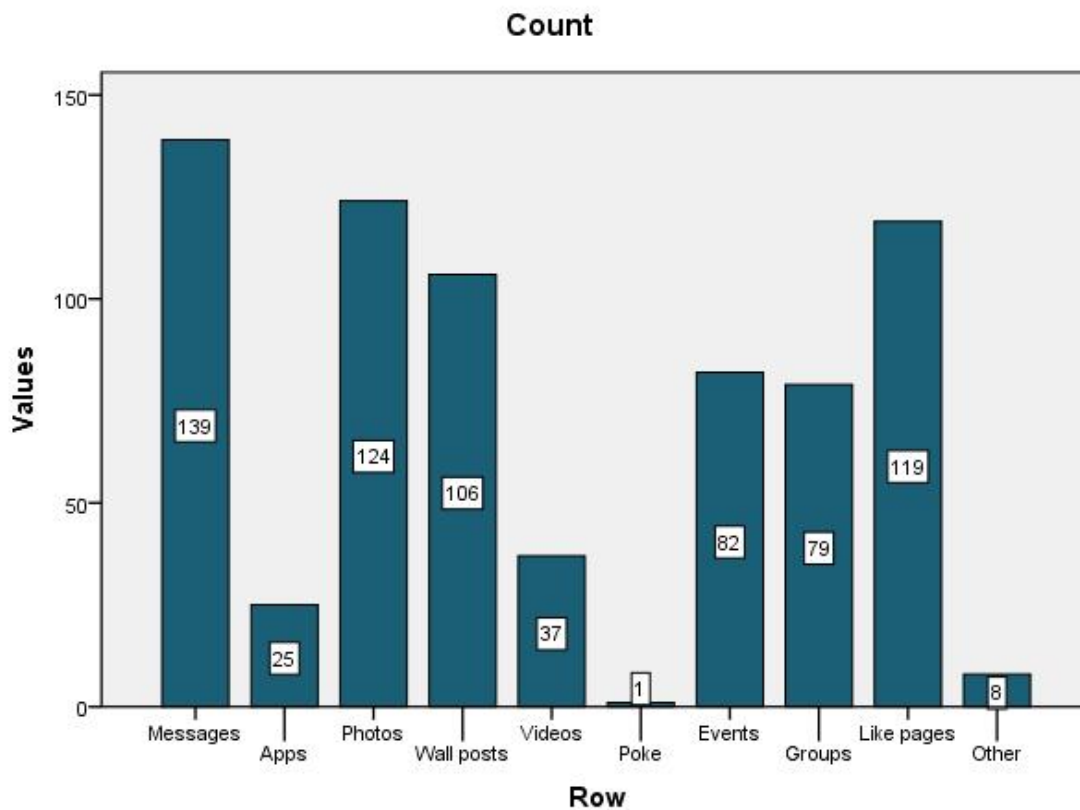
Graph 4.8: *Frequency of Facebook functions used by the respondents*

To test the last hypothesis '*people who use SNSs more frequently engage more often with museums on SNSs than people who use SNSs less frequently*' again a chi-square test was used. The results show that Facebook use is not statistically related to both, visiting, $\chi^2(24) = 169$, $p > .05$ and contribution, $\chi^2(24) = 168$, $p > .05$. In the Mann-Whitney U test, I have divided the groups in the following way: Respondents who use Facebook to a maximum of once a day are grouped together against respondents who use Facebook more often than once a day. The reason behind this choice is the distribution of the variable 'online activity on Facebook', where more than two-third of all respondents replied that they used Facebook two times a day or more. The Mann-Whitney U test shows that there is no statistical significant difference between the two groups. Henceforth, online activity on Facebook does not tell much about whether people visit museum pages on Facebook more often ($z = -.025$, $p > .05$) and about their engagement through comments or posts ($z = -1.096$, $p > .05$). This finding is also confirmed when testing the two biggest groups, '2-3 times a day' and 'more than 3 times a day', against each other. Although the mean ranks for the former group are higher, they remain statistically insignificant on both visiting ($z = -.387$, $p > .05$) and

contributing (z = -.368, p > .05). In a nutshell, there is enough evidence to reject this hypothesis.

4.4.3. Network Effect

The network effect is inherent in social media (Anderson, 2007) and a positive outcome is that if it is created, more people are inclined to join the (museum) network. The network effect can be created through WOM or eWOM (Steffes & Burgee, 2009). According to Kotler and Kotler (1998), WOM is one of the most influencing factors to decide to visit a museum. Thereby, reference groups play an important role, for example peers (Kotler & Kotler, 1998). Furthermore, through the network effect, a trend can arise, which might also influence the decisions of individuals (Kotler & Kotler). However, the findings show that WOM and the network effect are not relevant in choosing to visit the Facebook page. In Graph 4.9 we can see all reasons in more detail.

How did you find out about this museum Facebook page?
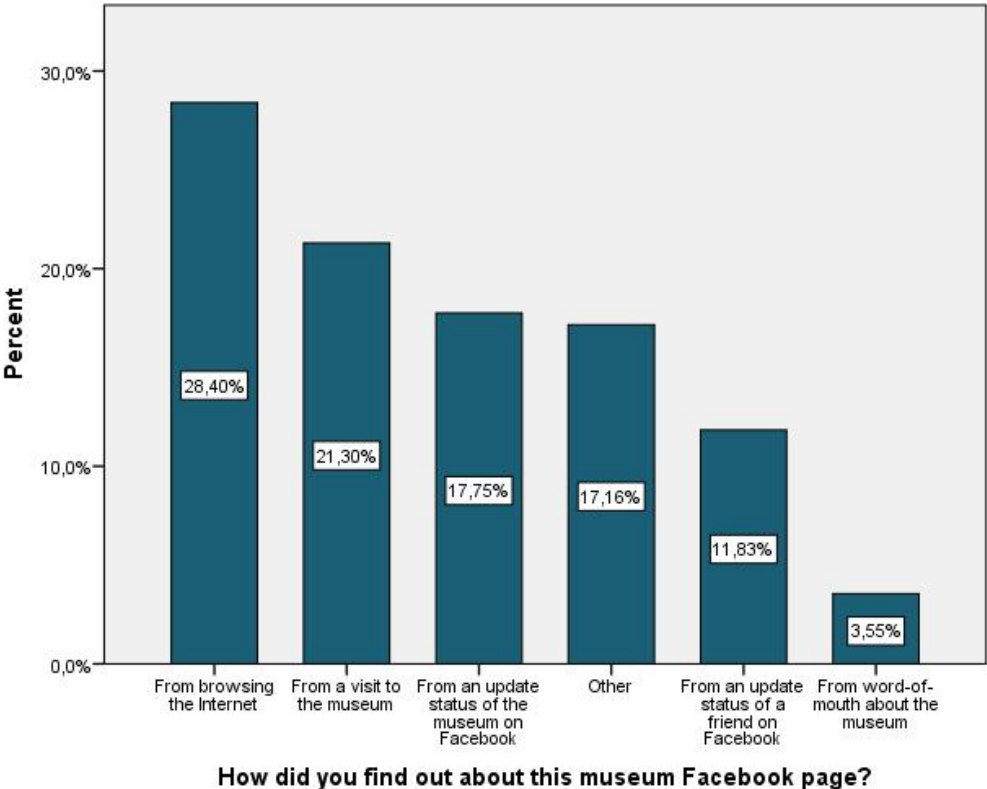
Graph 4.9: *Distribution of reasons to visit the Facebook page of the museum*

It becomes clear that most people found the Facebook page through browsing the internet (28.4 percent) and from a visit to the museum (21.3 percent). WOM about the

museum has the smallest percentage (3.6 percent). Also other relevant sources were stated with 17.2 percent. Since it is quite a high number, they are worth mentioning. The majority of the respondents added that they specifically looked for the Facebook page. A small number stated that they liked the art or the artist of the museum and specifically looked for it or that Facebook 'suggested' the page on another Facebook page. Individual, but interesting answers were: "opening", "google plus", "after buying something from the museum webshop" and "I worked as an intern in the museum".

We can see that eWOM plays an important role in finding out about the Facebook page. It can be identified by the update status on Facebook, which reaches 17.8 percent when the museum posted it and 11.8 percent when a friend on Facebook posted it. Furthermore, how much eWOM is influencing the decision of the respondents becomes clear when people would visit a museum, when it was recommended by a friend on Facebook. Thereby, 71 percent stated yes and 29 percent no.

## 4.5.   Attitudes of the Online Audience

In this following part of the analysis, the attitudes of the online audience towards the SNS Facebook are described. These attitudes show whether the online audience has actually the same perception about engagement on social media than the museum. As already stated above, we can differentiate between three forms of engagement here: 'liking', visiting and contributing. All three forms will be discussed separately led by the second sub-question: *Which assumptions are expressed in the attitudes of the online audience towards SNSs?*

4.5.1.   Attitudes towards the 'Like' Button

The 'like' button is an easy form of engagement because it is possible to get involved in the museum activities on Facebook through one click. For museums, this function is seen as useful because it can establish a first connection to the online audience and at the same time it is easily measured quantitatively. In turn, the 'like' button is also seen as superficial and not an in-depth measurement of the impact of Facebook (Van Dijck, 2013; Fletcher & Lee, 2012).

The respondents of this research were asked to place different statements for what the 'like' button is intended for on a scale from one to ten. The answer with the highest mean is that the button should be used "to learn about new exhibitions or events". This

finding conforms to previous research about social media use in museums, which shows that social media like Facebook is used to promote the museum activities. Here the perception of the museum and the online audiences converge because both believe that the 'like' button should be used for practical information. The answer with the second highest mean is "to show support for the museum". This statement represents the art-loving attitude and means that with the 'like' button people want to show their appreciation for art or the museum. However, this answer also leads to the conclusion that the online audience supports the idea that a high quantity of the 'like' button is a positive outcome for the museum (Graph 4.10).
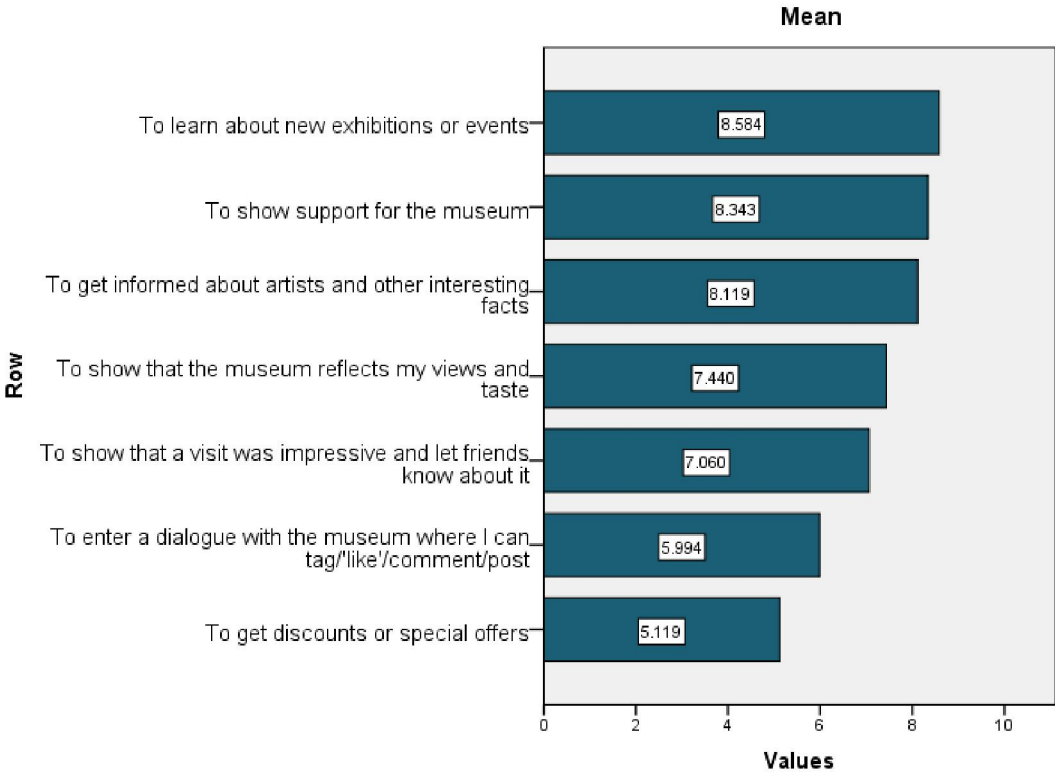
Mean

Graph 4.10: *Attitudes towards the 'like' button on Facebook*

The statement with the third highest mean shows a professional attitude, meaning that the respondents are interested in the professional knowledge of the art museum. According to Stylianou-Lambert (2009), people who perceive the museum in this way, already have integrated art in their lives or in their work. The self-exploration attitude with the statement "to show that the museum reflects my views and taste" and a social attitude with the statement "to show that a visit was impressive and let friends know about it" have still a high mean above seven, but are rather low in the hierarchy. The former means that people have a motivation to expand themselves, but it is also related to a social attitude

because they want to share this interest. Likewise, the latter means that people perceive the SNS Facebook as a place to share and communicate with others.

Entering a dialogue with the museum and get discounts or special offers are perceived as the least important when using the 'like' button. This finding shows that the 'like' button might not be an adequate tool to communicate with the museum because it is indeed superficial and does not express a qualitative engagement. Furthermore, a museum does not have the priority to provide many offers in comparison to commercial companies, thus this practical attitude might not be appropriate as well.

4.5.2. Attitudes towards the Museum Facebook Page

The next Graph 4.11 shows the attitudes towards what the museum should use Facebook for in general. In contrast to the 'like' button, Facebook in general should not be perceived as a means to measure engagement quantitatively, but it is necessary to see the activities in both, a qualitative and quantitative way (Fletcher & Lee, 2012; Etlinger, 2012). All in all, Facebook is one of the most popular social media because it allows interaction and is at the same time easy to use (Kaplan & Haenlein, 2010).
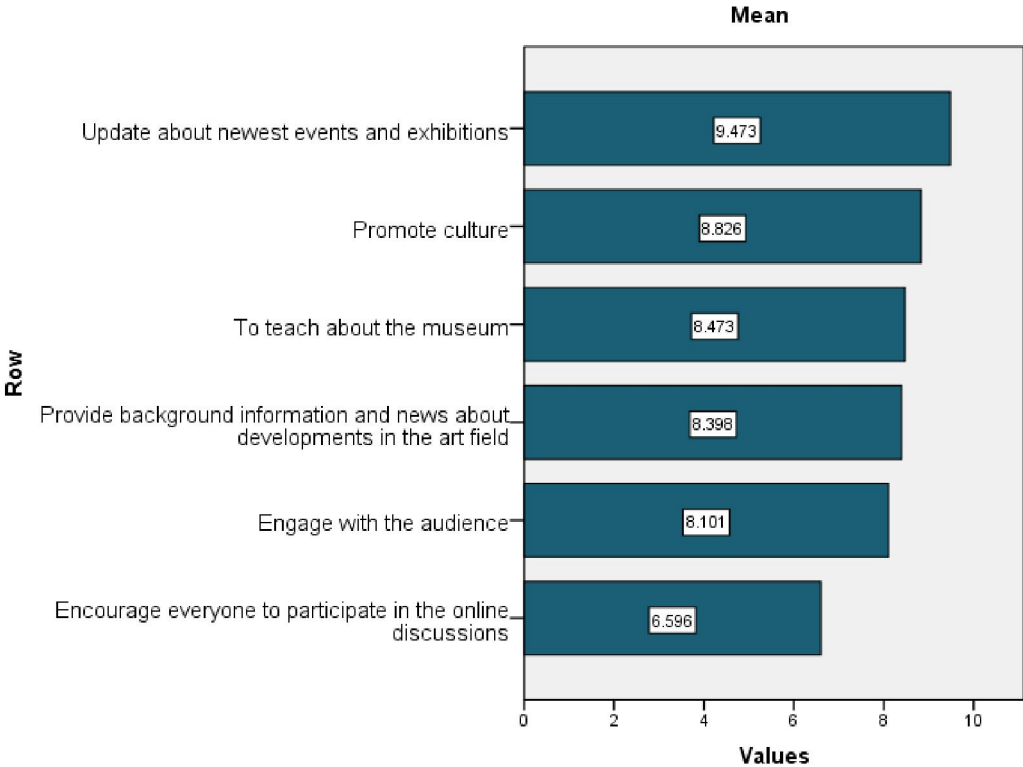
Graph 4.11: *Attitudes towards the Facebook use of the museum*

The findings show that similar to the 'like' button, the highest rated statement refers to a practical attitude, namely that the museum should use Facebook to "update about newest events and exhibitions". Also the second highest rank is again an art-loving attitude, which shows a certain passion for art (Stylianou-Lambert, 2009). The third highest rank is the learning attitude. This is an interesting finding because it shows that Facebook is in fact seen as learning environment. The next two statements reveal the professional attitude and a social attitude. These can again be compared to the results from the 'like' button. Finally, participation and dialogue are not seen as important. The statement "encourage everyone to participate in the online discussions" received a relatively low mean. Also here, we can see that the online audience least agrees that the encouragement of online discussions is an essential function of the museum.

To further investigate the attitudes of the online audience, they were asked again to rate how the museum should be presented on Facebook from one to ten. Hereby, adjectives were given, which have a different explanatory power than statements because they are more catchy and intuitive. The respondents rated "original and inspiring" as the highest and "open-minded" as the second highest adjective (Graph 4.12). This shows that the audiences have a self-exploration and social attitude towards the museum on Facebook. The adjective with the third highest mean represents a professional attitude and the fourth an educational attitude. The word, which was least ranked is "entertaining".
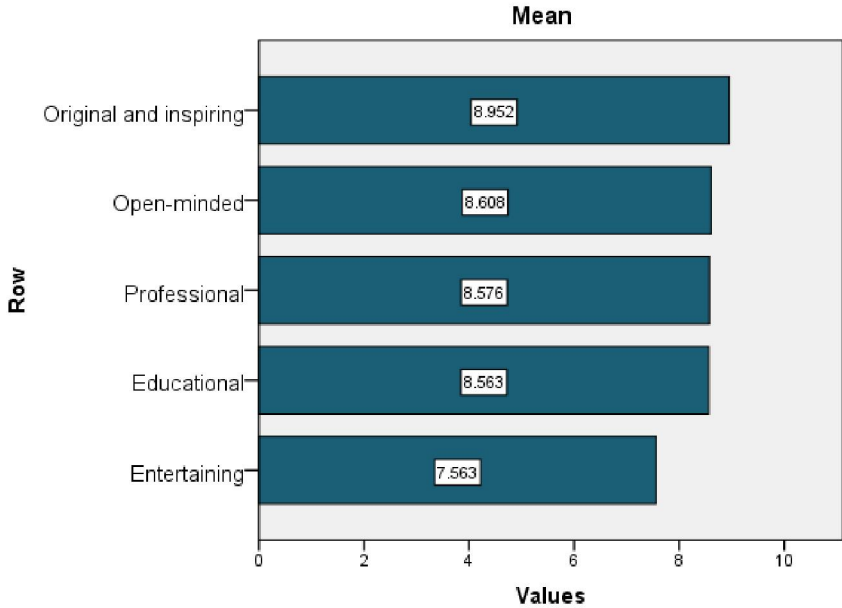
Graph 4.12: *Attitudes towards the Facebook presentation of the museum*

All in all, we can see that these findings differ from the previous ones because the respondents mostly expect to get inspired, whereas they mostly expect the museum to use Facebook for practical information. The difference between the results from this question might indeed derive from the more intuitive adjectives. A reasonable explanation for these disparities is that statements provoke people to answer in a more socially desirable way, meaning that they perceive what is already given as the best solution. However, when formulated in adjectives, people might be more intuitive and answer with their inner expectation. Lastly, it is notable that in general all statements received a relatively high average mean above five. This result might be caused by the positive statements of the question. As already stated in the methodology, the statements were taken from previous research, which found only positive results.

4.5.3. Attitudes towards Contribution

Contribution on the Facebook page is the active and qualitative form of engagement and is thus more difficult to measure and control by the museum (Fletcher & Lee, 2012; Etlinger, 2012). However, communication with others is the essence of the SNS Facebook and is thus the aim of every museum. To start in an exploratory manner, the respondents who ever commented or posted something on Facebook, were asked in an open question why they did so. This way, the individuals had the possibility to mention attitudes, which were not comprised by the survey. 58 respondents answered this question, which is 34.32 percent of the whole sample. The answers were categorized in 17 types. In Appendix D the whole list of categories and the original answers can be seen. The results can be summarized in a world cloud, which emphasizes the quantity of the categories with a bigger font size (Figure 4.13).

From 58 people, 12 answered that they want to express some kind of opinion, in relation to other comments or independently. Similarly, 12 people answered that their motivation was related to art. People either felt interested in a particular kind of art, painting or artist, they liked the art exhibited by the museum, or they wanted to make a comment about art and culture in general. Ten respondents answered that they wrote a comment or posted something out of support for the museum. The term support was mentioned independently, but also included appreciation for the museum in general.

The fourth most mentioned reason answered by seven respondents is that the topic appeared to be appealing, followed by six people, who answered that they wanted to inform

others about the content of the Facebook page or the museum. Likewise, six people answered that they commented or posted something out of a feeling to do so. One respondent for example answered that he or she "felt the connection", another stated that "it was inspiring". Less frequent reasons were to contribute for the sake of education, answered by five people and to ask a question, answered by four people. Respectively three people stated that their comment was a reaction to other comments and that they wanted to reflect on an experience in the museum, for example a visit. Only two persons answered with the reason that they want to interact, criticize something, have a sort of influence or to express appreciation for an exhibition. Finally, only one person answered that he or she wants some entertainment or to seek information or comment on an event respectively.

Figure 4.13: *World cloud including the most frequent answers for the reasons to comment or post something organized according to size*

Then, the respondents were asked to rate what they think about the comment/post function on the Facebbok page of the museum. This way, also people who never contributed could still express their opinion. Looking at Graph 4.14, we can see to which proposed statements the respondents agreed or disagreed most. The answer with the highest mean is "to express appreciation for the museum", which is an art-loving attitude. The second highest statement in the hierarchy is "to express interest in a comment/photo/video", which is a participatory attitude because it shows that the individuals want to get involved in the museum online content. The professional attitude ranks third and the social attitude receives the fourth place. A rather low rank is the practical attitude and the lowest is the

critical attitude. As already assumed, commenting or posting does not serve for mere information exchange. Moreover, these results hint at the assumption that Facebook is not perceived as an environment to be critical. This is ambiguous because in the previous result it was concluded that Facebook should be open for opinion. However, here it crystallizes that museum authority should not be undervalued.
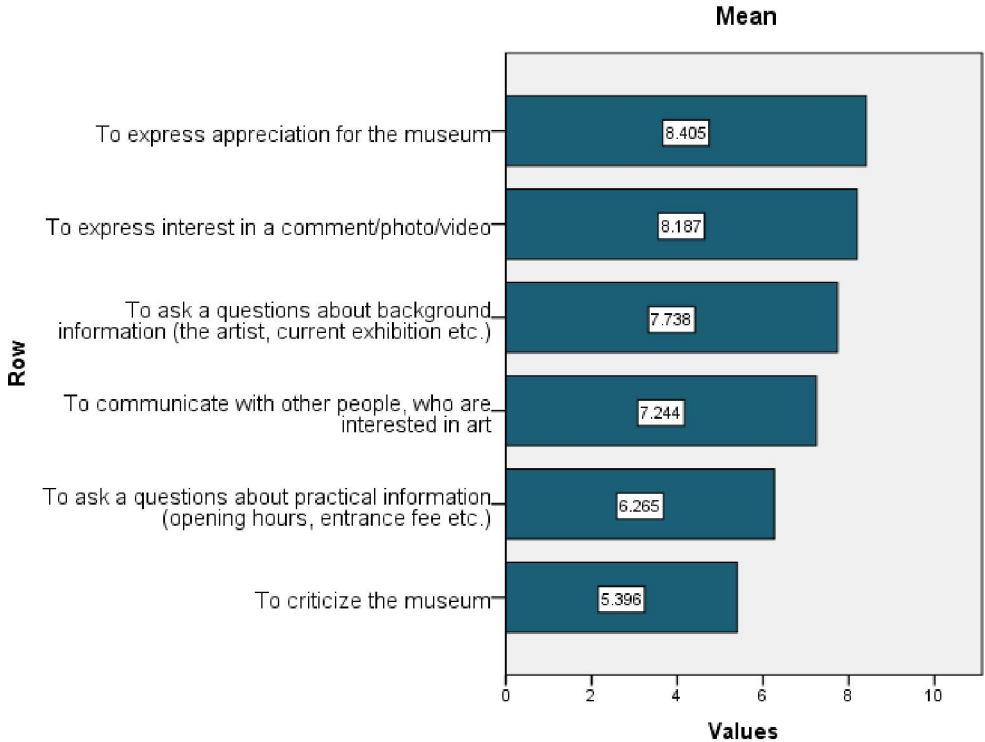
Graph 4.14: *Attitude towards commenting/posting on the Facebook page of the museum*

4.6. Conclusion and Discussion

After presenting all results of the research, a discussion is necessary to find out what these results mean. In the theory we have seen that there are many expectations for social media and its online audience. The results showed who the online audience is, how social media is used and perceived. Now, we can discuss whether SNSs, such as Facebook, as the best example for social media, is indeed fulfilling the previously assumed expectations. The results can be brought in the three organizing frames of social media as introduced by Kidd (2010): marketing, inclusivity and collaborative. In the end, we can come back to the initial research question: *To what extent do SNSs contribute to an enhanced communication between the online audience and art museums?*

4.6.1. Social Media as a Marketing Tool

In the 'marketing frame', social media belongs in first place to the marketing activity of the museum, which is the easiest way to understand social media by museums (Kidd, 2010). As Fernández-Blanco & Prieto-Rodríguez (2011) claim, also museums can be seen as economic actors, who care about growing attendance and maximizing profits. Indeed, due to the low barriers of entry, social media can be seen as a tool to attract new audiences, to create reputation and a network effect. In plain words, social media shall enhance the image of the museum and generate more demand for on-site visits to maximize revenues.

One of the essential questions hereby is: Do the museums really reach new audiences? To find this out most hypotheses in this research were aiming to test whether the online audience resembles the regular museum visitor. We have seen that few hypotheses confirmed this assumption (see Table E.1, Appendix E). The largest age group, for example, is between 25 and 54 years old, a result also found in museum audience studies (Schuster, 1991). These medium aged or older people also engage in the Facebook page of the museum more often than younger ones. Furthermore, there are more females in the sample, although they did not engage significantly more than males.

In fact, from some variables it became clear that museums do indeed reach a new audience different than the museum visitor. For instance, most people in the sample are employed and the significance test showed that they also visit museum Facebook pages more often than other individuals. Since it was assumed that self-employed and employed people have less time to visit a museum (Frey & Meier, 2006), it might be seen as a success to reach this target group online. Also the lower educated people can be seen as a new audience. Although most people in the sample have a university degree, the people without a degree visit the Facebook page more often. Another important finding is that the majority of the respondents have a low income. However, income does not play an important role in engaging in the social media activity of the museum.

An interesting conclusion from this finding is that the online audience does not belong to a higher social class, when we consider education and income. The theory proposed by Bourdieu (1986) therefore holds not true for the online environment of a museum. However, it turned out that cultural capital in form of cultural experiences still plays an important role. The majority of the online audience has a high cultural experience and those people also visit the SNS of the museum significantly more often. Hereby, in

accordance with Bourdieu's (1986) theory, the use of social media requires certain cultural capital.

The results about the geographic characteristics were rather surprising. Although it was assumed that most online audiences would be Dutch, the majority came from abroad, mostly from Central or South America. Consequently, the museums achieve to reach a new audience. Tourists, according to Kotler & Kotler (1998), entail different behaviors than community visitors: they tend to visit the museum only once, have high expectations and are attracted to blockbuster exhibitions. The high amount of foreigners could be linked to the participation of the Van Gogh Museum in the research because it is the museum with the most 'likes' and internationally oriented. Furthermore, the Van Gogh museum can be seen as a 'blockbuster' because it represents a very famous Dutch artist known internationally. His popularity thus tourists attracts tourists to visit the museum.

Although these insights already answer whether a new audience can be reached, they do not matter if these people visit the museum frequently anyway. This assumption cannot be confirmed though. The results show that most respondents have not visited the museum or visited only once. This is a valuable finding, which means that the individuals on the Facebook pages are not the same as the ones visiting the museum. Also the hypothesis that frequent visitors engage more often in the Facebook page of the museum could be rejected. A contradictory finding is that almost half of the people are a member of the museum. This might show that 'membership' might be interpreted differently by different people, especially since many foreigners participated in this research. However, 'membership' could be associated with a strong relationship anyways and shows that a strong relationship leads to significantly more visits to the museum Facebook page.

Lastly, social media is not only important to reach new audiences, but also to create a network effect. Through a network effect the more people join, the more are attracted to join (Anderson, 2007). A network effect is created through WOM or eWOM when it comes to the online environment (Steffes & Burgee, 2009). However, WOM seems to be not important among the online audience. Thus, a network effect is not created. This seems reasonable since Facebook is a complex platform and comprises various individual profiles, as well as pages from various firms and other organizations. Thereby, looking for a museum Facebook profile seems very specific. However, this is not necessarily negative. Since the Internet provides many possibilities, it can offer niche products and markets and create a

long tail (Anderson, 2004). For museums this means that although WOM might not be a relevant factor, through "browsing the Internet", which is the most answered option, various people can find the museum Facebook page online and create a community of interest. This applies especially for museums, which represent one specific artist, for example Escher, Rembrandt or Van Gogh.

4.6.2. Social Media Creates a Democratic Museum

The use of social media as mere marketing tool is criticized by many authors (Russo et al., 2008; Schick and Damkjær, 2010; Fletcher & Lee, 2012). More generally, McLean (1997) states that museum marketing should not be associated with mere increase in visitor numbers. Instead, marketing should follow the mission of the museum (McLean, 1997). This holds true especially for social media because social media cannot be merely measured in numbers, but needs qualitative assessment as well (Fletcher & Lee, 2012; Etlinger, 2012). In fact, this can be achieved by creating a community of interest as described in the inclusivity frame by Kidd (2010). Thereby, the museum needs to be open and democratic towards conversations with their audience.

The simplest way to step in the museum online community is the 'like' button of the museum. Indeed, we have seen that this function is used by the majority of the respondents. Furthermore, people who 'like' the museum online also visit and contribute significantly more. Despite the success of this function, it is also seen as superficial because it can calculate quantity, but does not say anything about the quality of the engagement. Due to the lack of quality assessment, this form of engagement can also not be considered as more democratic. In line with Van Dijck's (2013) thinking, social media platforms should not be seen as 'automated systems'. For example, tourists might like the museum because they visited it one time, but it does not mean that they want to belong to a community of the museum.

Further, this research distinguished between two ways of engaging in the online platform of museums. Whereas 'visiting' the museum on a SNS is a rather passive form, 'contribution' means that people can be actively involved. Since the former is more common, meaning that the majority of people visited the Facebook page more than 10 times, museums should consider enhancing communication in this way and starting to build a community focusing on these people.

If museums want to respond to that, they need to get rid of the authoritative image from the past, as proposed by many scholars (Hooper-Greenhill, 2000; Russo et al., 2008; Kidd, 2010; McLean, 1997). However, most museums are still far from using social media in a democratic way. We have seen that the majority of museums use social media for promotional activities as in the marketing frame. They post past and upcoming events and information about other museum activities. There is also still little visibility for individual posts on the Facebook pages. Instead, the majority of the Facebook content is dominated by the museums, which shows that interaction is still one-way. Moreover, in the methodology we have seen that many museums explicitly do not wish to post information of third parties on their Facebook page. These observations indicate that the transmission model of communication (Hooper-Greenhill, 2000) is not abolished yet in the online environment because the museum is considered to be the only information provider of a grand narrative. We can conclude that many museums are still authoritarian and self-promoting (Schick and Damkjær, 2010).

Some museums strive for interaction with the audience by posting interactive content, by allowing all kinds of interaction and encouraging people to interact. This way of communication promotes the constructivist learning approach, where a dialogue is created between the museum and the audience (Kidd, 2010; Hooper-Greenhill, 2010; Russo et al., 2008). If social media is used successfully, museums can strengthen authority and extend authenticity by letting the online audiences participate in the debate (Russo et al., 2008). This is especially useful when many foreigners are attracted to the online debates because this means that the audience is differentiated and the museum is obliged to respond to respective needs (Hooper-Greenhill, 2000).

4.6.3. Social Media Gives a Voice to the Public

Last, but not least, we should have a look at what the public can actually contribute to social media. Social media can be used for content creation as proposed by the 'collaborative frame' by Kidd (2010). Not only the museum can strive for innovative ways to create museum content online, but also the online audience should have a voice in the content of a museum. This way, social media can exploit the 'power of the crowd' for the museum's and the audience's benefit (Anderson, 2007). It can be used to collaborate more with the

audience as proposed by many scholars (Trant, 2009; Hooper-Greenhill, 2000; Russo et al., 2008).

In order to be able to interact, knowledge of the Internet platform is needed, a Digital Cultural Communication (Russo & Watkins, 2007). Although this seems self-evident, it is still important to be pointed out because if social media of museums would attract people, who are not familiar with the new technology, for example older people, the museums would need to find ways how to deal with this situation. Whether this is a basis for the respondents of the surveys, was tested how much they use Facebook a day. Indeed, most respondents used Facebook more than 3 times a day. Likewise, most functions were familiar to the online audience. Hence, the majority of the online audience is able to understand Digital Cultural Communication. However, the people who use Facebook more often do not significantly engage more often in SNSs of museums.

Do social media create interaction? There is only a small group of people who see the online platform of a museum as a space for open communication, a finding already assumed by Kidd (2010). We could see in the results that the majority has never commented or posted anything on Facebook. Whether a large active community is the aim of a museum might be questioned because a museum might be very specific. In the results we have seen that only some groups of people contribute to online discussions significantly more. First of all, tourists are contributing more than nationals. This result might be explained by different cultural and ethnic factors (Kotler & Kotler, 1998). For instance might American people be more acquainted with saying an opinion in the public or they might be more familiar with social media. Another result is that middle aged and older people engage more often than younger people. This might show that older people are more self-confident about open discussions.

It is even more interesting to look at the reasons why people participate and what they think about engagement on SNSs of museums. Brandtzæg and Heim (2009) found out that the main aim in using social media is to meet new people, connect with friends and be social. The results from this research add to these findings. We have seen that the most common reason to comment or post something on the Facebook page of the museum is that people want to say their opinion. They also see this platform as an opportunity to talk about art or another interesting topic. This shows the desire of people to communicate with the museum and others.

A more ambiguous result is that interaction is not the priority of the online audience when we look at the attitudes related to the Facebook appearance of the museum or the 'like' button. Although many people expressed an art-loving attitude, for most people engagement with the museum was associated with practical information, which means that people expected to get informed by the museum through Facebook. One explanation for this finding might be that the respondents gave a socially desirable answer. Another might be that people do not know how a purely interactive SNS might work and thus gave an answer they already know. All in all, this shows that interaction is still poorly developed in the online environment.

In the literature review we have seen that the museum as gate keeper is not necessarily a negative function because it reduces uncertainty of risks (Arora & Vermeylen, 2012). However, it can still be debatable if the authoritative role is still necessary in the online environment at all. Instead, online platforms open the possibility to exchange opinions about art and culture and the power of the crowd could give value to art (Arora & Vermeylen, 2012). This research showed that the online audience is not ready yet to be critical towards the museum or it perceives it as not necessary. We have seen that a critical attitude gained the least high rank when asking the respondents about contribution on Facebook. Thus, museum authority is still dominant in the online environment.

To put everything in a nutshell and answer the research question in plain words, social media users demand a museum that maintains its one-to-many communication model although SNSs, like Facebook, offer the possibility of a many-to-many communication model. Neither inclusive nor collaborative frames are desirable from the demand side. This can further be confirmed from the supply side since most museums were reluctant to collaborate in this research project and their cultural content on the Facebook page was mostly promotional and non-interactive. Since attempts were made by a few museums to be collaborative and interactive, a change in the future depends on the willingness and motivation of the online audience to engage in these activities. For now, this demand could not be observed.

CHAPTER 5: CONCLUSION

The starting point of this thesis was to extend existing research about social media in the museum sector, particularly in art museums. A research on this topic is interesting because art museums inherent an authoritative image, which seems to contradict the open and democratic nature of social media. Although the majority of museums apply social media already, it remains unclear whether they do so effectively. In contrast to previous research addressing the museum side, this thesis focused on the users of social media. Through a survey research, the aim was to find out who those online audiences are, why they use social media and how they perceive museums' social media use. From these findings it could be concluded whether the pre-existing expectations about social media and its users meet reality. Here, a cultural economic approach is useful to find out whether social media is actually economically valuable.

5.1. Reflection

The expectations of this research can be described from three points of view: economic, social and cultural. From an economic point of view, the research provides insights into the question whether social media is indeed an economically effective tool to be used in museum marketing. The results show that partly a new audience could be reached. Particularly individuals with a low education and low income might be an important target group for the museums because they differ from the regular museum visitor. Furthermore, social media might not achieve a network effect as expected, but it is useful to attract audiences with a specialized taste. These individuals can for example like a specific artist and are not limited to personal or geographic borders. Whether these individuals would increase attendance numbers and finally contribute to an increase in revenues is still questionable.

The social aspect of social media in art museums is still unclear. The aim of museums is to connect individuals to each other by building a community. The museums seemed to be aware which target group they want to attract. Most of the museums were nationally oriented, whereas some were focusing on foreigners as well. We have seen that most individuals are repetitive online visitors, which means that the museums seem to achieve to build an online community. Due to the high amount of foreigners in the sample, the people in the online community seemed to be differentiated as well. Thus, the museum has to

develop a balanced strategy including the diverging needs of its online audience. A more critical outcome of this research is that besides some exceptions, most museums seem to impose an authoritative image online, which means that even in the social media environment the democratizing effect is not completely achieved yet.

Lastly, the research can be seen from a cultural point of view, where the museum should enhance dialogue and content creation. Although we could see a clear motivation for freedom of opinion and communication with others, the majority of people do not contribute to the online discussions. The question then is not whether the museum should be more democratic, but whether the online audiences want to be involved in the online discussions. In fact, the outcome is that the priority of the people was to get informed by the museum, whereas open criticism about the museum plays only a minor role. In the end, the audience is not yet ready to be critical in an open online environment like social media and subsequently the authority of museums prevails.

5.2. Limitations

Due to the exploratory approach and the time and space restrictions of this research, various limitations were experienced. First of all, in comparison to the large population of online audiences of museums' social media, the sample size is relatively small. The reason is that collecting surveys was limited by the extent to which the museums wanted to cooperate and post (or allowed me to post) the survey online. The research was thus restricted to the museums willing to collaborate, which in itself may contain selection bias. Hence, the selection of museums might not be as numerous and homogenous as could be possible.

Another limitation of this research is that it was limited to art museums in the Netherlands. In relation to that, the survey was written in English, but distributed among Dutch Facebook pages, which might have caused a lower response. Furthermore, the research was limited to one form of social media only. Although Facebook is considered to be an appropriate choice because of its popularity, other SNSs might have resulted in different conclusions. More generally, other forms of social media different than SNSs might have required a different research design in the first place. Lastly, the SNS Facebook has many similarities with a website of a museum. In this research, a comparison between the two online mediums was not possible. All in all, due to these restrictions, the results of this

study should only cautiously be generalized to individual SNS users involved in all other Dutch art museums, or even other countries or types of museums.

5.3. Suggestions for Further Research

This study was one of the first attempts to grasp the meaning of social media among museum online audiences. Some suggestions can be made for further research. Firstly, as already mentioned above, the research was limited to the cooperation of museums and a time frame. Further research should differentiate between specific forms of art museums, for example nationally and internationally oriented museums. Thereby, a case study could be made for one specific museum, but over a longer period of time in order to collect enough survey responses. A longitudinal study with repetitive surveying would be the next necessary step in order to be able to grasp the fast technological changes of social media.

Furthermore, the exploratory nature of this research would allow for an interview research, where the online audience can be asked in-depth about specific factors for social media use, for example motivations, behaviors or personality. Finally, also the online audience could be differentiated. Whereas this research focused on all people using Facebook pages of museums, further research could find what the differences are between different groups, for example people from a higher and people from a lower social class. Also other stakeholders which can be reached through social media could be analyzed, for example donors or sponsors.

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APPENDIX A: ONLINE SURVEY

The results from this questionnaire will be used by Olga Nierenberg as part of her master thesis within the program Cultural Economics and Entrepreneurship at the Erasmus University in Rotterdam. The aim of the thesis is to find out the characteristics and the behavior of individuals using social media of museums (the questionnaire should not be filled out by museum staff). When completing the questionnaire, you are giving consent to use the results for the master thesis. Participation is anonymous and you can quit the questionnaire at any time. The survey is confidential and the results will be used for scientific research only. Thank you for your participation!

1. **How old are you?**

□ 13-16 □ 18-24 □ 25-34 □ 35-44 □ 45-54 □ 55-64 □ 65 or older

2. **Are you male or female?**

□ male □ female

3. **In which country do you currently live?**

□ the Netherlands □ Germany □ Belgium □ United Kingdom □ Other, specify___

4. **What is your current employment status?**

□ Employed □ Self-employed □ Retired □ Housewife □ Student □ Unemployed

5. **What is the highest level of school you have completed or the highest degree you have received?**

□ Less than high school degree

□ High school degree or equivalent

□ Some college but no degree

□ Associate degree (HBO)

□ Bachelor degree

□ Master degree

□ PhD degree

6. **What is your gross annual income?**

□ Less than €20.000

□ €20.000 - €29.999

□ €30.000 - €49.999

□ €50.000 - €69.999

□ €70.000 - €89.999

□ €90.000 - €149.999

□ More than €150.000

7. **Are you a member of the museum of this Facebook page (vrienden van het museum)?**

□ Yes □ No

8. **How often have you visited the museum last year?**

□ Never

□ Once

□ 2-3 times

□ 4-5 times

□ More than 5 times

9. **How often have you visited other cultural events/institutions last year (opera, theater, exhibition, dance performance etc.)?**

□ Never

□ Once

□ 2-5 times

□ 6-10 times

□ More than 10 times

10. **Would you be more likely to visit the museum if a friend recommended it on Facebook?**

□ Yes □ No

11. How often are you online on Facebook?

□ This is my first time

□ Less than once a week

□ Once a week

□ 2-3 times a week

□ One a day

□ 2-3 times a day

□ More than 3 times a day

12. Which Facebook functions do you use on a regular basis (multiple answers possible)?

□ Messages □ Apps □ Photos □ Wall posts □ Videos □ Poke □ Events □ Groups
□ Like pages □ Other, specify___

13. Do you 'like' this museum on Facebook?

□ Yes □ No

14. What do you think is the 'like' button of the museum Facebook page intended for?

Please rank from 1 (totally disagree) to 10 (totally agree).

	1	2	3	4	5	6	7	8	9	10
To learn about new exhibitions or events										
T get discounts or special offers										
To get informed about artists and other interesting facts										
To show that a visit was impressive and let friends know about it										
To enter a dialogue with the museums where I can tag/'like'/comment/post										
To show support for the museum										

To show that the museum reflects my views and taste										

15. About how many museums do you currently 'like' on Facebook?

□ None

□ I 'like' 1

□ I 'like' 2-5

□ I 'like' 6-10

□ I 'like' more than 10

16. How often have you visited this museum on Facebook?

□ This is my first time

□ Once before

□ 2-5 times

□ 6-10 times

□ More than 10 times

17. How did you find out about this museum Facebook page?

□ From an update status of the museum on Facebook

□ From an update status of a friend on Facebook

□ From word-of-mouth about the museum

□ From browsing the internet

□ From a visit to the museum

□ Other, specify___

18. In your opinion, what should the museum use Facebook for?

Please rank from 1 (totally disagree) to 10 (totally agree).

	1	2	3	4	5	6	7	8	9	10
Update about newest events and exhibitions										
Provide background information and										

news about developments in the art field										
Engage with the audience										
Encourage everyone to participate in the online discussions										
To teach about the museum										
Promote culture										

19. How should the museum present itself on Facebook?

Please rank from 1 (totally disagree) to 10 (totally agree).

	1	2	3	4	5	6	7	8	9	10
Entertaining										
Professional										
Open-minded										
Educational										
Original and inspiring										

20. How often did you write comments/post something on the Facebook page of this museum?

□ Never

□ Once

□ 2-5 times

□ 6-10 times

□ More than 10 times

21. If you ever commented or posted something, why did you choose to do so?

_____

22. What should the comment/post function on the Facebook page of the museum be used for?

Please rank from 1 (totally disagree) to 10 (totally agree).

	1	2	3	4	5	6	7	8	9	10
To ask a question about practical information (opening hours, entrance fee etc.)										
To ask a question about background information (the artist, current exhibition etc.)										
To communicate with other people who are interested in art										
To express interest in a comment/photo/video										
To criticize the museum										
To express appreciation for the museum										

APPENDIX B: VARIABLES

Table B.1: *Description of variables included in the online survey*

Variable	Question/Statement	Scale
Dependent		
Facebook visit	How often have you visited this museum on Facebook?	Categorical
Facebook contribution	How often did you write comments/post something on the Facebook page of this museum?	Categorical
Demographic		
Age	How old are you?	Categorical
Gender	Are you male or female?	Dichotomous
Employment status	What is your current employment status?	Categorical
Education	What is the highest level of school you have completed or the highest degree you have received?	Categorical
Income	What is your gross annual income?	Categorical
Geographic		
Place of residence	In which country do you currently live?	Categorical
Behavioral		
Loyalty status	Are you a member of the museum of this Facebook page (vrienden van het museum)?	Dichotomous
Museum visit	How often have you visited the museum last year?	Categorical
Like status	Do you 'like' this museum on Facebook? About how many museums do you currently 'like' on Facebook?	Dichotomous Categorical
Cultural experience	How often have you visited other cultural events/institutions last year (opera, theater, exhibition, dance performance etc.)?	Categorical
Facebook use	How often are you online on Facebook? Which Facebook functions do you use on a regular basis (multiple answers possible)?	Categorical Categorical
Network effect	Would you be more likely to visit the museum if a friend recommended it on Facebook? How did you find out about this museum Facebook page?	Dichotomous Categorical
Attitudes		
Open	If you ever commented or posted something, why did you choose to do so?	Open
Practical	To learn about new exhibitions or events To get discounts or special offers Update about newest events and exhibitions To ask a question about practical information (opening hours, entrance fee etc.)	Continuous

Professional	To get informed about artists and other interesting facts Provide background information and news about developments in the art field Professional To ask a question about background information (the artist, current exhibition etc.)	Continuous
Social	To show that a visit was impressive and let friends know about it Engage with the audience To communicate with other people who are interested in art Open-minded	Continuous
Learning	To teach about the museum Educational	Continuous
Critical	To criticize the museum	Continuous
Participatory	To enter a dialogue with the museums where I can tag/'like'/comment/post Encourage everyone to participate in the online discussions Entertaining To express interest in a comment/photo/video	Continuous
Self-exploration	To show that the museum reflects my views and taste Original and inspiring	Continuous
Art loving	To show support for the museum Promote culture To express appreciation for the museum	Continuous

APPENDIX C: LIST OF MUSEUMS

Table C.1: *Detailed description of the participants of this research, including date, number of 'likes', place and form of participation*

Museum Name	City	Facebook 'likes' (April 22, 2014)	Museum-Post	Self-Post	Date
Centraal Museum	Utrecht	9.933	X		May 8, 2014
Cobra Museum for Modern Art	Amstelveen	6.192	X		May 6, 2014
Dordrechts Museum	Dordrecht	2.017		X	April 29, 2014
Escher in het Paleis	The Hague	4.765	X		April 29, 2014
Fries Museum	Leeuwarden	6.246	X		May 12, 2014
Gemeentemuseum	The Hague	17.193		X	May 8, 2014
Groninger Museum	Groningen	7.183	X		May 9, 2014
Museum Beelden aan Zee	Scheveningen	3.237		X	April 29, 2014
Museum for Contemporary Aboriginal Art (AAMU)	Utrecht	2.002		X	April 29, 2014
Museum Het Rembrandthuis	Amsterdam	2.773		X	May 7, 2014
Museum Willet-Holthuysen	Amsterdam	1.004		X	May 8, 2014
Stedelijk Museum	Schiedam	2.519	X		May 8, 2014
Van Gogh Museum	Amsterdam	279.203	X		May 16, 2014

Appendix D: Open Question Answers

1. **Opinion**

- To encourage the museum to continue a particular action; to show agreement on a frame of thought. To express my feelings, opinions...
- I felt I had an opinion on the subject matter
- Because I had something interesting to say both to the museum staff and other members of the public who like the museum
- to show my opinion about the post
- Show agreement/disagreement with page or others' comments. To add a differing point of view.
- In most cases I decided to comment on a post published by the museum because I liked the paintings that are exhibited by the museum. Also because I want to give my opinion on issues raised by the museum. Finally I compliment the museum because of the activities that it promotes to the public and especially those that are made for children (they are the most interesting ...).
- To give a different point of view to other Facebook users
- To tell my opinion or react to other comments.
- Because the post was raising my interest, and I had something to say on the topic
- believed, I could contribute to the discussion
- To entertain, to give my two cents and keep a dialogue alive.
- because I liked the post and wanted to give my reaction

2. **Art**

- The painting so resonated with me I wanted to let the staff know their efforts are hugely appreciated.
- because of a particular regard for the artwork mentioned/desire to be at an event that was publicized.
- I like the interaction and I am excited about the art works.
- Inspired by the artwork or the artist
- for the art
- I love Van Gogh

- I like it, because I love Vincent van Gogh, Fine Arts, Amsterdam, van Gogh Museum too. I like creativity and education and so on. I spent in Amsterdam wonderful days. And with Vincent van Gogh quite a lot of special "experience". He influenced me.
- In most cases I decided to comment on a post published by the museum because I liked the paintings that are exhibited by the museum. Also because I want to give my opinion on issues raised by the museum. Finally I compliment the museum because of the activities that it promotes to the public and especially those that are made for children (they are the most interesting ...).
- Usually about paintings I recognize
- To express my views on art & culture
- To inform a friend or relative of a specific painting that we might both like or to point them in the direction of a specific work of art
- I've seen the art work before, looking forward to seeing it when in Amsterdam or commenting on the scope of the work of the artist

3. Support

- The painting so resonated with me I wanted to let the staff know their efforts are hugely appreciated.
- To encourage the museum to continue a particular action; to show agreement on a frame of thought. To express my feelings, opinions...
- I don't use the facebook page the way someone in Europe might - we live on the other side of the world, but I 'like' it to support the museum, and promote to other friends who might be travelling. I might comment if I knew someone was interested in something that was being promoted by the page.
- to show my appreciation
- In most cases I decided to comment on a post published by the museum because I liked the paintings that are exhibited by the museum. Also because I want to give my opinion on issues raised by the museum. Finally I compliment the museum because of the activities that it promotes to the public and especially those that are made for children (they are the most interesting ...).
- Because I loved a post, an exhibition, or just the museum in general
- Because it is one of my favourite museums

- I that this is the best Museum of a painter I've ever visited
- Support
- To show support

4. Topic

- Topic was of interest to me
- Because I am passionate about the content
- because I m particularly interesting in that subject
- porque el tema me interesó, porque queria saber sobre algo que me interesó (because the subject interested me, because I wanted to know something that interested me [own translation])
- Because the post was raising my interest, and I had something to say on the topic
- Interesting post
- Interesting subject or a question

5. Inform

- I don't use the facebook page the way someone in Europe might - we live on the other side of the world, but I 'like' it to support the museum, and promote to other friends who might be travelling. I might comment if I knew someone was interested in something that was being promoted by the page.
- To inform a friend or relative of a specific painting that we might both like or to point them in the direction of a specific work of art
- Om te vertellen dat museum aanrader is (to tell that the museum is recommendable [own translation])
- to inform other friends
- To inform others
- I enjoyed the visit and wanted to tell my friends.

6. Feeling

- Only if I felt strongly about it and wanted to share.
- in desire to feel myself inside of the atmosphere of museum.
- I felt the connection

- It was inspiring. It was transmitting the idea of the day. It was the greeting of a new day.
- Porque me pareció importante (because it seemed important [own translation])
- i was tempted to do so

7. Education (5 answers)
- This to rich the culture and know (to enrich culture and to learn [own interpretation])
- I like it, because I love Vincent van Gogh, Fine Arts, Amsterdam, van Gogh Museum too. I like creativity and education and so on. I spent in Amsterdam wonderful days. And with Vincent van Gogh quite a lot of special "experience". He influenced me.
- commented for teachers and pupils (school)
- porque el tema me interesó, porque queria saber sobre algo que me interesó (because the subject interested me, because I wanted to know something that interested me [own translation])
- to learn

8. Question
- To ask a question!
- I had a question which needed clarifying in relation to a message they posted
- I had a question
- Interesting subject or a question

9. Reaction
- To indicate that I would participate in this study.
- Because I loved a post, an exhibition, or just the museum in general
- To tell my opinion or react to other comments.

10. Experience
- In order to share an experience related to the museum
- I like it, because I love Vincent van Gogh, Fine Arts, Amsterdam, van Gogh Museum too. I like creativity and education and so on. I spent in Amsterdam wonderful days. And with Vincent van Gogh quite a lot of special "experience". He influenced me.

- I enjoyed the visit and wanted to tell my friends.

11. Criticism

- If I really liked the exhibition or If I found some misleading information
- Omdat ik genoeg kreeg van al die misplaatste 'stimulerende'' berichten: "Kom met je vrienden", "Kom ook eten" , Kom met je kinderen" De fb-pagina is te veel op promotie gericht. (Because I got tired of all those misplaced 'stimulating' messages: "Come with your friends," "Come and eat," Come with your children "The fb page is too focused on promotion. [own translation])

12. Influence

- Would like to take influence.
- This to rich the culture and know (to enrich culture and to learn [own interpretation])

13. Interaction

- I like the interaction and I am excited about the art works.
- To entertain, to give my two cents and keep a dialogue alive.

14. Exhibition

- Because I loved a post, an exhibition, or just the museum in general
- If I really liked the exhibition or If I found some misleading information

15. Entertain

- To entertain, to give my two cents and keep a dialogue alive.

16. Information

- to get some information about the museum

17. Event

- because of a particular regard for the artwork mentioned/desire to be at an event that was publicized.

APPENDIX E: SUMMARY OF TEST RESULTS

Table E.1: *Mann-Whitney U test results on determinants of SNSs engagement with museums.*

N°	Hypotheses	Group 1 (n)[4]	Group 2 (n)	Mean rank group 1	Mean rank group 2	z-score	p-value (one-tailed)	Result[5]
1	Younger people engage with museums on SNSs more often than older people.	Age 18-34 (54)	Age 35 – (114)	65.05[6]	94.62	-3.79	<.001	X
				64.19[7]	94.12	-4.456	<.001	X
		Age 18-34 (55)	Age 55- (41)	41.05	58.49	-3.128	0.001	X
				42.76	54.90	-2.987	0.002	X
		Age 18- 24 (20)	Age 55- 64 (28)	19.55	28.04	-2.165	0.015	X
				20.5	27.36	-2.088	0.019	X
2	Females engage with museums on SNSs more often than males.	Female (125)	Male (42)	85.5	81.49	-0.477	0.317	-
				85.78	78.70	-0.327	0.164	-
3	(Self-) employed people engage with museums on SNSs more often than people with another employment status.	(Self-) employed (104)	Other statuses (65)	90.29	76.53	-1.832	0.034	XX
				88.31	78.47	-1.528	0.064	-
4	Higher educated people engage with museums on SNSs more often than lower educated people.	University degree inc. HBO (137)	No university degree (32)	82.06	97.58	-1.663	0.048	X
				85.04	82.2	-0.355	0.361	-
5	People with a high income engage with museums on SNSs more often than people with a low income.	Income 30,000 – (70)	Income 0 – 29,999 (90)	84.27	77.57	-0.934	0.175	-
				79.11	81.58	-0.4	0.345	-
6	Local people engage with museums on	Netherlands (70)	Others (99)	73.09	93.42	-2.741	0.003	X
				73.11	92.64	-3.07	0.001	X

[4] Number of cases can vary between the two dependent variables. However, the difference is usually one to two respondents less on 'comment' variable. The number of cases is taken from the 'visit' dependent variable
[5] One line (red) indicates that the result is insignificant and the hypothesis is rejected. Two crosses (green) stands for confirmation of the hypothesis with an alpha = 0.05. One cross (red) means that the hypothesis is rejected, but the result is significant. This means that the result is in the other direction.
[6] The first row refers to 'visits'
[7] The second row refers to 'contribution'

	SNSs more often than tourists.							(red)
7	People with more cultural experiences engage more often with museums on SNSs than people with less cultural experiences.	Visit cultural events or museums 6 time and more last year (102)	Visiting cultural events or museums less than 6 times last year (67)	90.58	76.5	-1.885	0.03	XX (green)
				83.06	86.72	-0.569	0.285	- (red)
8	People who visit a museum more often engage more often with the respective museum on SNSs than people who visit the museum less often.	Visited museum more than one time last year (116)	Visited museum never or once last year (53)	82.94	85.94	-0.38	0.352	- (red)
				80.81	86.2	-0.798	0.213	- (red)
9	Members of a museum engage more often with the respective museum on SNSs than non-members.	Member of the museum (75)	Non-member (93)	91.24	79.06	-1.660	0.049	XX (green)
				88.49	80.42	-1.279	0.101	- (red)
10	People who 'like' a museum online engage more often with the respective museum on the SNS than people who do not 'like' the museum.	Likes the museum (144)	Does not like the museum (21)	89.98	35.17	-5.054	<0.001	XX (green)
				85.36	63.02	-2.404	0.008	XX (green)
11	People who use SNSs more frequently engage more often with museums on SNSs than people who use SNSs less frequently.	Uses Facebook more often than once a day (129)	Uses Facebook for first time to once a day (40)	85.05	84.84	-0.025	0.49	- (red)
				86.42	78.35	-1.096	0.137	- (red)
		More than 3 times a day (68)	2-3 times a day (61)	63.83	66.3	-0.387	0.35	- (red)
				63.51	65.58	-0.368	0.36	- (red)