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Master Thesis

Contemporary art museum websites in Amsterdam and Beijing: personalization and interaction

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Preface

When I was a teenager, I already developed a great interest in museums of sciences, history, cultural and arts. These amazing experiences always linger in my memory or on the old photo albums of my childhood. They all gave me thirst for knowledge and enjoyment from getting inspired. Besides that, to learn more about the west and east in terms of cultures, history and people and to find the similarities and difference always make me excited. Therefore, it is not a coincidence that I take up the museum industry as my major research field.

This thesis is for the completion of my master of Cultural Economics and Entrepreneurship in Erasmus University Rotterdam. During my study in the Netherlands, my friends gave me unselfish help and support and many of them become my life-long friends. To be particular, I would like to extend my gratitude to my supervisor, Prof. Dr. Vecco, for her constructive and supportive suggestions. Same thankfulness also goes to my parents who will visit me soon from China.

I hope this thesis is not an end in my study life. However, it would be a milestone in my life always reminds me to keep curious about our world, to be serious with academic studies, work and life.

Yang Nuo

Rotterdam, June 2013

Abstract

The thesis attempts to evaluate and compare the performances of contemporary museum websites in Amsterdam and Beijing. The purpose of this study is to explore how contemporary art museums are making use of their websites as a medium to support their other activities, what role of the websites are playing in the marketing of contemporary art museums considering Web 2.0 which highlights the interactions between websites and end-users. The comparison between Amsterdam and Beijing is conducted in order to get an idea of the situations of contemporary art museums in the East and West. Website content analysis and quantitative research methods are adopted to study five museums from Amsterdam and five museums from Beijing are studies respectively. The data are primarily collected from the official websites of the museums and then transported and analyzed through SPSS. By referring to frequency analysis, crosstabs, Cramer's and Chi-square tests, some hypothesis are tested and some conclusions are reached. The discovery of the research is intended to give useful suggestions to the directors of contemporary art museums for improvement in their performances and to shed some light on the understanding of art museum markets in the East and West.

Key words: contemporary art museum, marketing, website evaluation, Web 2.0, Netherlands, China

Chapter 1. Introduction

1.1 Introduction

Amsterdam is the capital city of the Netherlands and has an important place in the history and art of the Netherlands. Comparatively, Beijing is also a historical and cultural center of China. Both cities are international metropolis that has an impact with global research. Museums of these two cities are not only the name card for their cultures and personality but also play a part in tourism and cultural activities of both cities, given that both of them are tourism attractions and give much attention to their tourism policies.

In many countries, including China, museums are typical sectors that are subsidized by the government. The decision-making of museums, therefore, sometimes tends to be in accordance with the cultural policies of the government in this industry. But the situation is also changing. According to the Analysis of the Chinese Museum Market and Strategic Studies 2012-2016[1], the Chinese museum market is still expanding, but with the pressure of the international competition. Also new technologies will generate more challenges and opportunities. The Internet and World Wide Web can be one of the options for the museums to be more competitive (Hazarinis, Kanellopoulos and Lalos, 2008). According to them, multilingualism, dynamics, timely updated content, emails, search functions on the websites are all cruial factors to reach more e-visitors. If the museum websites can make proper use of these possibilities and make sure of the rich information, timely updating, interactivity, responsiveness to the customers' feedback, they can be outstanding among other

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[1] According to the Analysis of the Chinese Museum Market and Strategic Studies 2012-2016 (2012-2016 年中国博物馆市场分析及发展战略研究) is conducted by Askci, a consulting company, to provide third-party information. The research is based on the data from China National Bureau of Statistics, the Ministry of Commerce of China and so on.

museums (Hamil and Gregory, 1997 in Hazarinis, Kanellopoulos and Lalos, 2008). This is approved by some famous museums, such as British Museum (www.the britishmuseum.ac.uk), which endeavors to many dynamic Internet and multimedia technologies in order to successfully attract more e-visitors (Hazarinis, Kanellopoulos and Lalos, 2008). At the same time, the Internet is the most cost-effective distribution channel to reach the customers in the world. Thus it could be beneficial to see how websites of museums in, but not limited to China and Holland perform and improve their performance.

Many political and economic factors confront the museums with the opportunities and challenges. In the government report of Beijing municipality 2012, there are many interesting points in culture and local economic development. These are new focuses of the government compared with the past years. For example: Beijing municipality will give more attention to the cooperation between cultural and creative industries and other industries such as tourism, education, games, new media, comics and cartoon , sports and so on.(http://politics.gmw.cn/2012-02/07/content_3513082.html).

The Netherlands has a long history in museums industry. It also has a leading position in the field of culture and art. At the same time, the Dutch government recently made a severe cut in funding art and culture, which were one the major financial source of the cultural industries of the Netherlands. Under this pressure, public museums are forced to consider how to survive and sustain themselves. Especially the museums sectors, which is the typical that greatly subsidized by the Dutch government, are now trying to generate more incomes by possible ways, such as renting out places, providing ancillary services and so on.

Besides the economic, political and social factors the competition between museums is also need to be considerate. Hu (2012) studies on the Chinese museum market and finds that the online museums have a strong pressure on traditional (physical)

museums. Online museums are able to get rid of the limitation of location and are available 24 hours a day. Also, they give the visitors the possibilities of communication and interaction.

1.2 Motivation

As discussed above, there are many opportunities and challenges for the museums from the economic and political sphere. Also there are many changes and impact on social sphere. Guo (2006) studies the social function---cultural transmission of modern museums. She points out that the tradition model of cultural transmission is transmission sources, transmission recipients, transmission context and transmission channel. China is dynamically undertaking social changes, and culture reorientation , which gradually push the relationship between museums and public visitors to shift from "museum dominating" to "being at equal status"(Guo, 2006). To be specific, the one-way communication, classroom model are becoming diversification and interaction in the communication. The public dissemination of museums in China are trying to give more attention to the value of the public and personalization (Guo, 2006).

Although the reformation of public dissemination of the museums in China is proceeding, there are still many problems. One is the sources of dissemination (Guo, 2006). She discovers that the main sources of public dissemination of the Chinese museums are students at school. However, as the students are flexible in terms of their location, for instance their location during holidays or after graduation, it is hard for the museums to make them as main sources of public dissemination in the long run. Guo (2006) explains that there are three ways of public dissemination for the Chinese museums: verbal communication, behavior dissemination and artistic dissemination. These can be understand by the examples of using mouth-to-mouth communication, taking kids to the museums regularly nurture their appreciation and offering dance, sculpture show, etc., to attract people's attention respectively. But if the students at

school as the main source of the pubic dissemination cannot work effectively, the museums cannot plan well enough. The other problem is localization. As Guo (2006) concludes, social communities of art amateurs and retired people are also two important groups of public dissemination for the Chinese museums. The advantages of them are their stable location and the ability to share some resources, which are a strong support for a sustainable public dissemination. But apparently, they have geographic limitations if they would like to reach the more audiences.

Traditionally, the education programs in the museums are an important way to communicate to the public and to present the heritage or art. But they remain to be a one-way, unresponsive and unequal communication. There is little room for interpretations and interactions and the visitors need are overlooked (Hooper-Grenhill, 1994 in Verboom, 2011). However, with lower barriers for knowledge, transmission of information and exchange of ideas among the general public, the visitors are gradually become more important for the museums. In recent years, many museums are reexamining their missions and attempting to adopt a stronger focus on the visitors (Kotler & Kotler, 2004 in Everett, 2009).
Similarly, the researches on the museum industry are also trying to relate more to the audiences and engage with public (Orr, 2004 in Everett, 2009).

1.3 Research question

This master thesis attempts to compare the contemporary art museums in Amsterdam and Beijing, and analysis the difference between their websites in terms of the website design and personalization, and how they communicate with the visitors especially with the paradigm of Web 2.0. Later on, this paper will attempt to get some results from the research and test the hypothesis: Public contemporary art museums have more resources and capability to build better websites than private-owned contemporary museums. Finally, the thesis will make rooms for the possible reasons

behind these differences and give suggestions to museums for their strategic decision-making.

1.4 Content of the thesis

In the first chapter, a literature review is discussed. The definitions and characteristics of the contemporary museums will be set and the economics of contemporary art museums will be touched upon. And the recent studies on the museum and Internet are reviewed. The second chapter is the research design, the methodology, operationalization and the detailed description about the sampling and variables will be elaborated. Some hypothesis will be listed before conducting the empirical research. Chapter Three reports the result of the research the interpretation. The test for the hypothesis which is followed by case studies on the special museums. The last Chapter concludes the research with some point of the limitations of the research and suggestions for future research.

Chapter 2 Literature Review

2.1 The definition and characteristics of contemporary art museums.

2.1.1 The definitions of museums.

The museum sector is very complex. Museums are different in sizes, structures, goals, natures and so on, and there are museums, museums of art academies, and museums of research centers, making it hard to define them. One of the leading definition suggested by International Council of Museums（ICOM）is popular in the fields of museology and UNESCO. The definition is :

> *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 in Verboom, 2011).

In this definition, the activities that are carried out by the museums are illustrated. The goals and mission of the museums in general are stated and the nature of museums is clarified. Art museums in particular, can be defined as a non-profit institution that displays art objects, striving to "preserve and present the artistic elements of the cultural heritage" (Heilbrun& Gray, 2011:187, Tugbay, 2012, Feldstein, 1991). The definition of contemporary art museums or modern art museums is the art museum that preserves and presents the art produced at present period of time.. Museums such as Witte de With contemporary Art, Museums van Boijmans beuningen, the Museum of Modern Art belongs to this type.

2.1.2 The responsibilities of contemporary art museum.

As is shown in the definition of ICOM, the responsibilities of museums are to acquire research, communicate and exhibit, which is also to some extent in accordance with Noble's (1970) idea: "to collect, to conserve, to study, to interpret and to exhibit" (Noble, 1970, in Verboom, 2011: 9). It is notably important that these responsibilities are interrelated. The change, expand, or reduce in one aspect of these responsibilities will undoubtedly have an impact on other responsibilities and on the filling of their goals, as is argued by Noble (1970) and Weil (1990).

Another point of view, which is supported by Weil (1990) and Frey (2006) is that these responsibilities can be divided in to three, namely to preserve, to study and to communicate. The communication function, which according to Hooper-Greenhill (1994) made a great shift in the 90's, especially for the communication to the public audiences. This made room for public relations and marketing, which is concerning the visitors of the museums. (Hooper-Greenhill, 1994 in Verboom, 2011)

2.1.3 The values of contemporary art museums.

Klamer (2010) discusses a lot about economic, social and cultural values of cultural goods in the cultural economic field. The values of museums can be economic, cultural social and political. Many museums are connected to local tourism and local economy (Tufts and Milne, 1999). Hewison finds out that there has been a "cultural revival of heritage experience as popular leisure and urban tourism activities (Hewison, 1987 in Tufts and Milne, 1999). And museums are regarded as main attractions luring tourists into the city (Tufts and Milne, 1999). They "enable cities to market themselves as cultural centers which both delight residents and tourists and appeal to professionals and investors" (Kotler, Haider and Rein 1993; Kearns and Philo 1993, in Tufts and Milne, 1999). However, as museums are not-for-profit, the cultural and social values of the museums can have more weight than economic

values. Besides, there is a means and goals relationship between the values. As claimed by Klamer (2010), a museum can contribute to cultural values directly without doing much on economic values (Klamer, 2010). The social value of museums can be giving the opportunity to the public to gain knowledge, to get education from culture, to view the objects that people may not see in the future, etc (Frey and Meier, 2006).

Political values of the museums refer to whether the idea has significance for political subjects. Some museums have prestige value for the nation, the region or the local community (Frey, 2010). The Van Gogh museum for Holland and the Louvre for France are two examples. They represent the splendid culture and the respective countries (Frey, 2010). What is more, "politicians and planners have taken the opportunity to integrate museums into economic development initiatives in both large and small urban centers" (Vaughan and Booth 1989; Zukin 1995, in Tufts and Milne, 1999).

2.1.4 Different perspectives on museums

The traditional studies and research on museums are based on the knowledge of museology or museums studies. It focuses on the objects in the museum and is trying to explore their role in our society. This approach is the social and political perspective (Verboom, 2011). The public support for museums are based on this perspective on the fact that it is important to be aware of positive external effects of the museums (Frey, 2010). Museums organizes cultural activities that produces positive externalities for the society (Peacock and Rizzo, 1994 in Frey, 2010). Also some educational programs designed by the museums can foster creativity either in general or generate new ideas for commercial activities (Frey, 2010). Therefore politicians or museums managers sometimes argues that free admission to the museums can attract less educated people, which can generate positive externalities the society as a whole (Anderson, 1998 in Frey, 2010).

However, in Frey and Meier's (2006) work *The Economics of Museums,* a museum is regarded as an economic unit. This perspective has two impacts, as they mentioned. The first is that many activities and factors in the museums can be put in economic and management models. For example the museum are dealing with exhibits, human resources, which can be treated as input and at the same time the visits, return on tickets sales can be treated as output. The second impact is that effect of museums on the economy can also be measured and analyzed, such as the effect on local tourism economy. The economic approach to study museums can be based on other economic theories such as rational choice theory and neo-classical economics. Other disciplines, such as political economy or public choice economics can also be applied if the research is related to government subsidies and regulations (Frey and Meier, 2006).

2. 2The economics of museums

2.2.1 The supply side of contemporary art museums

The classical views on the supply of museums are often considered in a traditional way, which tends to refer the supply of physical museums. Taking museum websites, or virtual space, which has also enough potential into account, we can categorize the supply of museums into two kinds: off-line supply and online supply. Compared with off-line supply of the museums, the online supply of the museums is regarded as promotional factors (Hazarinis, Kanellopoulos and Lalos, 2008). They hold that the Internet and web service had a profound effect on cultural and tourism products and therefore can generate a wider group of e-visitors (Hazarinis, Kanellopoulos and Lalos, 2008). They are defined based on where is supply is taking place---online or offline, but the two parts are interrelated. In the following part, the two kinds of supply will be discussed respectively and the relationship between them will be touch upon later on.

Fernandez-Blanco and Prieto-Rodriguez (2011) define the supply of museums as organizing exhibitions, providing research and conservation. Becker (1965) holds a more economic viewpoint by stating that what museums supply are market goods, which, if combined with other input, are "purchasable" in the forms of knowledge, aesthetic experience, entertainment, etc (Becker, 1965, as cited in Fernandez-Blanco & Prieto-Rodriguez, 2011: 290). No matter from which perspective to take to understand the supply of physical museums, some basic element can be agreed upon, as claimed by Fernandez-Blanco and Prieto-Rodriguez (2011):

(a) Collection: include but not limited to identification, documentation, illustration, preservation of the objects in the museums;

(b) Exhibition: offer museum experience to the public for education, entertainment, research, etc.;

(c) Other services: other activities such as catering in museum café, transactions in museum shops, etc.

These above mentioned offline activities share some characteristics of experience goods. The concept is defined in Philip Nelson's book *Information and Consumer Behavior*, which means the quality of a product or service cannot be easily perceived before the consumption but can be known after consumed. This concept is proposed in contrast to search good, which refers to the value of a good or service can be defined before consumption. The concepts are two extremes, the off-line supply of the museums possess partially both characteristics of the two extremes but it seems to be lying closer to the side of experience good if we temporarily leaving the impact of museums websites (online supply) as information sources.

After Nelson (1970)'s classification of goods: ordinary, search and experience goods, Darby and Karni (1973) introduced the term *credence goods*[i] to be added to the classification (Dulleck,,Kerschbamer and Sutter, 2010). The offline activities of contemporary art museums also have the characteristics of credence goods. Even after the visitors enjoyed the experience in the museums and the appreciation of the works

of art, it is hard to identify the quality of these activities, as in the case of participating in the education programs of the museums.

Different from experience goods, "museum experience" is constantly mentioned in literature on museums. In the case, the "experience" indicates the experience a visitor gets when being in the museum. The experience takes place in real life and starts from being attracted by the museum, witnessing the exhibit, engaging and interacting in some activities, and reflecting after the visit. (Lenker, 2002, in Welie and Klasse, 2004). It is a complete whole process of pre-visiting, visiting, and post-visiting the museum. In this sense, the experience includes not only the off-line supply of the museums but also online supply of the museums for the fact that online supply may contain giving useful information about exhibition, exhibits and/or collecting feedback on the exhibitions, etc., which can both be regarded part of the museum experience.

The online supply and off-line supply differs in the fact that the museum website is not merely a copy of the museum or exhibition (Welie and Klasse, 2004). The museum websites, in many cases plays the role as "teaser". Although the online supply and off-line supply are not identical, they do overlap to some extent. Especially when museums website is designed to be more than merely a bulletin board that only contains basic information, but are granted the functions of virtual exhibition, museum marketing, sales, public relations, funding and sponsorship and so on, the online supply of museums can cover the realms of pre-visit, visit and post-visit.

2.2.2 The demand side of contemporary art museums

When discussing the supply side of contemporary art museum, both online supply and offline supply are touched upon. However, in the demand side, online visitors, rather

than off-line (on-site) visitors will be analyzed in great details with more attention for the sake of the research question.

The target audiences of museum websites are diverse. In order to understand their motivations and needs, it would be helpful to first group them according to the similar consumption behavior so that niche markets can be created and dealt with respectively. Kravchyna and Hastings (2002) claim that the types of audiences of a museum sites can be categorized into the following parts, although a specific situation and exception is reserved for room to discussion (Kravchyna and Hastings 2002 in Welie and Klasse 2004). The following list shows these categories and their characteristics:

- *People who plan to visit the physical museum*
   This group of audiences needs to be attracted to the real museum. Therefore, information about the current exhibition in the museums, visiting hours, locations, transportations, ticket information, etc., are demanded. Some reports show that up to 60% of the physical museum visitors also visit the museum websites before and after their visit to the museums (Kravchyna and Hastings 2002 in Welie and Klasse 2004). They may like to check the information on the internet to decide whether the museums worth a visit.

- *People who have visited the physical museum*
   In this case, the people may like to review what they have seen, check some information for their interested objects during the exhibition, and purchase some gifts or publications.

- *Potential visitors who are not able to visit the physical museum*
   People who suffer from the geographical limitations fall in this group. But still, they can show great interest in the exhibitions.

- *Educators*

Educators are in need of the information for some specific exhibits and high-quality materials such as images, video, maps and so forth. They can also have the demand for the information of historical context, the development of research on the objects. Furthermore, it is also possible that educators are actively cooperating with the museums in creating or improving existing material by combining different expertise.

- *Researchers, scholars and students*

This type of audiences has similar needs with the educators, but the types and quality of the material, may differ extensively.

- *Curators*

Curators are typically interested in the detailed information of the particular items in terms of acquisition, reservation, restoration and so on.

- *Children*

Children are expected to learn and play in the museums. In order to offer the edutainment museum experience, museums organize special activities for children such as special workshops or birthday party.

- *Managers and donators*

These people often have interest in museums in general and may have some characteristics similar to those of the above mentioned categories.

Apparently, there are some overlaps among these categories but accepting this fact will not reduce the importance of knowing these types of audiences. These are important groups for the museums and therefore they can be regarded as niche

market, which is helpful for the museums to create tailored marketing strategies to approach to them.

2.3 The museum websites and Internet

2.3.1 Museums websites

The new technologies provide opportunities for innovations in the museum industry (Johnson, 1998). For instance, the digitalization of museum collections can help make the museum restoration work shown on the website to be more transparent to the visitors, which could be innovative practice to increase the audiences' willingness to visit the museum. But in general, according to Towse (2010), the not much of the work on the economic effect of digitalization on museums are done (Towse, 2010: 248).

In Welie and Klasse's (2004) report, they describe three museums websites in details in order to find the general characteristics and issues in museums website design. They use an existing collection of design patterns as a tool to evaluate basically the museum site of the Rijksmuseum, the Louvre and the Guggenheim. The findings are that most museums have similar design in structures and content and that the evaluation tool---pattern analysis is a relatively complete framework. Even the websites of these three world-famous museums can be decently described and evaluated by using the design patterns.

Furthermore, considering different levels of museum website design, Welie and Klasse (2004) formulate the "growing path" for museum sites to set three different phases of museum website development. A small museum normally starts with simple brochureware sites giving basic information of the museums such as opening hours, locations and collections. The second step is to have an online/ digital collection and / or education programs to have some interactions with online visitors. The third phase

is that museums become almost completely virtual, different groups of visitors can find what they want and personalization and community aspects can be found on the websites.

There are many factors that influence the construction of the museum websites. The attitudes of museum administrators are a subjective factor. Museum curators weigh different on the relationship between physical museum and museum website. Some museum administrators are less intended to take their museums fully online because they think there is no substitute for the real museum and that the museum website is merely complementary to the physical museum. (Welie and Klasse, 2004) Another factor is financial resource for the museum website construction, which is an objective factor. Welie and Klasse (2004) point out that the website of world-famous museums such as the Rijksmuseum is designed by professional design agency, Eden Design (www.edendesign.nl). They obviously take serious effort in creating a presentable website for their museums.

2.3.2 Online community and museums

If we take a look at the development of online communities in general, we know that virtual communities have been established for decades. (Rheingold, 2000, in Beler, Borda, Bowen, Filippini-Fantoni, 2004:1). With the use of new technologies, the forms of online communities' building and expansion appear to be much unexpected. (Kolko, 2003, in Beler et al, 2003:1). Online communities can be understood at two different levels. The first level is museums/ institutional level, which means a platform, is built primarily upon one museum network. The web-log, or micro-blog, as a medium to makes online diaries and articles available to a wider range of readers by lowering the threshold of the required technical proficiency for readers. Such technologies can be also used to facilitate the development of community-oriented web resources according to Beler et al (2004).   Another level of online community is inter-institutional level, which is more involved. For instance, the networking

platform on the internet that is beyond the one individual institution such as the virtual Museums of Canada (VMC) (www.virtualmuseum.ca) act as a "national aggregator of content and links and acts as a hub for the entire Canadian cultural heritage community." (Beler, 2004).

The benefits of both levels of building online community/ platform can break down the geographic confines of the physical museums and increase the "visitorship" . (Beler et al, 2004). However, in reality, according to the observation from Beler (2004) et al, learning organizations, including museums only have an online presence to publish organizational information, and there is often not a step forward to further cultivate museums websites as a way to improve their performance.

Thinking from the stand points of museums, there are good potentials and advantages. Beler (2004) et al hold that museums have a perfect position to benefit from the Internet to reach and sustain a wider range of web-based audiences. The reasons lie in the fact that museums have a physical space as well as a virtual (online) space, which can be combined to dynamically learn from the audiences' feedback and respond properly. This can be helpful, if suitable actions are taken, for the museums to bring together individuals, communities, sectors and knowledge chain and make continuing dialogues and communications among them.

The museums websites is a window for the museums to reach more groups of audiences. The museums can use their websites as potentials to build online communities of museums amateurs and professionals for the museums. In *the Building of online communities: an approach for learning organizations, with a particular focus on the museums sector,* Beler (2004) et al suggest several ways of building and enlarging the virtual communities. The idea of characterizing online museums as community-oriented has long been accepted at academic and research level. Beler (2004) et al propose that personalized toolkits which are gradually often

integrated on the websites can help provide a basis for creating and sustaining communities through the ways of developing collaborative spaces, community channels and group interactions. Chat forums, E-newsletters are some tools, which need strong technical to achieve these goals.

2.3.3 Customization and personalization in contemporary art museum websites

In recent years, Web 2.0 is brought into discussion within the realm of the Internet development. The Web 2.0 means the websites use new technologies to move them from the static pages to a new version. The term obtains the attention and popularity during the O'Reill Media Web 2.0 conference in 2004. The core idea of Web 2.0 is personalization. It highlights the pleasure the user can get from personalized experience. Furthermore, people need to share the experience with society (Ivanchenko, 2011). The web-developers get the idea that sharing, interaction, participation and contributions from the users can build up a number of web-based applications. In other words, a Web 2.0 site can create the opportunity for users to interact and collaborate on a social media platform. It is not a technological specification but an innovative viewpoint on how web pages are created. Instead of putting people at a passive status to receive the information on the websites, which are usually seen in Web 1.0, Web 2.0 strives to provide user-generated content in online communities.

The impact of this applications generated from the users' side can be profound because the Internet are gradually involved many people's works and lives. As a matter of fact, there are plenty of services around ourselves can be regarded as Web 2.0, such as blogs, bookmark, video sharing and wikis.

The ideas of personalization, sharing among people and user-generated content if the concept of Web 2.0 can be beneficial to museum websites. The sharing of videos, photos on the museum, for instance, by one person to another can increase the exposure of the museums among interested people. This is a way of marketing, which is very taking place spontaneously and the museum do not need to put much energy to make this happen. At the same time, if the websites if is directly or indirectly linking to other social networks, such Facebook, the number of people who can view the content will enlarged phenomenally, and so will the value of the museums experience. This is similar to the logic of Network effect, which according to Klemperer (2006), Liebowitz and Margolis (1994), describes the fact that when the number of people who are using the product or services is increasing, the value of the product or services will be increased as well (Klemperer, 2006; Liebowitz and Margolis, 1994, in Ivanchenko, 2011).

2.3.4 Legal issues in museums website content

For many museums the content of the collection on the museum website is an important issue. Especially in the contemporary art museums, where more and more modern art are digital and the demand for physical art forms are decreasing, some art pieces, therefore are better presented online (Guynup, 2003, Welie and Klasse, 2004).

At the same time, according to Wallace's (1995) work *Museums on the World Wide Web*, the digital art work brings about another concerned issue about the museums website: the intellectual property. He explicitly put it as "no institution or online visitor can afford to ignore copyright issues." (Wallace,1995: 397). The issue becomes especially challenging when the museums attempt to provide digitalized museum on the internet, which means the real objects or works of arts will have a "copied" version which can be view on the websites. The challenge also holds to contemporary art museums where many exhibiting objects are visual art works. If the image of a certain art pieces is on the internet without a proper supervision, the

downloadability and mutability of the image is not controllable. In order to deal with the problem, some solutions are proposed in Wallace's (1995) article. A solution in the legal field is to present and formalized copyright statement, which is a common practice for many museum website. What is also true, to the best knowledge of the author is that the copy statement often defines that the content, images and texts on the websites are the intellectual property of the museums and that they are forbidden to be published in other public domain without permission. It is further indicated that the content on the website can be used for personal or educational purposes but not for commercial purposes. Besides the legal methods, a technical solution is also adopted by some museums to prevent intellectual property problems. In the case of Kelsey Museum, according to the research of Wallace (1995), "the quality of images has been intentionally compromised to discourage their unauthorized use" (Wallace, 1995: 397).

In the Chinese museum market, as is stated in the *Analysis of the Chinese Museum Market and Strategic Studies* 2012-2016 (2012-2016 年中国博物馆市场分析及发展战略研究), the legislations on the intellectual property right is still need to be improved and refined. The digital information can be easily copied and downloaded and the intelligent property cannot be secured. Therefore, any digital museums in China have to shoulder the risk (Shen, 2009). Taking the copyright protection of the images in digital museums as an example, some technologies such as digital watermarking and SVD-based blind digital image watermarking algorithm are possible ways to protect the intellectual   property right, but they are still at the stage of discussion and many further issues need to be studied (Shen and Su, 2012).

2.4 The results and methods in the study of museum websites

In the literature on the study of the museum websites, the methods that are used are web content analysis (Welie and Klaassen, 2004; Tugbay, 2012; Paulus, 2013; Ivanchenko, 2011; Pallas and Economides, 2008), quantitative analysis (Paulus, 2013;

Wallace, 1995 Ivanchenko, 2011), qualitative analysis (Paulus, 2013; Pallas and Economides, 2008) and case studies (Beler et al, 2004; Welie and Klaassen, 2004). .

Paulus (2003) proposed some indicators to measure the websites and tested their validity for 14 museums in the US and France. Wallace evaluated 16 museum websites worldwide by 7 criterion and concludes that digitalized objects online are not as robust as expected. Beler et al (2004) used case studies to evaluate the 8 internet tools on the museum websites and concludes that the museums can play a significant role both for physical visitors and virtual visitors. Welie and Klaassen (2004) examined three museums in depth by using the design patter analysis and find that museums have similarities in content and structure of the websites. Tugbay (2012) finds out that the museum websites in the Netherlands are adopting social media tools and the idea of Web 2.0 but the state-owned museums and private museums are different in the extent to which they are using the tools and ideas. Ivanchenko (2011) discovers that many museums already began to adopt multimedia in the websites, and the characteristics of personalization can be found and art museums in Amsterdam seem to be more advance than rest of the regions in the Netherlands. Pallas and Economides (2008) developed MUSEF as a framework to evaluate the museum websites and conclude that museum websites are developing rapidly and adopting Internet technologies at a high level. However, in this research, museums websites are graded on a scale by the author, which may lead to the question of objective evaluation and reliability

Chapter 3 Research design

After reviewing the related literatures in the previous chapters, empirical research design is the focal point of this chapter. In the following parts, the methodology to be adopted for the empirical research will be discussed and decided, relevant definitions that are important to make the research clear will be explained, the variables that derive from past literatures and theories but are adapted to this research is defined and discussed with necessary coding system, value definitions and notes to these variables.

3.1 Research question

The research question is *what are the similarities and differences between contemporary art museums in Amsterdam and Beijing in terms of their official websites?* Therefore, the thesis attempts to explore some important issues concerning the construction and design of the websites of the contemporary art museums, the content of the websites of the contemporary art museums, the possible reasons that could have led to the results and situations, the impact of these differences could have on the marketing of these contemporary art museums and on the online visitors and on-site visitors of these museums.

3.2 Methods

The empirical research is descriptive. It aims to measure the performance of contemporary art museums in Amsterdam and Beijing respectively by analyzing their museum websites. Therefore, content analysis on the website content is adopted as the first research methods. Also the research will be conducted in quantitative way and by using SPSS, some primary conclusion are expected to be reached. After that case study will be conducted for some special samples to have a deeper understanding of them.. The number of samples is limited to 10 in total,which is manageable for quantitative study and later partly as cases to be analyzed.

3.3 Website content analysis

Content analysis is a research technique for social sciences studies. According to Holsti (1969), it is "for making inferences by objectively and systematically identifying specified characteristics of messages" (Holsti,1969:14 in Bryman, 2008:274). Obviously, websites content analysis is a special form of content analysis taking World Wide Web as the main channel to get content and data.

Website content analysis is chosen as the main research methods for much feasibility it has to contribute to this research. At the first place, websites content analysis per se is a common tool for social science research because content materials can be systematically coded. (Tugbay, 2012). It is context sensitive and can be conducted on unstructured material, process symbolic forms and work on large volumes of data. (Krippendorff, 1980, in Hashim, Hasan & Sinnapan, 2007) What is more, as the research question is about the museum websites, therefore a relatively direct way to study is to focus on the web content. The method is widely employed in the research fields of communication, E-commerce, marketing and branding, where World Wide Web is place in which communication and interaction is happening. In other words, website content analysis plays a dynamic role in social science, business and marketing research fields; therefore, it is likely to contribute to this thesis where the focus is cultural economics on the museum websites.

The website content analysis works under some guiding principles. First of all, the objects are documents on the museum websites. They are regarded as unites to be coded and translated, counted and analyzed. To illustrate more on these unites, words, subjects, themes, pictures, video and audio files can be taken as examples of studying units (Bryman, 2008:282). It is necessary to notice that although many literatures and tools are mentioned in the section of literature review, such as Wallace's (1995), Kidd's (2011) works, only items that are directly related to the research question of

this thesis is considered, coded and counted. This indicates that a selection process is done prior to the use of different variables and categories in the empirical research.

After identifying the suitable research methods and the guiding principles on how to work with the methods, in the next part, an explanation of how do conduct the website content analysis is followed. Firstly, the sample websites should be found and selected and they should be representable. In order to make the contemporary museums in Amsterdam and Beijing comparable, an equal number of samples or a comparable numbers of samples should be obtain from both cities. Secondly, as long as the samples are chosen, the work will move to "what needs to be counted" (Bryman, 2008). A separate section below will focus on the operationalization of the methodology, illustrating what variable are identified to measure the performance of the contemporary art museums, what are the definitions of the variables are, and how to measure them. Consequently, a working coding manual is attached to make the coding process more transparent.

The procedure of statistical analysis is followed after the coding procedure, which in the case of this thesis, the analyzing tool SPSS---Statistics Software Package is used to provide more detailed and statistical analysis on the data. The analysis will be conduct from different perspectives to strive to lead to some interesting findings and / or to test the expectations. The result will be discussed in the Results Section.

3.4 Samples

In the Netherlands, there are said to be more than a thousand museums. Considering the research question of this thesis, only contemporary art museums in Amsterdam will be studied. Therefore, samples in Amsterdam are selected in two ways. The first way is internet. Three websites are used to collect the samples---the official websites of Holland (http://www.holland.com) , the website of Amsterdam (http://www.iamsterdam.com) and Dutch museums site

(http://www.dutchmuseumsite.com).   On the Official website of Holland, there is a special web-page for tourism and museums (http://www.holland.com/global/Tourism/Activities/Museums.htm) where many reputable museums are listed with general information, picture and web links. On the Dutch museum websites (http://www.dutchmuseumsite.com) a great amount of museums are listed and can be sorted in terms of geography (eg. Amsterdam). After checking the website of each museum, museums such as Optical Illusion Museum Amsterdam are omitted because of its closure, and six contemporary art museums in Amsterdam are chosen as the samples. For an overview of the selected samples please refer to Table 1 in the appendix.

In the process of finding the sample museums in Beijing, key words in both Chinese and English are used to search on the websites. The official website of Chinese Government (http://www.china.org.cn/english/features/museums/116909.htm) and that of the 798 Art Zone (http://www.798art.org/) is used to get the list of museums. There are many synonyms for art museums. Examples are art space, art center, or 艺术宫 (Yishugong, translated as art palace) in Chinese. The criterion of how to identify whether it is a contemporary art museum is to check their "introduction" or "About us" section on the websites about how they present themselves. Later on, five contemporary art museums in Beijing are chosen as the samples.

There are five contemporary art museums selected as samples to study Amsterdam and five contemporary art museums as samples in Beijing. After a first review on the websites of these museums, it is confirmed that the websites are all "true WWW" websites. They are not a web-page that belongs to a tourism website, only demonstrating some basic text of picture information of museum All the museums websites selected use the name of abbreviation of the museums as the web address.

3.5 Operationalisation

3.5.1 The criteria for selection

The criteria of the selection of these samples primarily based on the categories set by the contemporary art museums that are found: they have a focus on contemporary art; they organize exhibitions for contemporary arts and they have a collection for contemporary arts. Five samples in Amsterdam and six samples in Beijing are discovered. In order to make them comparable, one sample from Beijing has to be left out. Then a random selection is conducted to select five samples in Beijing out of six in order to make them comparable to those in Amsterdam. In the process of selecting contemporary art museums, many efforts are put to separate art galleries and art museums because sometimes the names are ambiguous.

3.5.2 Data collecting period

The period that is chosen for the survey on the websites of the websites is a very important issue. The information on the internet can be constantly changing. The Lay-out of the web-page can be changed after a redesign of website construction and the information about the collections, programs, partnerships, mission statement, etc., can also be added, deleted, eddied or adjusted now and then. So in the survey, the data and information are collected during the period of June 1st---June 16th 2013.

In order to translate the studying units to the coding system, the working language is primarily English. This indicates that the English version of the websites, if there is any, is referred throughout the study. If there is no English version, only Dutch or Chinese version, then a translated version is used with proper reference.

The fist level of measuring relates to the information content of the websites. After reviewing the Wallace's (1995) work *Museums on the World Wide Web*, which is

primarily basing his analysis on the information content dimension, some variables are decided. For an overview of the variables, values and interpretations, please refer to Table 2 in the appendix.

3.6 Hypothesis

Hypothesis: *Public contemporary art museums have more resources and capability to build better websites than private-owned contemporary museums*

In the work of Frey and Meir (2006), it is argued that whether the museum is private or public, has a great impact on the decision-making of the museum with the respect of pricing, marketing activities, management and so on. Therefore, it is estimated that being private of public can also have an impact on the museum constructions. They future explains that the institutional nature of the museum, being private or public, can have an impact on the financial resources, such as sponsors or government subsidies respectively, and the funding of the museums influence the management of the museum dramatically.

Chapter 4. Result

In this Chapter, the result of the quantitative research will be followed by case studies. It needs to be mentioned that, although the analysis is done by SPSS and Chi-square analysis is used, the intention of the analysis is to be descriptive on the samples. It is not to make inference statistics to study the population. The logic is that the five samples from Amsterdam are, to the best knowledge of the author, all the contemporary art museums in Amsterdam that is suitable for the research. The five samples from Beijing are selected from six samples (all suitable samples that can be found on the internet). One sample in Beijing is left out is because on the internet there is not a clear distinction between activities of its subsidiary in Beijing and Guangzhou.

As we can see in the Table 3, the 10 sample museums are listed according to the cities they located and alphabetic order, 5 museums in Amsterdam and 5 museums in Beijing. Altogether there are 40 variables that are defined. The data of each museum are imported in the SPSS to make descriptive explanations and statistical analysis. In the Table 4 to Table 6 (in the appendix), it is obvious that half of the sample museums are built and opened after 2000 and 40 percent of the museum are before 1990, which means they have more than 20 years history. About the ownership of these contemporary museums, it is evident that most of them are private-owned. This argument can be supported by a percentage of 70. (in Table 6 in the appendix)

Table 3

sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Eddie the eagle museum	1	10.0	10.0	10.0
	Fluorescent Art Museum (Electric Ladyland)	1	10.0	10.0	20.0

Greenbox Museum of Contemporary Art from Saudi Arabia	1	10.0	10.0	30.0
Mediamatic Bank	1	10.0	10.0	40.0
Stedelijk Museum Amsterdam	1	10.0	10.0	50.0
Inside-out Art Museum	1	10.0	10.0	60.0
Museum of Contemporary Art Beijing	1	10.0	10.0	70.0
National Art Museum of China	1	10.0	10.0	80.0
Today Art Museum	1	10.0	10.0	90.0
Ullens Center for Contemporary Art	1	10.0	10.0	100.0
Total	10	100.0	100.0	

4.1 Some general findings of the description of the research:

From the samples, we can observe that there are more private contemporary art museums in Amsterdam than in Beijing. In Beijing, however, although there are more private contemporary art museums, 40 percent of the contemporary art museums remain to be public owned. Furthermore, from Table 10, we can report that X^2 (1, N=10) = 0.476, p=.490, ns, V*=0.218. Therefore, there is a moderate relationship between the city where the contemporary art museum with their being of for-profit or none-for-profit.

Table 10

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.476[a]	1	.490		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.483	1	.487		

Fisher's Exact Test					1.000		.500
Linear-by-Linear Association	.429	1	.513				
N of Valid Cases	10						

a. 4 cells (100.0%) have expected count less than 5. The minimum expected count is 1.50.

b. Computed only for a 2x2 table

Table 8

profile * profile Crosstabulation

			profile		Total
			private	public	
profile	Amsterdam	Count	4	1	5
		% within profile	80.0%	20.0%	100.0%
	Beijing	Count	3	2	5
		% within profile	60.0%	40.0%	100.0%
Total		Count	7	3	10
		% within profile	70.0%	30.0%	100.0%

4.2 The situation of the visitor-interaction and personalization function on the websites

At the first step, for the data in the SPSS, a calculation on some variables needs to be conducted. Just as mentioned in above, some variables: visit online arrangement, event calendar, online membership subscription, educational program, volunteer information, email contact, online museums shopping, external website links, material downloading, login function, visit data, information for professionals, job vacancy information, online survey/ feedback can be labeled under the category of visitor, interaction and personalization. Therefore, these values of the variables are added up to be under the new variable: userorien. The next step is to run the cross tabulation and from the Table 12, we can observe that 60 percent of the contemporary art museums in Beijing applied more than 10 visitor-oriented functions and more than 60

percent of contemporary art museums in Amsterdam have applied less than 3 visitor-oriented functions. We hereby report that: X^2 (6, N=10) = 6.000, p=.423, ns, V*=0.775. The result indicates that there is a strong relationship between the city of the contemporary museums and their visitor oriented and personalized website service.

Table 12

profile * userorien Crosstabulation

			userorien							Total
			2	3	7	9	10	11	13	
profile	Amsterdam	Count	2	1	0	1	0	1	0	5
		% within profile	40.0%	20.0%	.0%	20.0%	.0%	20.0%	.0%	100.0%
	Beijing	Count	0	1	1	0	1	1	1	5
		% within profile	.0%	20.0%	20.0%	.0%	20.0%	20.0%	20.0%	100.0%
Total		Count	2	2	1	1	1	2	1	10
		% within profile	20.0%	20.0%	10.0%	10.0%	10.0%	20.0%	10.0%	100.0%

The most phenomenal contemporary art museums in providing user-oriented services on their websites are Mediamatic museum in Amsterdam and National Art Museum of China in Beijing. These two samples will be elaborated in the case study section.

4.3 The collection and exhibition

The collection and exhibition activities are core activities of the contemporary art museums. By running a frequency analysis, we can observe in the Table 15 that the majority of the sample contemporary art museums in Amsterdam and Beijing have online collection display, being 80% and 100% respectively.

Table 15

profile * collection Crosstabulation

			collection		
			no	yes	Total
profile	Amsterdam	Count	1	4	5
		% within profile	20.0%	80.0%	100.0%
	Beijing	Count	0	5	5
		% within profile	.0%	100.0%	100.0%
Total		Count	1	9	10
		% within profile	10.0%	90.0%	100.0%

4.4 Searchable catalog for exhibitions

To study whether searchable catalog are available in contemporary art museums in Amsterdam and Beijing. From Table 16, it is obvious that in the samples, more than 80% contemporary art museums in Beijing have searchable catalogs available on line, compared to 20% contemporary art museums in Amsterdam. We can run the cross tabulation of "catalog" and "city" variable, and therefore report that X^2 (1, N=10) = 3.600, p=.58, ns, V*=0.600.

Table 16

profile * exhibition Crosstabulation

			exhibition		
			no	yes	Total
profile	Amsterdam	Count	4	1	5
		% within profile	80.0%	20.0%	100.0%
	Beijing	Count	1	4	5
		% within profile	20.0%	80.0%	100.0%
Total		Count	5	5	10
		% within profile	50.0%	50.0%	100.0%

4.5 Exhibition information.

We calculate the information about past, current and future exhibitions and get the new variable: exhibitioninfo. After running a Crosstab analysis, we can report that

(Table 19 to Table 21): X^2 (2, N=10) =2.000, p=.368, ns, V*=0.447 . From the samples we can see that there is a strong relationship between the city of the contemporary art museums and the amount of information for the exhibitions, however, the statement is not significant.

Table 19

profile * exhibitioninfo Crosstabulation

			exhibitioninfo			
			1.00	2.00	3.00	Total
profile	Amsterdam	Count	2	1	2	5
		% within profile	40.0%	20.0%	40.0%	100.0%
	Beijing	Count	1	0	4	5
		% within profile	20.0%	.0%	80.0%	100.0%
Total		Count	3	1	6	10
		% within profile	30.0%	10.0%	60.0%	100.0%

4.6 Test of the hypothesis

Hypothesis: Public contemporary art museums have more resources and capability to build better websites than private-owned contemporary museums

To test this hypothesis, the variable of "private/public owned" and "visitororien" is used. They reason is that due to a first round of review on the statistical analysis, we find out that there are many similarities of content, presentations, structure and basic information of the contemporary art museum websites. Thus it is interesting to see the personalization and visitor-oriented services on the websites. Table 22 to Table 25 are reflecting the test of this hypothesis. From Table 23, we can see that more than 57 private contemporary art museums have less than 3 functions of personalization and visitor orientation. But at the same time nearly 43 percent of private contemporary art museums have more than 10 functions of personalization and visitor orientation.

Based on the Chi-square analysis we can report that: X^2 (6, N=10) = 10, p=.125, ns, V*=1. So the hypothesis cannot prove to be true by this statistics.

Table 23

profile * userorien Crosstabulation

			userorien							Total
			2	3	7	9	10	11	13	
profile	private	Count	2	2	0	0	1	2	0	7
		% within profile	28.6%	28.6%	.0%	.0%	14.3%	28.6%	.0%	100.0%
	public	Count	0	0	1	1	0	0	1	3
		% within profile	.0%	.0%	33.3%	33.3%	.0%	.0%	33.3%	100.0%
Total		Count	2	2	1	1	1	2	1	10
		% within profile	20.0%	20.0%	10.0%	10.0%	10.0%	20.0%	10.0%	100.0%

4.7 Case studies

4.7.1 Case 1: Mediamatic in Amsterdam---interaction

(Screenshot from http://www.mediamatic.net/)

Mediamatic is located in Van Gendthallen in Amsterdam. There are two spaces, one for 570 m² and the other 1054 m². The appearances of the two spaces are quite different: one clean and crisp, the other raw and edgy. With sky-high ceilings in spaces, they are flexible to host exhibitions, events, workshops and parties and it also has the ability to serve food and drinks.

The opening time for Mediamatic is also flexible. It is not easy to find a "fixed opening time" on the website. But there is indeed an "event calendar" from where visitors can refer to. In other words, the opening hours depends on the events or projects: it can be as early as 9:00 in the morning and as late as 20:30 in the evening.

The financial source for Mediamatic is diverse. One of the sources is admission fee to some events. Another source is to rent the building out. What is more, as they organized workshops and training programs for both arts and technologies and for different groups of people, these can also be their financial resource.

Mediamatic was focusing on media and video art when it was founded in 1983. And it tries to link new technologies to cultural development. Therefore, it is in a better place to provide, besides exhibitions, workshops, salons, etc., more exciting online experience then common museums. Besides the technological advantages, Mediamatic also tries to use of the artists, designers, technicians based in its space to make more connections and possibilities. At the same time, from 1994, Mediamatic began to build up online communities by setting up Mediamatic.net, as a platform of social network.

Gradually the physical side and virtual side of Mediamatic are more blurry. Interesting enough, on both the physical and virtual side of Mediamatic, there are many splendid services offering to the public. For the online services, Mediamatic has an online travel agency, an online dating service, an online library network, and many

projects in cooperation with artists and designers. And for physical services, it provides magazines, exhibitions, publications, etc. It has a Mediamatic lab for technologies and design and Aquaponics for environmental protection.

Mediamatic is really attractive to online visitors in terms of personalization. On its websites, there is possibility to subscribe and become a member. Then by using the "Calendar" function, and define the period, you can find various activities, from Media Art festivals, art swap market to VJ party. Besides, you can also add your own activities on the website so that other people can view it. All the activities are accompanied with pictures and other information, and you can also see which members are participating, just like the "event" function on Facebook. It is also very easy to post comments any time, make tags on the picture and share them around easily.

Apart from the interaction between the websites and people, the interactions among people are also easy and fast. You can choose and then write to any members, among whom are artists, craft men, visitors, designers and people from all walks of life. Members of the Mediamatic can view who will participate an event and what other members wrote about. In this way, the online and off-line activities become more transparent and trust is easier to build up.

4.7.2 Case 2: National Art Museum of China in Beijing (中国美术馆)---visitor-oriented.

(Screenshot from http://www.namoc.org)

National Art Museum of China in Beijing has a space of 18,000 m²where 8,300 m² is for exhibition. The opening time is relatively fixed, from 9:00 am to 17:00 pm. And since it is a state-owned museum, it is under the direct leadership of the National Department of Culture. Also, the local government sets up a special fund for the collections in the museum. Besides these, many artists donated their art works to the museum.

Under the National Art Museum of China, there is National art committee, which runs at a branch of the museums. It acts as a host to organize conferences for public and private art museums across the nation and it has 72 members. Therefore in a sense, the National Art Museum of China has a good network for the cooperation and communication among peers in China and it has an important position among them. Apart from the involvement with art museums in China, it also actively participates in International conference such as Asian Art Museum Director Forum and International Committee for Museums and Collections of Modern Art.

National Art Museum of China is also excellent at its visitor-oriented services. It is highly possible that they categorize the visitors based on their needs and provide customized services to different groups of audiences. For example, under their education programs, they have activities for "lectures and seminars", "guided tour", "workshops for children" and so on. For the publications, they have periodicals, collection catalogs, exhibition catalogs, academic papers and annual book, which can cater for people with different levels. The customized services can also be reflected from the virtual exhibition. For most of the exhibitions that were held in the museums, there is 3-D virtual equivalent on the websites. It means the audience can chose which exhibition to view online. To the best knowledge of the author, there are some museums construct a 3-D virtual museum on their websites, but it rarely happens that a museum put different exhibitions on the virtual museum. The visitors can just use the mouse to enjoy the full exhibition, with videos, document description, and if there

is a problem, there is always a help button. Furthermore, even the news is categorized in to: "news of the industry", "news of the National Art Museum of China in Beijing" and "other news". Under the "facilities", museum map, affiliated shops and café, wheel chairs for the disabled can be found. All in all, the information is very systematically and specifically categorized to produce better visitor experience. However, although the website is available in English version, the English website seems to be a previous version, which is far less as attractive as the Chinese version.

Chapter 5 Conclusion

5.1 Conclusion

With the use of the Internet and digitalization technologies, many museums are able to have their own official websites, which opens a new way for the visitors' experience. A gradually up-grade in Internet use can be seen in the museum industry. For example, Contemporary art museums in Amsterdam and Beijing have a high percentage in digitalized their collections on their websites. And many of the sample museums already put basic information such as address, opening hours, ticket arrangement, exhibition information, etc., on the websites.

As for the adoption of Web 2.0, which give much attention to personalization, online community building and customer orientation, there is an unequal development among the contemporary art museums in Amsterdam and in Beijing respectively. Take the Eddie Eagle Museum in Amsterdam as an example, which treats its website more as an online magazine, the website of this museum is structured as several separated electronic magazines. The information is mainly listed with the concern on exhibitions. Therefore, without a siteman, it is not easy for the online visitors to get the primary information such as the location and opening hours.   At the same time, there is also Mediamatic in Amsterdam, which created many possibilities for the visitors. They build up online community, which allow members to get the first hand event information, and even can create and promote their own cultural and artistic events. Also there are also possibilities for the interaction among visitors and between visitors and the websites. The team members of the Mediamatic are communicating with the audiences on an equal basis. They have similar structure and appearance of personal account.

In Beijing, the situation on the website of contemporary art museums also varies a lot. The National Art Museum of China has an advantage over others in the fact that it is very customized and systematic. This makes the website very consumer-friendly. Information and material for different groups of customer can be found on the web, for professional, for scholars, for children, for amateurs and so on. It is necessary to points out that National Art Museum of China has an outstanding digital museum online. What is more, it sets up an electronic version online for each exhibition. And there are also many personalized possibilities such as online museum map, online ticket booking, wheel-chair reservation and so on.

Based on the statistic analysis and the case studies, the Mediamatic and National Art Museum of China perform better than other sample museums in Amsterdam and Beijing respectively. But there are also slight differences between them. The National Art Museum of China seems to be more concerned on personalization by offering many products and services for visitors that have special needs. The Mediamatic, on the other hand, seems to be more innovative and highlight the interacting between people.   Both of the two factors are important for the application of Web 2.0 in the contemporary art museum websites.

Based on the research it is also found out the there is not a significant relationship between whether the contemporary art museum is private or public and their performance on the websites designs. Many private-owned contemporary art museum such as Mediamatic, Today Art Museum and Museum of Modern Art, have a list of interesting services on their websites.

5.2 limitations of the research

5.2.1 Samples

Since the samples are taken from the Internet, it can be possible that some contemporary art museums are not included in the samples. It is also possible that

since the data are gathered in July, new contemporary art museums could be established later on. So it would be over confident to say all the samples can represent the reality of contemporary art museums in Amsterdam and Beijing.

5.2.2 Website content analysis

There are two points to be addressed. First is the reliability of the content sources. Website contents can be changing constantly. Announcement and advertisement for new programs and new regulations can be added to the websites and outdated information will not be reliable. So it is always good to have the most updated information. And in order to be comparable for the contemporary art museums in both cities, the empirical research is designed to choose a specific time points. The second point in the website content analysis is validity. This occurs especially when coding the website content into statistics, because part of the meaning of the content could be imprecise or even lost. This is partly why the case study is followed to give a detailed look over some outstanding contemporary art museums.

5.2 Suggestions for future research

The concept digitalization of museums, Web 2.0 in art museum website, personalization and interactions with new technologies are relatively new in the development of contemporary art museums. And there needs to be more pioneering practices to be seen. This research is descriptive about the situation of the supply side of museum websites in Amsterdam and Beijing, but the situation on the demand side of the museum websites still need to be discovered. How do the visitors like the museum websites? What is the impact of the websites on the visitorship ?

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Appendix 1. Description of the museums in the sample

1 **Eddie the eagle museum**   http://www.eddietheeaglemuseum.com/

The Eddie the Eagle Museum is founded by an working artist together with c different artists from different disciplines and various backgrounds. Their focus is the talent regardless of age, reputation and establishment. The displayed art works range from old talents to street musicians clochards and even home made photographers. The museum put its attention on the uniqueness of the art pieces. It is always trying to put art works under certain social context and link different layers of the society. This can also leads to unexpected alliances and unimagined forms of artistic expression.But on the other and new bands and new loves sprouted in Eddie the Eagle Museum, and it is good for the progression of the arts.

(http://eddietheeaglemuseum.com/documents/information/)

2 **Fluorescent Art Museum (Electric Ladyland)**

   http://www.electric-lady-land.com/

It is the only museum of this kind in the world. Electric Ladyland is the First Museum of Fluorescent Art. It is based in a big room with Fluorescent Environment. your experience becomes a part of the art. That is why we call it participatory Art.

"Participatory Art" means during the visit of the audiences, they have the opportunity to create art work on their own and can also be part of the art work. So it is different fom many conventional contemporary art museums where the there are less interactions and Involment between the museums and the visitors.

(http://www.electric-lady-land.com/index.html)

3 **Greenbox Museum of Contemporary Art from Saudi Arabia**

http://greenboxmuseum.com/

Greenbox Museum of Contemporary Art is from Saudi Arabia and first served as a private institution for research of the art colletions in Amsterdam.From 2008 on, it shifted its focus on the visual art pieces and Saudia Arabia. The collections are from th 18ᵗʰ century and the museums is dedicated to art discussion, learning and entertainment. The museum highlighted the function of art that generate intelligence and creativity. (http://greenboxmuseum.com/)

4 Mediamatic Bank

http://www.mediamatic.net/

Mediamatic was founded in 1983 as a cultural institution. It values most on the relationship between culture and technologies. It tries to know how culture can spur the development of the technologies and how, in return culture and arts can fulfil their mission with the help of the new technologies. They produce magazines, exhibitions, workshops, salons, dev camps and other events. When Mediamatic.net was launched in 1994 it became a growing online social network.

(http://www.mediamatic.net/245164/en/this-is-mediamatic)

5 Stedelijk Museum Amsterdam

http://www.stedelijk.nl/

Founded in 1874, the museum has undergone many renovations and reopening.

The museum has a vast collection of modern and contemporary art pieces as well as the design as early as 20th century.It features artists include but not limited toVincent van Gogh, Andy Warhol, Wassily Kandinsky, Ernst Ludwig Kirchner, Marlene Dumas, Henri Matisse, Jackson Pollock, Marc Chagall,Karel Appel, , Willem de Kooning, Lucio Fontana, and Gilbert & George.(

http://en.wikipedia.org/wiki/Stedelijk_Museum_Amsterdam)

6 中间美术馆（**Inside-out Art Museum**）

http://www.ioam.org.cn

Inside-out Art Museum is committed to promote contemporary visual art in China. Founed in 2008, it is later officially recognized by Beijing Civil Affairs Bureau as nonprofit an organization in 2011.

In some period of the Chinese history, "Contemporary" refers two aspects that are urgent for us, to preserve practical knowledge in traditional art forms and crafts and at the same time to support creative thinkers in the present artistic practices both from China and the world. The museum attempts to truthfully reflect the current level of artistic consciousness in China, and provide soil to cultivate diverse ideas and approaches to art. （

http://www.ioam.org.cn/index.php?option=com_flexicontent&view=items&cid=14&id=11&Itemid=9&lang=en）

7   北京当代艺术馆(Museum of Contemporary Art Beijing)

http://www.bjmoca.com/

The Museum of Contemporary Art Beijing (BJMOCA) is located in the Art Center Park where there are a groups of creativity and activity spaces. BJMOCA is dedicated to the contemporary art communication and exchanges. BJMOCA is actively cooperating with other international museums and offer exhibitions for different groups of visitors. BJMOCA also organizes academic exchange programs for international artists.（http://www.bjmoca.com/en/gyysg/index.asp）

8   中国美术馆（National Art Museum of China）

http://www.namoc.org

The National Art Museum of China (NAMOC) is dedicated to the art collection, research and exhibitions for contemporary artistic works in China. It is founded in 1963 by the Chines government, to serve the needs of the public for art and culture..(http://www.namoc.org/en/about_NAMOC/History/index.html)

9　今日美术馆**(Today Art Museum)**

http://www.todayartmuseum.com

The museums plays an active role in China's creative and cultural industries. TodayArt Museumis give much attention to the relationships with the local community and at the sametime never stop to offeren creative art works. TodayArt Museum is regarded as the first non-profit private art museums in China and is also the first international art museum specializing in contemporary art in Beijing. TodayArt Museum has taken positive and practical actions in its research and exploration of contemporary art in order to present and promote contemporary art. (http://www.todayartmuseum.com/entemplateone.aspx?type=curatormessage)

10　尤伦斯当代艺术中心**(Ullens Center for Contemporary Art)**

http://ucca.org.cn/en/

The Ullens Center for Contemporary Art (UCCA) is an not-for-profit art center in the 798 Art District in Beijing, it was founded in 2007 by Guy and Myriam Ullens . UCCA focuses on promoting the development of the artistic environment, supporting international exchanges, contributing to the latest forms of art, design, and so on. UCCA organizes and hosts a wide range of programs among which are cultural and educational programs that helps bring the public close to the cutting-edge thought in art and humanities and offer new experiences to the audience. (http://ucca.org.cn/en/about-us/)

Appendix 2 Tables

Table 1:

	Names of the museums	websites
	Contemporary museum in Amsterdam	
1	Eddie the eagle museum	http://www.eddietheeaglemuseum.com/
2	Fluorescent Art Museum (Electric Ladyland)	http://www.electric-lady-land.com/
3	Greenbox Museum of Contemporary Art from Saudi Arabia	http://greenboxmuseum.com/
4	Mediamatic Bank	http://www.mediamatic.net/
5	Stedelijk Museum Amsterdam	http://www.stedelijk.nl/
	Contemporary museum in Beijing	
6	中间美术馆（Inside-out Art Museum）	http://www.ioam.org.cn/
7	北京当代艺术馆(Museum of Contemporary Art Beijing)	http://www.bjmoca.com/
8	中国美术馆（National Art Museum of China）	http://www.namoc.org
9	今日美术馆(Today Art Museum)	http://www.todayartmuseum.com/
10	尤伦斯当代艺术中心(Ullens Center for Contemporary Art)	http://ucca.org.cn/

Table 2 Variables and definitions

Dimension	variables	Values	Reference

Collections Information			
	Visibility	0-no	Whether there is a "column" or "link" currently or in the near future to view the objects in the museums
		1-yes	
		2- in process	
	Browsable Images	0-No	Can the objects be viewed online?
		1-Yes	
	Format	0-Still image,	In which format can the objects be viewed?
		1-Moving image,	
		2-sound	
	interpretive information/	0-None,	How many pieces of browsable objects in the museums have related interpretations or documentations available online?
		1-less than half	
		2-more than half	
		3-all	
exhibitions			
	past Exhibits	0-None,	Can the browsable objects in the museums be related to past exhibits?
		1-yes	
	Current exhibits	0-None,	Can the browsable objects in the museums be related to current exhibits?
		1-yes	

	Future exhibits	0-None, 1-yes	Can the browsable objects in the museums be related to the coming exhibits?
	Searchable catalog	0-None, 1-yes	Is there an interactive search interface on the websites?
Visitor interaction and personalization			
	Online tours	0-None, 1-yes	Is there a virtual tour online available? With floorplans for instance
	Arrange visits	0-None, 1-yes	Can visitors arrange visits to the museums directly on the websites?
	Events calendar	0-None, 1-yes	Is an event calendar available on the website?
	Educational program(s)	0-None, 1-yes	whether information for lectures, classes, and/or other educational program(s) organized in the museum available?
	downloading	0-None, 1-yes	Whether the material for downloading is available
	Membership information	0-None 1-only information 2-Membership	To what extent is membership information available on the website?

		subscript ion	
	Volunteering	0-None	Whether the information on volunteering opportunities is available
		1-Yes	
	Staff contact information	0-None	Whether a staff directory is available
		1-Yes	
	Museum webshop	0-None	To what extent are museum shop available on the website?
		1-inform ation only	
		2-online purchasi ng ability	
	Visitor Data	0-None,	Whether the statistics on the use of the websites is available
		1-yes	
	User feedback feedback	0-None,	Whether the statistics on the use of the websites is available
		1-yes ,	
	Professionally- oriented information	0-None	Whether professional information is available
		1-yes	
	Online survey	0-None	Whether online survey is available on the website
		1-yes	
	vacancy	0-None	Whether the vacancy information for the

		1-yes	museum is available
	Links to external websites	0-None 1-yes	Whether other hyperlinks to other websites are available
	Log in	0-None 1-yes	Whether visitors can log in
usability	navigation	0-None 1-yes	Whether the statistics on the use of the websites is available
	sitemap	0-None, 1-yes	Whether sitemap is available
	Partnership	0-None, 1-yes	Whether partnership information is available
	Basic information	0-None, 1-yes	Whether the basic information such as address, opening time, etc., are available
	Transport informaion	0-None, 1-yes	Whether guidance on how to get to the museums is available
technical	multimedia	0-None, 1-yes	Whether multimedia is available
	Online	0-None,	Whether the online discussion platform is

	discussion	1-yes	available
	Online seminars	0-None, 1-yes	Whether the online seminar platform is available
	Online seminars	0-None, 1-yes	
	Chat forums	0-None, 1-yes	Whether the chat forum is available
	Message boards Surveys/ polls	0-None, 1-yes	Whether the message board is available
	Webcasts	0-None, 1-yes	Whether the webcast is available
	E-newsletter	0-None, , 1-yes	Whether the E-newsletter is available
content	language	0-None, 1-yes	Whether Multilanguage web-page is available

Table 3

sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Eddie the eagle museum	1	10.0	10.0	10.0
	Fluorescent Art Museum (Electric Ladyland)	1	10.0	10.0	20.0
	Greenbox Museum of Contemporary Art from Saudi Arabia	1	10.0	10.0	30.0
	Mediamatic Bank	1	10.0	10.0	40.0
	Stedelijk Museum Amsterdam	1	10.0	10.0	50.0
	Inside-out Art Museum	1	10.0	10.0	60.0
	Museum of Contemporary Art Beijing	1	10.0	10.0	70.0
	National Art Museum of China	1	10.0	10.0	80.0
	Today Art Museum	1	10.0	10.0	90.0
	Ullens Center for Contemporary Art	1	10.0	10.0	100.0
	Total	10	100.0	100.0	

Table 4

profile

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Amsterdam	5	50.0	50.0	50.0
	Beijing	5	50.0	50.0	100.0
	Total	10	100.0	100.0	

Table 5

profile

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2000-2013	5	50.0	50.0	50.0
	1990-1999	1	10.0	10.0	60.0
	before1990	4	40.0	40.0	100.0
	Total	10	100.0	100.0	

Table 6

profile

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	private	7	70.0	70.0	70.0
	public	3	30.0	30.0	100.0
	Total	10	100.0	100.0	

Table 7

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
profile * profile	10	100.0%	0	.0%	10	100.0%

Table 8

profile * profile Crosstabulation

			profile		
			private	public	Total
profile	Amsterdam	Count	4	1	5
		% within profile	80.0%	20.0%	100.0%
	Beijing	Count	3	2	5
		% within profile	60.0%	40.0%	100.0%
Total		Count	7	3	10
		% within profile	70.0%	30.0%	100.0%

Table 9

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.218	.490
	Cramer's V	.218	.490
N of Valid Cases		10	

Table 10

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)

Pearson Chi-Square	.476[a]	1	.490	
Continuity Correction[b]	.000	1	1.000	
Likelihood Ratio	.483	1	.487	
Fisher's Exact Test				1.000	.500
Linear-by-Linear Association	.429	1	.513	
N of Valid Cases	10			

a. 4 cells (100.0%) have expected count less than 5. The minimum expected count is 1.50.

b. Computed only for a 2x2 table

Table 11

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
profile * userorien	10	100.0%	0	.0%	10	100.0%

Table 12

profile * userorien Crosstabulation

			userorien						
			2	3	7	9	10	11	1
profile	Amsterdam	Count	2	1	0	1	0	1	
		% within profile	40.0%	20.0%	.0%	20.0%	.0%	20.0%	
	Beijing	Count	0	1	1	0	1	1	
		% within profile	.0%	20.0%	20.0%	.0%	20.0%	20.0%	
Total		Count	2	2	1	1	1	2	
		% within profile	20.0%	20.0%	10.0%	10.0%	10.0%	20.0%	

Table 13

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.775	.423
	Cramer's V	.775	.423
N of Valid Cases		10	

Table 14

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.000[a]	6	.423
Likelihood Ratio	8.318	6	.216
Linear-by-Linear Association	1.597	1	.206
N of Valid Cases	10		

a. 14 cells (100.0%) have expected count less than 5. The minimum expected count is .50.

Table 15

profile * collection Crosstabulation

			collection		Total
			no	yes	
profile	Amsterdam	Count	1	4	5
		% within profile	20.0%	80.0%	100.0%
	Beijing	Count	0	5	5
		% within profile	.0%	100.0%	100.0%
Total		Count	1	9	10

profile * collection Crosstabulation

			collection		Total
			no	yes	
profile	Amsterdam	Count	1	4	5
		% within profile	20.0%	80.0%	100.0%
	Beijing	Count	0	5	5
		% within profile	.0%	100.0%	100.0%
Total		Count	1	9	10
		% within profile	10.0%	90.0%	100.0%

Table 16

profile * exhibition Crosstabulation

			exhibition		Total
			no	yes	
profile	Amsterdam	Count	4	1	5
		% within profile	80.0%	20.0%	100.0%
	Beijing	Count	1	4	5
		% within profile	20.0%	80.0%	100.0%
Total		Count	5	5	10
		% within profile	50.0%	50.0%	100.0%

Table 17

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.600[a]	1	.058		
Continuity Correction[b]	1.600	1	.206		
Likelihood Ratio	3.855	1	.050		
Fisher's Exact Test				.206	.103
Linear-by-Linear Association	3.240	1	.072		

N of Valid Cases	10				

a. 4 cells (100.0%) have expected count less than 5. The minimum expected count is 2.50.

b. Computed only for a 2x2 table

Table 18

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.600	.058
	Cramer's V	.600	.058
N of Valid Cases		10	

Table 19

profile * exhibitioninfo Crosstabulation

			exhibitioninfo			
			1.00	2.00	3.00	Total
profile	Amsterdam	Count	2	1	2	5
		% within profile	40.0%	20.0%	40.0%	100.0%
	Beijing	Count	1	0	4	5
		% within profile	20.0%	.0%	80.0%	100.0%
Total		Count	3	1	6	10
		% within profile	30.0%	10.0%	60.0%	100.0%

Table 20

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.000[a]	2	.368
Likelihood Ratio	2.406	2	.300
Linear-by-Linear Association	1.000	1	.317
N of Valid Cases	10		

a. 6 cells (100.0%) have expected count less than 5. The minimum expected count is .50.

Table 21

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.447	.368
	Cramer's V	.447	.368
N of Valid Cases		10	

Table 22

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
profile * userorien	10	100.0%	0	.0%	10	100.0%

Table 23

profile * userorien Crosstabulation

			userorien						
			2	3	7	9	10	11	13
profile	private	Count	2	2	0	0	1	2	0
		% within profile	28.6%	28.6%	.0%	.0%	14.3%	28.6%	.0%
	public	Count	0	0	1	1	0	0	
		% within profile	.0%	.0%	33.3%	33.3%	.0%	.0%	33.3%
Total		Count	2	2	1	1	1	2	
		% within profile	20.0%	20.0%	10.0%	10.0%	10.0%	20.0%	10.0%

Table 24

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.000[a]	6	.125
Likelihood Ratio	12.217	6	.057
Linear-by-Linear Association	1.560	1	.212
N of Valid Cases	10		

a. 14 cells (100.0%) have expected count less than 5. The minimum expected count is .30.

Table 25

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	1.000	.125
	Cramer's V	1.000	.125
N of Valid Cases		10	

[i] Credence goods share the characteristics that though consumers can observe the utility they derive from the good *ex post*, they cannot judge whether the type or quality of the good they have received is the *ex ante* needed one"
(Dulleck,Kerschbamer and Sutter, 2009; 1)