ERASMUS UNIVERSITY ROTTERDAM

Erasmus School of History, Culture & Communication

A REMBRANDT IN VIRTUALLY EVERYONE'S LIVING ROOM?

THE GOOGLE ART PROJECT AND ITS PROMISE OF A GLOBAL AND DEMOCRATIC ART CONSUMPTION EXPERIENCE

Ioanna Panagiotopoulou (351340)

Supervisor: Payal Arora
Second reader: Jacob Groshek

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Abstract

The launch of the Google Art Project (GAP) promises the most ambitious virtual art experience, as esteemed museums in Europe and the USA display their art to an online global audience. This new web space promises users an astounding range of art to browse through in their own time and in their own manner of choosing. This new space also promises to challenge the traditional museum experience as users can have a 360-degree view of galleries, with an option to zoom in or out. Such promises however, have triggered a flood of reaction, starting with the more typical fear of a physical space being replaced by a virtual space and how this would impact museum attendance. Opposed to that, the optimists see this as a strategic means to get the visitor into the museum by, "looking through the Google Art Project is a bit like walking by a bakery, smelling the brownies and shoving your nose against the glass. It intensifies the hunger rather than quashing it," (The Economist, February 2011). This study aims to help position the complex relationship between new media and high culture. Besides comparing online and offline art spaces, this thesis researches a more grandiose idea; the possibility that high culture has, at last, become accessible, where the virtual art space of the GAP is making art enjoyment and knowledge a democratic and global experience. Therefore, by implementing qualitative and quantitative methods and positioning the user as central – a "visitor-centered" (Hooper-Greenhill, 1994) study - this investigation sheds light on the users' opinions, feelings and beliefs about this virtual museum realm, contributing to the main aim of the study. The data of this research argues that the GAP is a lens with expanded utility in enjoying art, evoking from educational to sensational experiences to the "virtual" users, revealing the edutainment nature of the online art realm. It is proposed that a virtual art space could potentially mediate our mind, our senses and our memories, by creating new or evoking "real" memories and emotions through the virtual navigation with active and critical engagement of space and art. Overall, the virtual art realm could present itself as an opportunity for museums to strategically reinvent users' perceptions about engagement and entertainment to a diverse public. The primary contribution of that thesis lies on addressing the amateur and the high culture relationship, by highlighting the potential museums have to rebrand their identity due to the growth and importance of online art spaces' in our contemporary environment.

Table of Contents

Chapter 4

Chapter 5

Chapter 6

Table of Figures

Chapter 1

Introduction: Mind The GAP

1.1 Introduction

"*Explore museums from around the world, discover and view hundreds of artworks at incredible zoom levels, and even create and share your own collection of masterpieces," (*Sood, 2011).

"Makes Masterpieces Accessible to All," and, "The glory is in the detail of the Google Art Project," are headlines of several online and offline popular media. Other such titles include, "Hype and Hyper-reality: Zooming in on Google Art Project," (Davis, 2011) and, "Google's Art Project reveals never-before-seen secrets of art world," (IBTimes Staff Reporter, 2011). It is apparent that the Google Art Project (GAP[1]) has gained popular media attention[2].

The launch of the GAP (http://www.googleartproject.com/) unveiled by Google on the 2nd of February 2011 is viewed as a, "unique collaboration with some of the world's most acclaimed art museums to enable people to discover and view more than a thousand artworks online in extraordinary detail," as underlined in the Press Release of the project. This is a profound sign that we are experiencing a revolutionary age, a "digital revolution" in the art world, engendered by information technology and characterized by functions and processes that are increasingly organized around networks: open, highly dynamic and interconnected systems of information (Sood, 2011).

In this online virtual space, dedicated to works art, the user can find a selection, "of super high-resolution images of famous works of art as well as more than a thousand other images, by more than 400 artists—all in one place," (Sood, 2011). With the use of Google Street View technology, users can take a virtual tour inside seventeen

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1 This thesis uses the abbreviation 'GAP' when refers to the Goggle Art Project.

2 This is a short review of Google Art Projects articles in the popular media:

"National Treasures: Google Art Project unlocks riches of world's galleries" *(The Washington Post)*
"Google Art Project: the 7 billion dollar masterpieces" *(The Telegraph)*
"The Problem with Google Art Project" *(The Telegraph)*

of, “the world’s most acclaimed art museums, including The Metropolitan Museum of Art and MoMA in New York, The State Hermitage Museum in St. Petersburg, Tate Britain and The National Gallery in London, Museo Reina Sofia in Madrid, the Uffizi Gallery in Florence and Van Gogh Museum in Amsterdam,” (Sood, 2011). As Roberta Smith wrote in her thoughtful exploration of the project in the New York Times (2011), “the online zoomable images are not really so new or novel for museums.” But the new standard set by the sheer amount of zoomable surface in the “ultra-detailed gigapixel rendering of 17-spotlighted paintings” — one from each of the participating institutions — “is the game-changer here” (Smith, 2011). This implies that visiting virtual museums and Google’s visibility could reinvent the museum experience by replacing it and this fear fanned by popular media is essential to unpack the actual impact this virtual art space has on its clientele.

The exploration of the project triggered reactions and an endless discourse in the social media. The positive take on this is expressed, “[…] you can look from a seated position in the comfort of your own home or office cubicle, for as long as you want, and without being jostled or blocked by other art lovers,” (Smith, 2011). Additionally, the Head of Google Art Project, Amit Sood, points out is that the main aim of this promising project is to provide accessibility to artwork to people from all over the globe, “[…] It’s our first step toward making great art more accessible,” (Sood, 2011). However, the question emerging is, given the accessibility to the art works that the space provides, will the general public still want to see these works of art and the museum in physical space or does this serve as a substitute to the museum’s physical space? This research argues that this question is probably misleading, as its not an either/or situation; rather, we should examine the relationship between the virtual and the real experiences that the users have and explore further the ways these compliment and interact with one another.

The Economist (2011, February) approaches the project positively although questions its usability, “looking through the Google Art Project is a bit like walking by a bakery, smelling the brownies and shoving your nose against the glass. It intensifies the hunger rather than quashing it.” Tim Adam particularly argues that the project can evoke a more palpable desire to view the original artwork (Adam, 2011). Thereby, the director of London’s Tate Museum, Sir Nicholas Serota (2011), stated that, “[…] the most revolutionary aspect of the project may be its use in arts education.” It is therefore particularly interesting, when investigating this new digital

art platform, to look into the role of learning. In fact, the participation of museums in the project may dovetail into a number of educational initiatives, which, as described by Serota, "[…] will expand the reach of the museum internationally by leveraging virtual technology," (Serota as cited in Simek, 2011).

Those more skeptical opinions about the project challenge the hype around it; "What the Art Project produces is an illusion of democratic experience," Jed Perl, The New Republic's art critic stated (February 16, 2011). Sacha Freudenheim (vice president of the arts communications company Resnicow Schroeder Associates) blogged about the GAP, "At some level, this is a very elite take on the idea of accessibility: you need to be able to appreciate art in order to appreciate art in this context," (2011, February). Simek (2011) questions, "Is the Google Art Project the best thing since real eyes?" "[…] Is it art or just pixel-perfect?" Smee also challenges the GAP and continues, "[…] we're deluding ourselves if we think Van Gogh's brilliance can be subdivided into pixels," (Smee, 2011, The Boston Globe). Regarding that, the director of The Met, Thomas Campbell (as cited in Davis, 2011) underlines, "[…] obviously, nifty digital simulations of famous art are first and foremost a great ad for the artworks themselves. They are bound to expand interest, not diminish it."

As previously mentioned, "[…] the first flood of reaction to Google's art initiative has focused on the question of whether or not it might replace the need to go to a museum", Davis highlights (2011). However, "[…] such preoccupations may reveal more about contemporary insecurities about art museums, as degraded cathedrals of tourism […]" (Davis, 2011) than they do about what Google has to offer. As Erdmann of the Vaughan Christopher Gallery replied, when asked what he thinks of the criticism of the project, "People will never stop going to museums. They are part of our culture and history" (as cited in Freudenheim, 2011).

Many art museums, as Hooper-Greenhill supports (2001) in her research of the museum space, "[…] see themselves as rather special places, separate from the mundane world of the everyday, places that preserve the best of the past, and places that are appreciated by cultured and sophisticated people" (Hooper-Greenhill, 2001:10). The new tools and technologies may lead and provoke profound change, both within museums and in their relations with the public. Some argue that the GAP allows users to customize their experience, at least up to a point, by deciding which galleries or museums they want to visit, and how they will circulate around the rooms. But, do advances in technology necessarily make art more democratic? To answer

this, the way the general public perceives this project will be central to this research.

Amit Sood, stresses this point clearly on the company blog, where it is stated that its team's ultimate goal is to bring about change where museums make their art more accessible and bring it closer to their visitors "[…] not just to regular museum-goers or those fortunate to have great galleries on their doorsteps, but a whole new set of people who might otherwise never get to see the real thing up close," (Sood, 2011). Hence, what does "access" mean in this context? This notion will be deconstructed through analysis of the case. Perhaps the, "Google Art Project may have the same relationship to museum-going that Facebook has to friendship. It will take you only a small part of the way," (Perl, 2011). It is, therefore, the role of this thesis to ground this range of suppositions by means of exploratory research.

Interacting with the public using new technology designed for that purpose means that the public is able to engage in potentially shaping the perception of art and constructing a new identity of the museum. This may represent a shift of power, from museums to the public as gatekeepers. The GAP offers possibilities to different audiences for engaging and interacting with art objects, as it allows anyone with an Internet connection to explore in breathtaking detail hundreds of important paintings; a fact that could impact the democratization and globalization of art and culture.

This thesis aims to contribute in positioning the complex relationship of the amateur and the high culture within the new media sphere. For this reason it explores in depth how the virtual space and the user's experience connects with the real ones, as the virtual and the physical blurs in the contemporary environment. The hype question of whether the GAP, and the virtual museum by extension, replaces the experience of seeing masterpieces in the physical museum space is further answered by this study.

More importantly, the question that this study sheds light on is: ***does the GAP democratize and globalize the experience and knowledge of art*****?** In order to answer this main research question, three sub-questions have been opted for to address the different aspects. In doing so, this thesis combines quantitative and qualitative methods. The sub-questions are:

1. *Who is using GAP and why? (Profiling the users of GAP)*
2. *What is the users' perception regarding online art and the online collection?*
3. *How do the user's experiences of "virtual" and "real" art compliment and*

interact with each other?

Therefore, I delve deeply into the euphoric propositions about the virtual museum, positioning the user centrally within this virtual museum world. I attempt to profile the users that access the GAP, and then analyze how they perceive these novel art spaces and what motivates them to access and experience them (Chapter 5). Furthermore, I examine how they view the relationship between these virtual museum spaces and the physical museum world (Chapter 5). The idea of accessibility is pushed further, gauging how users make sense of the virtual representations and indexing of the art online.

Methodologically, this detailed study employs a mixed-method including an online survey and interviews. The intent is to see how the user interfaces with this space and, overall, to create some grounding to the hyped claims pervading the media landscape on virtual art spaces. This serves as an ideal opportunity to reveal online choices of the amateur in their art discovering behavior, information access and the processing and motivations for inhabiting and engaging with certain art spaces over others online.

The primary contribution of this thesis to this area lies mainly in the qualitative data collected, which suggests that the virtual visitors of the online art spaces are potentially having more complex experiences at these spaces, including a wide range of emotional responses and intellectual engagement with the art online, as presented later at this study (Chapter 5). Understanding the complexity of the users' perceptions and experiences at the virtual art spaces is crucial, as it influences their perception about art, the present and future museum identity. Museums are overall places of social activity that facilitate a range of experiences, including emotional and educational experiences. In parallel, the social activity of the user in the virtual art spaces is explored, as it may also reveal how identities are built and negotiated, influencing the present museum identity. At the end of this study the GAP is defined as a virtual art space in which different types of educational and entertaining experiences are being blurred, revealing its edutainment nature of experiencing art.

The in-depth investigation of the user's opinions, feelings and beliefs about the GAP reveals the expanded utility of the GAP from an educational and active learning lens, to creating sensational experiences for the users, and ultimately promoting an innovative culture and economy. Overall, this investigation sheds light on the users' opinions, feelings and beliefs about this virtual museum realm, contributing to the

ongoing research on amateurs and high culture and highlighting up the opportunity the museum has to reinvent and rebrand its identity to the visitors' perception.

Chapter 2

Museum: A Conceptual Framework

2.1 Introduction

This chapter constitutes the "conceptual framework" of this study as Miles and Huberman (1994: 18–22) have defined it; a visual or written product, one that, "explains, either graphically or in narrative form, the main things to be studied—the key factors, concepts, or variables—and the presumed relationships among them," (Miles and Huberman, 1994: 18). In this study, this "conceptual framework" is used in constructing the system of concepts, assumptions, expectations and theories supporting and framing the research regarding the GAP.

The structure of this chapter is as follows. Firstly, a definition of "The Museum" and the "virtual museum" are presented, as well as the terminology that this study refers to; following which, the transition of the museum identity is revealed and the main reasons causing it; the commercialization, and eventually the introduction of new media, and digitalization as it impacts the art world sphere. Conceptualizing and situating the notion of an audience is inevitable, as the celebration of the amateur holds a central position in this study. Additionally, the idea of active and emotional engagement with online art and the experience of the users in the "virtual" and the "real" museum spaces are explored critically. Finally, the conceptualization of the different social roles the museum holds in our society is also discussed in this study; particularly its educational and communication role. The main aim of this chapter is to critically approach the concepts framing the museum's identity and its key terminology. Overall this chapter aids in framing the research questions later on (Chapter 3), and the research design (Chapter 4) in questioning whether the Internet and new media are democratizing and globalizing the knowledge, experience and institutionalization of art. This study addresses the implications that the new virtual art world may have on the users', and, in turn, on the world of high art.

2.2 Conceptualizing "The Museum" and "The Virtual Museum"

The first thought that crosses the mind when we think about museums, despite the changes that have taken place in recent years with regards to a shift to digitalization, is cathedrals with classical columns, with marble stairs and, generally, an impressive

building. That could be the general image of “The Museum” (Hooper-Greenhill, 1994); an archetype that can include and sustain with pride a variety of interpretations: culture and civilization, days of glory and misery, power and control. “It is an essentialist image, which acknowledges neither the range of pleasures that may be gained from visiting museums, nor the complexities of the challenges facing museums today,” (Hooper-Greenhill, 1994). “The Museum” is an ambitious representation of culture and holds a powerful idealistic position in people’s minds, as Hooper-Greenhill also discusses.

Defining a museum according to the International Council of Museums (ICOM), it is, “a non-profit making, permanent institution in the service of society and of its development, and open to the public, which acquires, conserves, researches, communicates and exhibits, for purposes of study, education and enjoyment, material evidence of people and their environment,” (ICOM, 2010). The definition from ICOM highlights the preserved “permanent” position the museum holds in our society and its social roles in education and entertainment; concepts that are central to this study as the idea of accessibility is pushed further, guaging how users make sense of informational representations and the indexing of the art within virtual museums. Moreover, the ‘openness’ of the museum to research, community building, and its important role of conserving objects are also underlined in that definition.

At the same time, the definition of the “virtual museum” (Schweibenz, 1998:191), a term coined by Schweibenz, should be discussed, as it is a constitutive part of this study. It is defined as, “a logically related collection of digital objects composed in a variety of media, and, because of its capacity to provide connectedness and various points of access, it lends itself to transcending traditional methods of communicating and interacting with the visitors, being flexible towards their needs and their interests.” This definition clearly emphasizes the characteristics the virtual museum has, as featured in the GAP, and the personalized virtual experience it offer the users; the main attribute being its flexibility to suit users’ unique desires and purposes to navigate the platform and experience art.

At this point, it has to be mentioned that the idea of the “virtual museum” is not new, but has already been described by Allon Schoener (1968: 364) at the 1968 Conference on Computers and their Potential Application in Museums. Nowadays, the Internet and Google, especially with the launch of the GAP, have made the “virtual museum” space a reality. The “virtual museum” as Andrews and Schweibenz (1998) described, is a “museum without walls” as Bearman (1992: 126)

calls it.

The “museum without walls” is characterized by two things and is related to the third generation of online museum sites, such as Pawels and Van Oost (2005) have categorized them. They have interactive features and are not merely brochures of the traditional museum. Firstly, the virtual museum’s openness; as it is accessible out of the museum’s space online, enables an interactive dialogue with visitors offering them digital art objects and information (Andrews and Schweibenz, 1998). Secondly, through its connectivity, visitors from the entire world can access it, and it, “gives them a dynamic, multidisciplinary and multimedia approach to the collection,” as Jamie McKenzie describes it (McKenzie, 1997 as cited in Schweibenz, 1998). This definition of the “virtual museum” describes the exact characteristics that the museums featured in the GAP have - global accessibility and connectivity of the users – those notions are embraced and used in this study.

Overall the definition of the “virtual museum” in the museum field and the associated literature is defined in a variety of terms. Different synonymous combinations for online museum digitally-related spaces exist, namely: “electronic museum, digital museum, on-line museum, hypermedia museum, meta-museum, web museum, and cyberspace museum” (Schweibenz, 1998). Initially, the application of interactivity and multimedia in the museum field was first proposed in 1991, at *the International Conferences on Hypermedia and Interactivity in Museums* (ICHIM). All the above-mentioned terms aim to describe and define the digitalized museum with its world-wide-accessible online collection. Lewis (1996) gave the most well known definition, and his point of view regarding the “virtual museum” is as follows:

“A collection of digitally recorded images, sound files, text documents, and other data of historical, scientific, or cultural interest that are accessed through electronic media. A virtual museum does not house actual objects and therefore lacks the permanence and unique qualities of a museum in the institutional definition of the term.” (Britannica Online, Article Section, 1996)

Taking all these definitions into consideration about the "virtual museum" and especially drawing inspiration from Schweibenz (1998) proposal, the GAP could be defined as follows: “A selection of "virtual museums" with their “related collection of digital objects composed and in a variety of media,” (Schweibenz, 1998). Furthermore, because of its characteristic – as an online platform - to provide connectedness and global access, the GAP goes beyond the limits of the traditional social and communication roles of “The Museum”; as interactivity with the visitors

means being, “flexible toward their needs and interests; it has no real place or space, its objects and the related information can be disseminated all over the world,” (Schweibenz, 1998).

Marstine (2006) argues that museums are, “dominant features of our cultural landscape that frame our most basic assumptions about the past and about ourselves,” (2006: 1). Museums are recognized as places where identities are built and negotiated within the social activities that take place thus proposing that the social role of the museum is closely related to the construction of the cultural, national and social identity (Marstine, 2006). Nowadays, new media tools and the “virtual museums” can possibly advance a user’s sense of his/her cultural identity. New media and the GAP may challenge the contemporary museum identity, as presented in the definition given above, posing both opportunities and challenges.

The comparison and relation between the traditional museum and the “virtual museum” are mainly approached in this study from the users’ point of view. The main difference between the two spaces is “the real and the digital object”, as Lewis underlines (1996). However, there are scholars who support that, “there is no longer a clear conceptual distinction between original and reproduction in virtually any medium” (Davis, 1995:381), like a “chameleon”, as Davis puts it. The lack of the actual sense of the art work and the “aura” (the classic Walter Benjamin concept from “The Work of Art of mechanical reproduction”) of being in the physical space are qualities that the “virtual museum” lacks, as some academics argue, and this research aims to delve deep into the users’ perception about the possible aura and their sense of it (Chapter 5).

The persistence and the transience of “Aura”

Great discussion and debate exists regarding the “aura” in the museum literature, following the research of DiNicola (1995), which shows that Benjamin’s work is transferable to the digital reproduction of works of art. The more progressive academics support that between the two states, the “pure and original” and the “imitative and impure”, there is no difference. It also shows that the, “Images, sounds, and words are received, deconstructed, rearranged, and restored wherever they are seen, heard, and stored” (Davis, 1995:381). On the other hand, scholars argue that the “auratic quality” of the “virtual museum” is where, “the dead replica and the living, authentic original are merging, like lovers entwined in mutual ecstasy,” (DiNicola, 1995; Douglas Davis, 1995: 381-385). They are characterized as “traditionalists” by

Schweibenz (1998)-, (Schafer, 1995:75; Mitchell/Strimpel 1997:32) as they refuse to grant any “auratic quality” to the “virtual museum”.

McTavish (2006) belongs to the group of scholars questioning the authenticity and supporting the loss of the aura of art in the age of digital and virtual representation. She points out that quality problems are raised concerning the online representation of artworks, as it is highly dependant on the technology the user is using to access them (McTavish, 2006). Therefore, she underlines that this low quality that the online collection provides – either caused by technological issues or copyright - reinforces the statement that “real” art can only be experienced in the physical space of the museum; a statement that this study contradicts to an extent (Chapter 5). Also, the research done in exploring if the users’ of the GAP miss the ‘aura’ surrounding the original work of art – which is so prized by generations of collectors and critics - shows their intriguing perceptions of this discussion.

Apart from these qualities, the role of the museum as an educator (Hooper-Greenhill, 1994), as a “mediator of social inclusion” (Sandell, 1998:4) and as a communicator of culture are fundamental and are presented later in this chapter. So too is the fact that museums, with their function to deliver culture for public consumption, take on the significant role in a construction of social, cultural and national identity (Preziosi in Marstine, 2006: 5).

However, at this point, it has to be mentioned that Van Oost (2003) approaches the definition given by the ICOM presented above in a critical way as a linear and simplified approach towards the complexity of the museum. Specifically, she (2003) points out that it is more focused on four functions of the museum: “The acquisition of a collection, the conservation of a collection, scientific research of the collection, and the communication of the collection,” (Van Oost, 2003: 6). Van Oost also discusses that this last function of the museum, “the communication of the collection,” has gained the greatest importance in today’s world where museums are featured virtually. Indeed, this thesis’s findings support Van Oost’s emphasis on the educational, scientific research, and communication functions of the “virtual” museum.

On the other hand, the Internet enables the “virtual museum”, which is defined as a means of establishing accessibility and connectivity with users from all over the globe, to have dialogue with the virtual visitors. This capacity invites them to create,

“a visual museum experience that is related to a real museum experience,” as Schweibenz (1998) states and for this reason could be argued as being unique. Therefore, this research considers this characteristic of the “virtual museum”, which enables the “virtual” experience to be related to the “real” one as important (Chapter 5), and intends to question how the GAP can be used as a knowledge base and communication system in the art realm and its sheds light on the discussions framing it, referring specifically to art museums.

The art museums are described by the scholarship, as special because the objects displayed in their collection have a special, “ […] status as a work of art and curators often think it speaks for itself and no additional information is necessary whereas the public would appreciate background information in order to understand the museum objects,” (Schweibenz, 1998).

***Connectedness* of the “Virtual Museum”**

The distinguishing characteristic of the “virtual museum”, in contrast to the traditional one, is the connectedness as defined and proposed by Hoptman (1992) and displayed by the GAP in all dimensions. Specifically, this feature describes the presentation of the museum’s collection ecumenically, with interconnectedness, and multifariously, through the use of integrated media. This quality of the “virtual museums” featured in the GAP, allows going beyond the abilities of the traditional museum in presenting information (Hoptman, 1992 as cited in Schweibenz, 1998). For instance, the GAP allows the visitors the possibility to explore the digital representation of works of art and simultaneously to compare and contrast them to works by the same artist, or artists that have influenced him/her, or art works of the same style, or the same period that are exhibited in different museums, or galleries, around the world, which are otherwise impossible to access at the same time. The proposed definition of Hoptman (1992) regarding connectedness of the “virtual museum” is defined as follows:

“*The concept of the Virtual Museum demonstrates how limitations imposed by the traditional method of organizing and presenting information can be overcome in the context of museum visits. In a nutshell, the Virtual Museum provides multiple levels, perspectives, and dimensions of information about a particular topic: it provides not only multimedia (print, visual images through photographs, illustrations or video, and audio), but, more important, it provides information that has not been filtered out through these traditional methods”. (Hoptman 1992, p. 146)*

“Connectedness does not merely mean to link objects together but to give visitors the

opportunity to focus on their special interests by pursuing them in an interactive dialog with the museum," Schweibenz (2004) states. This step in the museum's expansion of the traditional status to the "virtual" one is important, as it is shifting from a "collection-driven museum" to an "audience-driven museum", as Hooper-Greenhill (1994:134) characteristically emphasizes. This shift focuses on the visitors instead of the collection, which is what "The Museum" does.

The GAP is a project signifying an important step towards the "audience-driven" or "visitor-centered" museum (Schweibenz 1998; 2004). In this way, "museums try to reach out to their prospective visitors" (Schweibenz 1998). This project opens up and links museums and art experiences to a wide and diverse audience and several previous studies have emphasized the possibility of outreach that Internet and new media offer (Anderson, 1997; Argoski, 1995; Bearman, 1995; Bowen/Bennett/Johnson, 1998; MacDonald, 1997). The World Wide Web offers many capacities for a hypermedia environment in the form of links to text, images, sound, and videos that are used by the GAP to provide the museums with the chance to present objects and information to an ecumenical audience for their remote collections. "This will have a deep impact on the traditional museum," Schweibenz (1998; 2004) argues. Additionally, there are academics like Anderson (1997:27), MacDonald, and Alsford, (1997:267), who have a balanced approach to the situation and have forecasted, what is happening at the moment. They predict that the museum, "will combine its role as a repository with the use of telecommunication technologies adding a new, digital dimension to the traditional museum," (Anderson, 1997:27). This digital dimension of the museums presented by the GAP mirrors the form of museum that augments the objects with information: the "virtual museum" (Schweibenz, 1998; 2004).

Technology has caused a cultural shift; the way that people act is changing. Therefore, as much as the museum cathedrals may impress and thrill people, nowadays it seems (Chapter 5) that we almost equally revel in truly interactive, innovative "virtual museum" spaces, as featured in the GAP. These online spaces seem to push the boundaries and definition of the traditional museum a step forward, as presented by the academics. Davis (1994) seems to support this argument by stating, "the digital museum can be visitor-centered rather than curator-centered," (1994:70). This study gives grounds for further research to delve deeper into whether, the curators are loosing status in today's art world or whether people actually like to be guided and the experts are maybe not as important, as the

scholarship claims. Museums should be platforms for exchange, to become more popular and accept that everyone can have something valid to contribute and maybe the GAP launches that era. The data of this research highlight that the accessibility that virtual spaces offer, is the key for the museums to expand their utility from places of heritage attraction, to places that facilitate a range of experiences including emotional and educational.

Museums should probably look beyond delivering the same experience to all their visitors and use technology to give personalized experiences to its visitors. The possibilities of, and problems involved with, bridging the gaps between information and entertainment, education and fun, labor and leisure, within the current evolving status of the traditional museum, are what constitute the main stimulation for research in this field. The technology applied by the GAP should be used by museums to bring people together and extend the reach of their community.

2.3 Museum's evolvement: States of Transition

Museums are cultural institutions with a long history that are appointed with the social role of the promotion of culture for the benefit of the society (Burcaw, 1997). "Museums of whatever kind all have the same task to study preserve and exhibit objects of cultural value for the good of the community as a whole" (UNESCO as quoted in Burcaw, 1997: 20). Hooper-Greenhill (1994) points out that the educational role of the museum has grown in recent years, addressing not only students and tourists, but including a broader audience. The changes taking place in the social structures are interrelated with changes in the knowledge and education (Hooper-Greenhill, 2001). Considering the above, museums are subject to various demands, and have to play compelling roles in order to be situated in the new online world. Art museums, along with the GAP, have the chance, as mentioned above, to demonstrate their viability and argue their value in new contexts by "educating" their audiences (Hooper-Greenhill, 2001: 11).

Before discussing the status evolution, which traditional museums have undergone during the period leading up to the "virtual museum" status, constitutional characteristics of the museum should be presented. First of all, the discussion deals

with the professionals that frame the museums identity, specifically curators and people who work in the museum; influencing with their practices, decisions and opinions its form and the museum experience in general. Hooper-Greenhill (1992: 3) argues that this lack of research in the cultural and professional aspects of the museum resulted in, “a failure to examine the basic underlying principles on which current museum and gallery practices rest, and a failure to construct a critical history of the museum field”. The museum experts’ examination is not in the scope of this research, although they are an integral part of the museum; only its audience will be explored. This decision is supported by the fact that the “virtual museum” is “visitor-centered” or “audience-centered” (Schweibenz, 1998; 2004) as presented in previous section.

The second fundamental element of the museum that could be affected more directly by the transition of the traditional museum to the “virtual” is the museum exhibition. “Exhibitions are a vital part of the museum,” that generally employ components such as objects either created by humans or found in nature (Kaplan, 1995). Exhibitions are not randomly composed but are constructed in a way to communicate ideas through the human senses with the most important being the visual (Kaplan, 1995). The importance of the exhibitions rests on the fact that they are the product of scholarship and research, as well as being the direct link between the museum and its audience. The form and presentation of a collection influences the visitors’ perceptions about the world and about themselves (Marstine, 2006). Therefore, there are opportunities and challenges that the museum faces with the introduction of the Internet, such as participating in projects like the GAP, which may influence the future and the form of the museum exhibition.

At this point, after presenting briefly the two constitutive elements of the museum, we will continue with the presentation of the evolution of the museum. Scholars (Hooper-Greenhill, 2000; Macdonald, 2004) at the end of the 20th century identified and defined a period of constant change in the museum field that is still in progress. This transition that the museums are undergoing is mainly caused by three reasons: the commercialization in the museum sector, the increase in number of theme museums, and lastly, the introduction of new media, the Internet and digitalization.

In the first place, the commercialization of objects in the museum triggered its entry into the competitive industry of entertainment, and is the main cause of the museums’ period of change from one stage to another (Mcdonald, 2004). This entry

in the highly competitive and unstable environment of entertainment industry, as Mcdonald (2004) states, is one where the museum has to maintain its social value with consideration to factors such as: the particular audience, those museum-goers which consist of a limited number, and the high storage costs. By entering the leisure field (Hooper- Greenhill, 2000), the museum had to compete indisputably with the leisure private-sector (Schweibenz, 1998), thereby challenging its social role.

Another cause of the changes of state that museums undergo is the increase in number of theme museums; specifically with regards to the entry of different objects with usability and positioning that were not related to the traditional museum field (Mcdonald, 2004). Simultaneously, the professionals involved in the field admitted that the boundaries between the museum and other organizations were blurred (Mcdonald, 2004). The cable car museums could be examples of new forms of museums, while art and natural history museums are characteristic examples of traditional themes of museums.

The third cause of the changes of state that the museums undergo is the emergence of new media and the Internet (Mcdonald, 2004). The academic debate and discourse around the "virtual" state of the museum, as presented before, incorporates opportunities and challenges the museum field. There is a division between enthusiastic-utopian and more skeptical-dystopian academics (Van Oost, 2003). Considering the utopian approach, the museums can draw nothing but benefits from embracing the Internet and attracting visitors both online and in the physical space. On the side of the dystopian approach, the academics support that the physical space of the museum is degraded, as is its social role, through the introduction of its online counterpart (Van Oost, 2003), the "virtual museum". Both points of view can be argued to be deterministic. The present study deals with, and critically examines (Chapter 5), this hype argumentation after the launch of the GAP, whether it will become a good substitute for the museums, and whether visitors are or are not stimulated to visit the physical museum space.

In this transitional period, in order to play and sustain a significant role in our society, Neil Kolter and Philip Kolter (2006) stress some points from the view of marketing at the end of the 20th century, which all museums have to face up to in today's world. First is the museum's mission and identity. Second is the building up of audiences, and third is attraction of financial resources. The relation between culture and economic recourses is briefly discussed below, as a constituent part of the research

done into whether or not the GAP visitors will be stimulated to visit the physical museum. Furthermore, the socially related concept of audience and its connection with the traditional and the “virtual museum” is presented in a later section. A growing number of museums today are reshaping themselves and their identity by incorporating new media, or creating their “virtual museum” through participation in the GAP, in order to adapt to the changing patterns (as cited in Chuan, Kun & Chyuan, 2006: 2).

Cultural Tourism

The challenging economic times have compelled museums and heritage sites to explore ways and means to increase attendance levels and self-generate revenues. Museums and heritage sites have had to meet the challenge of being open to entrepreneurial approaches, as commercial values are part of the museums and the Internet is a, “means, by which commercial transactions take place,” (Hesmondhalgh, 2007). In order to continue meeting their cultural preservation and tourism strategy, they should move more cultural products from being 'export-willing' to 'export-ready' and then to 'export-able’, as Silberberg states, and as the GAP does; meaning that the “virtual museum’s” objects are “ready” for consumption (Silberbeg, 1995:361).

Cultural tourism represents an area of significant economic benefit to museums and heritage sites, as many academics support (Silberbeg, 1995:361). It still seems that the tourism literature has not yet settled on a single definition for the term ‘‘cultural tourism’’ (Dolnicar, 2002; Hughes, 2002). Silberberg (1995) offers a broad definition by defining cultural tourism as: ‘‘visits by persons from outside the host community motivated wholly, or in part, by interest in the historical, artistic, scientific or lifestyle/heritage offerings of a community, region or institution,’’ (p.361). According to this definition, cultural attractions can be museums, galleries, festivals, architecture, heritage sites, artistic performances, as well as attractions related to food, dress, language, and religion.

The growing contribution of cultural institutions, like museums, to the attractiveness of a destination, and therefore to its economy, has urged researchers to turn their attention to the links between the economy and culture (Capstick, 1985). As Kirchenblatt-Gimblett (1998) supports, ‘‘Tourism needs destinations, and museums are premier attractions’’ (p. 132). In this study, the desire of the visitors to be stimulated by the “virtual museum” and the virtual experience of art, to actually travel to and visit the physical museum, is further discussed and investigated (Chapter 5).

Museums try constantly to attract and engage greater numbers of people and as many increasingly diverse audiences as possible. Using many methods, they entice people with different lifestyles and learning styles, cultural backgrounds and social perspectives. Attracting visitors is also dependant on whether museums can sustain a competitive position with the profusion of social, educational, and cultural activities vying for people's attention (McLean, 1999) in this leisure oriented era where the "virtual" and the "real" space are blurring. The competition in the entertainment industry is growing, as the private-sector companies are trying to reinvent their identity, and be positioned as more educational –oriented places in order to attract a more diverse audience (MacDonald and Alsford, 1995).

Overall, the proposition that the "virtual" museum could be characterized as a perfect marketing and communication tool for the traditional museum, as it is highly useful for the retrieval of information by tourists and others (Pauwels & Van Oost, 2005) is embraced by that thesis. As Schweibenz (1998) supports, the Internet can be an effective means of communication between the museum and its audience.

2.4 Social Context and Society: The Audience

The examination of the museum should not be done separately from the social context, as museums and society continuously influence each other; museums are being recognized as important spaces of social activity. The audience is an essential part of society and this study focus specifically on museum audience, because as Hooper-Greenhill says, "If we want to be better communicators we have to become aware of our partners in the communication process," (1994:9). Along with the changing society, art museum values are challenged, and "[…] museums should give to their audiences the opportunity to be the protagonist in the museum experience, acknowledging that many people prefer this way of learning […]" as Richardson underlined during MuseumNext11 conference (March, 2011). The concept of the audience along with the emerging new roles for art museums, and their exposition to new narratives are explored, as offers grounds for the art museums to be compelling in the marketplace (new positioning and branding) and be re-conceptualized in visitors' perceptions, as more democratic and popular places of social activity.

The elite have traditionally had power over the exhibitions, sponsoring or promoting them. The exhibitions, generally speaking, can be considered as political messengers, where, "powerful social groups contest for dominance," which is possibly challenged by the emergence of the "virtual museum" and new social groups

that also wish for social power (Kaplan, 1995), but maybe not. This study questions its “democratizing” power, which is a highly discussed subject in the popular online media, considering the elitist constrains that exist in the museum field. Kaplan (1995) also emphasizes that museums provide the possibility for the elite, via the employed objects and collection, to legitimize themselves in the social environment.

In addition to this, by observing the relationship between the museum and society, one might argue that museums are, “elitist institutions regarding both their audience and their professional sphere,” (Kaplan (1995: 38). Arguing this, Kaplan (1995: 38) defines the exhibitions within the museums as “collective rituals” that maintain and prolong patterns of social power and consist of objects and knowledge, “secret and ‘sacred’, available to those who ‘know’, and who have been initiated into the western notion of art and the world academia.” This image of an authoritative and elitist museum is being challenged by the introduction of the “virtual museum” and the GAP, as both defined previously to this chapter, having the potential to reconfigure social power, empowering the simple user to perform activities and get engaged with museum objects, which was not easily possible in former times.

The museums – especially the art ones participating in GAP - are shifting from being a passive depository of objects to a more active role. Roland Jackson et al. (1998:1) point out that, “the capacity of the Internet, synchronous and asynchronous, makes it possible to make contact and develop long-term relationships with the public”. In particular, they seem to start giving to their audiences the opportunity to be the protagonist in the museum experience; acknowledging that many people prefer this way of learning is discussed later on in this chapter. Besser (1987:14) predicted the change of the museum role; "The museum will change from a static repository of information (akin to an archive) to a more dynamic, interactive information source (more like a library), changing public perception of the objects they store.” He continues his prediction with, “Museums will become more accessible and more democratic as a wider public gets involved,” (Besser 1987: 16). It is this statement that is supposed to reflect the present situation with the GAP. Therefore, this study intends to highlight the global “democratizing” and “accessibility” aspect of the GAP by exploring the profiles – i.e. status, education, language, and race - of the users’ of the site.

Considering that the concept of the “passive audience” has been discarded by the communication research, since the 1950s and 1960s, Hooper-Greenhill (1995)

argues that the museum is developing from a collection-oriented form to a more "audience-centered" one. In the contemporary context that is characterized by the prevalence of the Internet as an archetype of new media, the role of the audience is continuously changing. Livingstone (2004) argues that, "new interactive technologies put ordinary people's interpretative activities at the very centre of media design and use," (p.75) implying that the user has become the centre of attention in relation to the new media technologies and practices. She underlines that there is indeed a change in the needs and the practices of the audience that is related to new media; disregarding the fact that there might have been an excessive enthusiasm around the concept of the "active audience" and a controversy about what that means specifically (Livingstone, 2004).

Once art and information are put into a digital form, e.g. in the GAP, we expand the potential relationships between them and can spread them across different platforms as Jenkins underlines (2001). The introduction of the term of User Created Content (OECD, 2007) in new media practices indicates that the users of the Internet are now given the opportunity not only to become more active online through interactive applications, but also to add value and, by extension, become producers themselves (OECD, 2007). In order to describe the generations that grew up in a new media-oriented environment, Prenksy (2001) uses the term "digital natives"; defining the generation that are use the Internet, computers, mobiles and "all the other toys of the digital age" (Prenksy, 2001:1) with confidence. By creating this term he attempts to stress the fact that this new generation has different needs and expectations as well as different media use. The new generation (Jones & Christal, 2002: 9) as argued by some scholars, has to be approached in the museum field through new tools that are related to the contemporary environment and not through anachronistic ones (Prensky, 2001) in order to engage them with art. However, it should be mentioned that the "digital natives" (Prenksy, 2001) terminology and the theory behind it, is challenged by some academics, as "[…] the significance of the context and circumstance when seeking to understand young people's (non)use of technology" (Selwyn, 2009:373). This means that it is not always necessary for something to be digital in order to attract the next generation. It depends on the context and the type of information that the young people wish to retrieve. This challenges the social role of the museum as an educator and as a communicator in the sense that new roles and identities are emerging in the art world, as is presented in the following sections in this chapter. It is not clear what would stimulate the next generation to the

museum-going practice.

Edutainment in the museum

Edutainment is the combination of information and entertainment and is precisely defined as “the joining together of educational and cultural activities with the commerce and technology of the entertainment world” (Hannigan, 1998:98). Its deployment in the museum field is significant (Schweibenz, 1998), because as presented in the transition periods that the museum undergoes, it has entered the leisure industry, which directly implies that it has to face the competition of other privately owned places of entertainment and touristic attractions (MacDonald, Sharon, 1996) that use new media and technology extensively in order to attract their audience. But the feature of entertainment gives the museums a competitive advantage among the other leisure activities (Schweibenz, 1998), as already includes the educational one, so that could attract a diverse audience. Hooper-Greenhill (2000) points out that education and entertainment synthesize and enhance the museum experience. “The museum has become an establishment for learning and enjoyment,” (Hooper-Greenhill, 2000: 2). George MacDonald and Stephen Alsford (1995:129) also describe how museums, in order to compete with leisure facilities, adopt certain means usually applied by theme parks to attract visitors. Silverstone (1988, in Schweibenz, 1998: 187) additionally remarks that, “museums are in the communication business,” offering education, information and entertainment services. Overall, it is argued in this study that Internet and the “virtual museum” enhance the social and educational role of the museum by providing creative and self-learning opportunities to its virtual visitors (Chapter 5).

Therefore, although education is the primary goal of the museum, entertainment is utilized as an educational method that can enhance a visitor’s learning experience in the museum through the provision of an exciting entertaining process (Hooper-Greenhill, 2000). Museums synthesize entertainment and education in order to satisfy an audience that is not only interested in short term superficial entertainment (Hooper-Greenhill, 2000). Hooper-Greenhill (2000: 140) also states that, “learning is best achieved in circumstances of enjoyment”. MacDonald and Alsford (1995) similarly conclude that there are “new structures in communication and learning that create a dynamic interplay” between the two and that the museum will pursue its unique way of presenting and interpreting information (1995:143-145) via edutainment to become more attractive to visitors (Schweibenz, 1998). Edutainment, which is recognized as the main advantage of the museum, is now briefly presented

as a main feature of the online counterparts of the museums displayed in the GAP - the “virtual” museums.

There are indicators that most museum visitors do not get the full value out of their visit and that museums could be more attractive to visitors by providing them with interactive activities, a personalized experience and inspiring them to be creative (Treiner, 1993). Treinen (1980; 1993) has identified a kind of permanent-stimulated behavior that people visiting museums have. He calls it the phenomenon of "active dozing", a purposeless, unstructured activity (1993:98). In museums he defined the “active dozing” as “cultural window shopping”, which means that, "visitors behave as if museums were mass-media: they linger in particular in front of objects with which they are already familiar, before they visited the museum. As long as they know something about the category of objects and thus about the structure of the display, then a few glances may suffice to check off a few points, to stimulate thought, to supplement knowledge. Everything else is simply ‘taken on board’, or treated as mere diversion," (Treinen 1993: 90).

Edutainment, as applied to the high cultural realm, it is a neologism and its popularity lies on offering simultaneously two thing to the people; “structured experiences that are high in entertainment value” (Janiskee, 1996:400, as cited in Hertzman et all, 2008:155) and informative and important cultural and historical experiences (Palmer, 2005, as cited in Hertzman et all, 2008). By combining education with entertainment aspects, the museum aims to enhance the learning environment in order to be much more “engaging and fun-filled” (Song, Elias, Martinovic, Mueller-Wittig & Chan, 2004). In this research, questions that emerge concerning the potential of the GAP to stimulate education and learning of art via the navigation of this virtual environment are faced, highlighting this potential. Most importantly, this study investigates the implications of the blurring educational and entertaining experiences of the users in this virtual art space, to the museum field. As the edutainment nature of these experiences interestingly define the GAP at the end.

Would that bring social change and enhance social participation in art appreciation? Simon (2007) argues that the employment of highly interactive Internet applications might lead to a more personalized overall museum experience, as well as to the creation of a close relationship between the museum and the visitor (Simon, 2007: 259).

Interactivity & Convergence

The theoretical concepts of interactivity and convergence seem to play a crucial role regarding the case explored. Apart from the thousands of selected images, one artwork is chosen from each of the seventeen museums and is depicted, “in extraordinary detail using super high resolution or “gigapixel” photo-capturing technology in the GAP. Each of these images contains around 7 billion pixels, as stated by the official Blog of the company (Sood, 2011).

Nowadays, interactivity that first and foremost characterizes face-to-face communication can be encountered in the online mediated environments (Rafaeli, 1988 in McMillan, 2006). Liu and Shrum (2002) suggest that interactivity is one significant characteristic of new media, and thus of the Internet, which influences the users behavior online. They also underline that it is usually assumed that interactivity enhances the online experience of the users and they seem to prefer applications with high levels of interactivity, as the popularity of websites like MySpace, YouTube and Facebook indicates.

The GAP site celebrates the amateur’s freedom by offering the choice to navigate in the museums and interact with the virtual space in whatever way they would like to, thus breaking the “unspoken rules” of the traditional museum. Therefore, the user has the “freedom” to explore the museum according to his/her own desire and get as close as they want to the exhibits with the zoom option. The clickable “annotation feature” that is inserted in the platform enables and underlines the central role of the user during the creation of the site, as this gives the user the choice to, “jump from being inside a museum one moment to viewing a particular artwork the next,” (Sood, 2011). This is particularly linked to the motives one has, as for instance being, “inside an image, an info panel lets you read more about an artwork, find more works by that artist and watch related YouTube videos.” All in all, everything is totally related to the stimulation the site exudes every time someone uses an online platform like the GAP (Liu and Shrum, 2002).

McMillan (2006) identifies three different types of interactivity: “user-to-user” (p.213), “user-to-document” (p.216) and “user-to-system” interactivity (p.219). The three types of interactivity proposed by McMillan (2006) can be encountered in different levels in new media applications. The ‘audience’ is not a passive receiver of art information or knowledge in the case examined, but rather an active “co-creator” (Rafaeli and LaRose, 1993, as cited in McMillan 2006: 215). The user has the option to build their

own virtual personalized gallery-collection and, “save specific views of any of the artworks,” (Sood, 2011). Therefore, the levels of interactivity can be measured by examining the direction of communication (one-way or two-way), the level of control of the receiver in communication, the nature of the audience or user (active or passive) and the transparency of the interface in the online environments (McMillan, 2006: 213, 216, 220). It is important to mention that, at this point, despite the popularity of websites like Facebook and YouTube, Nielsen (as quoted in Russo and Peacock, 2009) points out the paradox of “participation inequality”. Surprisingly, only 1 percent of the users fully exploit interactive features that allow the creation of content online, 9 percent of them sometimes become producers, and 90 percent of them are just observers (Russo & Peacock, 2009).

Convergence is another important concept related to the case explored. On the one hand, there is Pierre Bourdieu’s notion of *cultural field* and on the other hand is *digital convergence*, which today takes center stage in the communication process. Both synthesize this process and are possible ways to explain its challenges theoretically (Canclini, 2009). The convergence describes the combination of text, image and sound into single platforms or applications providing unlimited online possibilities for users and producers (Jenkins, 2004). Jenkins suggests that it is not just about new technologies, but it is also about the relationships that those technologies inspire and produce. In the case studied, relationships between the museums and the audience via web design showed that, “convergence alters the relationship between existing technologies, industries, markets, genres and audiences,” (2004: 34).

O’Reilly (2005), in order to portray the emergence of new highly interactive Internet applications such as are represented by Facebook and YouTube, introduced the term of Web 2.0. Today, these websites are gaining increasing popularity, as according to Alexa, the Web Information Company, those two are the 2nd and the 3rd most popular sites, respectively, in the world after Google. The fact that websites are seen as platforms created under the “architecture of participation” is, according to O’Reilly (2005), one of the core competencies of such applications along with the, “harnessing of collective intelligence.” According to the same source, Twitter gains the 11th position in this world scale. Simon (2007) underlines that the last few years’ Web 2.0 applications have influenced the way users, “interact with content and with each other on the web,” (p.257).

New media’s prevalence, including use of the Internet, in the modern landscape affects every aspect of daily social life, although they have not completely replaced

the older types of media like the television or the radio. The two previously mentioned websites, Facebook and YouTube, are based on the users “participation and creativity” because they are encouraged to create content (UCC), connect and communicate with other users, but also to become members of diverse communities.

Visitor's museum experience

It is important at this point to present the contexts that shape or influence the visitor’s museum experience, as this study is exploited further and compared to the “virtual” one. John Falk’s and Lynn Dierking’s (1992:2) research identified three contexts: the first identified is, “the personal one, which incorporates a wide range of personal experience, knowledge and motivation.” Second is, “the social context, which refers to the social environment,” in which the visit happens. Third is the, “physical context, which relates to the architecture of the building,” as well as to the objects contained within it. Falk and Dierking (1992:13) emphasize that the, "decision to visit a museum involves matching personal and social interests and desires with the anticipated physical context and the associated activities of a museum," and that visitors want to see content in context.

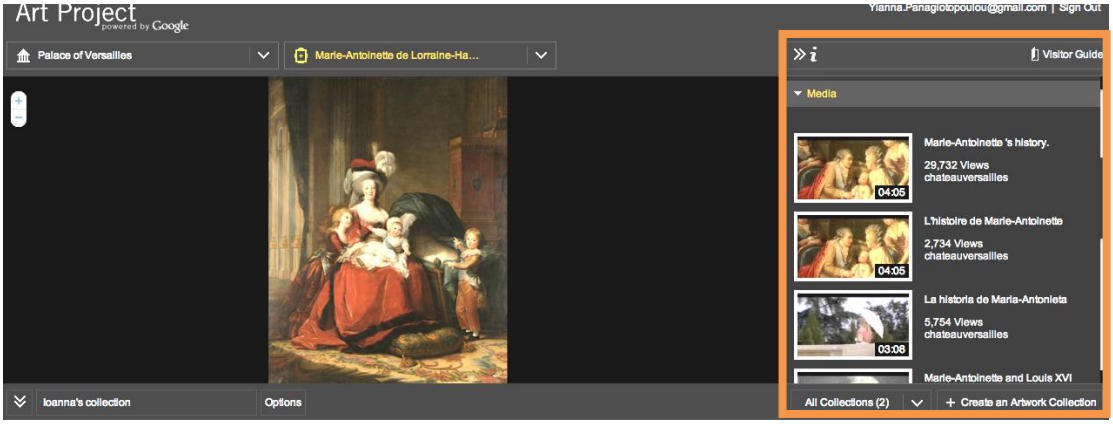
However, as discussed previously, regarding Treinen’s theory of the “cultural window shopping” phenomenon, most museum visitors do not get the full value out of their visit. In this context, the research of Falk and Dierking (1992: 37) offers an interesting insight that is embraced by this study and is further researched and analyzed (Chapter 5): the visitors’ museum experience – either physical to the traditional museum or to the “virtual” one - highly depends and ranges on the expectations and the purpose of the visitor and how closely they fit into the visitor’s museum agenda and the actual museum experience. As presented later on in this study (Chapter 5), if the visitors have previously visited the “virtual museum” in the GAP (Schweibenz, 1998), and then visit the traditional museum, they have "informed expectations" about the traditional museum visit. In that case there will be a “close fit between the expectations and the actual visit” (Schweibenz, 1998). Eventually, as Schweibenz (1998) emphasizes, and the results of this study present, “this will lead to a positive, reinforcing attitude about museums”.

However, there are scholars challenging the interactive features employed to stimulate the real life interaction and that they do not engage the visitors psychologically or intellectually (Manovich as cited in McTavish, 2006). McTavish questions the potential of online interactivity in the “virtual museum” to enhance the

museum experience. The users' perceptions are thoroughly investigated by this study in order to shed some light (Chapter 5) on the statement that, "Individualized intellectual operations, such as remembering, identifying and problem solving, are not encouraged by 'interactive' computer software," (McTavish, 2006: 232). McTavish (2006: 235) strongly argues that the "virtual museum" and the online exhibitions are "pre-programmed menus".

Regarding all of the above discussed perspectives and arguments, the lingering question, which is crucial to the "virtual museum" and as posed by Argoski (1995) is as follows: "Is it possible for the patron to have a meaningful or "real" experience visiting a "virtual museum"?" (Argoski, 1995). This question leads to extensive investigation by this thesis of the visitor's perspective regarding the comparison and contrast of the "real" and the "virtual" experience of the museum space. At this point, it must be mentioned that this question is partly approached by Falk and Dierking (1998) (as cited by Schweibenz, 1998), and draws parallels between museum-going and visiting museum web sites and suggests – based on the modest research that is available – "that creating a Web experience is as complex a behavior for virtual visitors as museum going, because both are centered on free choice learning," (Schweibenz, 1998).

Teather, using a specific term to define the "virtual" experience, the "user-created experience of museums", states that, "the essence of the museum experience that we wish to transfer to the web [...] is about meaning and knowledge building that is based on the visitor," (Teather 1998: 6). This argument is very important, as according to her, the museum experience – both the "real" and the "virtual" one - is centered around (Schweibenz, 1998), making sense, to the visitors, something for which they need information and, by extension, education. Donovan (1997:130) suggests, "museums should give up their object-centric manner in the electronic space because the object is only functioning as a substitute of the real work of art and the meaning hidden behind it; implying the "aura" of the work. Instead they should present stories of the culture, historical context, people and places the object is related with," which is exactly what the GAP does in presenting the "virtual museums" – a combination of the work of art and additional information about it -, and therefore it leads back to Hoptman's concept of *connectedness.*



During this transitional period, museums are involved in a crucial status due to their unique nature as social institutions. Since museums are traditionally connected with the values of authenticity, stability and the nation-state, they function in an unstable and continuously changing globalized environment (Mcdonald, 2004). However, the constant evolution, and the emergence of new media, paradoxically boost the social role of the museum in our society, as a place where social activities take place and identities are formed, and do not degrade it (Chapter 5), as this study argues.

The Social Role of the Museum

In recent years, the role of the museum as a social messenger has become even more important. Sandell (2002: 3) argues that, “Museums and galleries of all kinds have both the potential to contribute towards the combating of social inequality and a responsibility to do so.” They play a significant role in our society, which is not easily recognized and appreciated. “In some cases, collections of objects have been assembled in order to shape consciousness”, (Hooper-Greenhill, 1980, as cited in Hooper-Greenhill, 1994:229); excluding minority groups from the cultural and social arena, as Sandell (2002) points out, - especially in the context of class control, but in some other cases, pointing to a more socially democratic aspect (Chadwick, 1983, as cited in Hooper-Greenhill, 1994:229). Overall, museums in our society are not widely perceived as social messengers but more as cultural agents (Sandell, 2002). Today it is believed that they have the potential to enhance social participation by increasing the participation of social groups in decision making that were previously not given this chance (Sandell, 2002).

The importance of the museum in the social context rests, up to a certain point, on its potential to influence the construction of individual as well as collective identities. Marstine (2006) supports that the impact of the museum on individual and collective identities is that, as the theorist Preziosi says, “museums are such a dominant

feature of our cultural landscape that they frame our most basic assumptions about the past and about ourselves," (as cited in Marstine, 2006: 1). Nowadays, concerning the capability, "museums have to create and influence cultural identities," (Sandell, 2002:3), the literature focuses more than before, "on processes of reception and the tangible impact on audiences," instead of on the, "processes of construction within the museum," (Sandell, 2002: 3). Hooper-Greenhill (1992; 1994) states as well that museums can affect the construction of identity through the manipulation of the represented material objects, by creating meanings that influence the social context. Although there are limited empirical results on the social impact of museums in communities, museums, "can be uniquely positioned to act as catalysts for community involvement," (Sandell, 2002: 7).

Overall, museums seem to intensively occupy the media as well as the academic world (Mcdonald, 2004), which proves to an extent the realization of the fundamental role of the museum in society. In the next section of the conceptual framework, specific social roles of the museum will be discussed –that of the educator and the communicator - as they underline the social relevance of the present research. The discussion about the social role of the museum highlights the importance of the present research that examines the users' perception about the employment of the "virtual museum" and the online collection. The social role of the museum underlines its main function in, "the construction of a world view, through the choice of the representative objects and their arrangement in space," in a social environment where, "there is a pressing need," for more knowledge by the public (Hopper-Greenhill, 1994:229).

2.5 Conceptualizing Social Roles of Museum: Educational role

The thought that museums have the power to develop the mind and enrich the spirit was a founding principle for many institutions. A museum's objects tend to question the roles and the functions of the museum, "which in itself is a very important aspect of museum education," as Hooper-Greenhill underlines (1994:232). In the last two decades there has been a boost in the development of the educational potential of museums with the emergence of the Internet and new media. Museums, as discussed before, are in a constant transition; they are slowly changing to meet their community's needs. Along with this change, there is a shift in the role they play in the educational field. Hooper-Greenhill (2000) points out that the major change that museums undergo in the transitional period also influences the museum's

educational role. As museums become more audience-centered or visitor-oriented their displaying and educational policies evolve to meet the new challenges opened up by their “virtual” counterparts. “Museums have long been thought of as educational institutions,” states Hooper-Greenhill (1999:137). She continues by stating that, “a museum presents probably the only effectual means of educating the adult who cannot be expected to go to school like the youth,” (1991:18).

The academic literature underlines that the museums are no longer perceived as only being “repositories of objects,” but are also, "storehouses of knowledge as well as storehouses of objects," (Cannon-Brookes 1992:501;Hooper-Greenhill 1992:3). “The thrust of this shift is clear - museums are changing from being static storehouses for artifacts into active learning environments for people,” (Hooper-Greenhill, 2000: 1). While in the past, the museums were occupied with scholarship and research, nowadays they focus on the educational needs of the audience that they had been neglecting for so long (Hooper-Greenhill, 2000). Mckenzie (1997) categorizes the “virtual museums” into two divisions; the “Learning Museums”, or “Web sites that offer resources of on-line learning, inviting the visitor to investigate and to explore the available information” (Schweibenz, 1998), and the “Marketing Museums”, or “Web sites that are destined mainly to work as a marketing vehicle and a middle of communication to increase the number of visitors in the original physical museum,” (Schweibenz, 1998). This study focuses on the “Learning Museums” category.

The educational role of the museum is a complex one, as Hooper-Greenhill (1994) states, “knowledge is now well understood as the commodity that museums offer,” (Hooper-Greenhill, 1992: 2). Museums, with their exhibited objects and collection, have the potential to change the way society and everyday life is perceived and thus to communicate knowledge (Hooper-Greenhill, 1992). “The development of a critical museum pedagogy that uses existing good practice for democratic purposes is a major task for museums and galleries in the twenty-first century,” (Hooper-Greenhill, 2004: 4). The “critical museum pedagogy”, from her point of view, is an educational process where active learning is central and the museum space, in terms of accessibility, becomes more democratic and pluralistic in the artworks exhibited, so that a new broader generation should be reached and educated.

Many school age children today have grown up playing 3D immersive games on various computer systems. In recent years the academics have used the term

“Nintendo generation” (Lievrouw & Livinstone, 2006) to refer to that generation. The “virtual museums” represent the technological approach of the traditional museums and could be considered as being the next step in taking the museum experience beyond entertainment into something much more significant in its potential impact on learning; edutainment. Educational functions combined with interactive information processes, have been developed and enlarged until, at the present time, many museums can be seen to be embracing their (young) audiences enthusiastically, and opportunities for knowledge, inspiration, enjoyment and information are being opened up. The “virtual museum” is being designed in a dynamic and interactive way with links and further information – except the 360 degree navigation function in the museum – is oriented towards complementing learning and educational processes, providing access to young students, teachers and researchers (Chapter 5). This empowers the student to be the creator of the information and the curator, by creating their own collection. For this reason this study focuses on the educational role that the GAP can play and its impact on self-learning.

The development and maintenance of the GAP, featuring “virtual museums”, seems at first, and for many users (Chapter 5), an ideal way to provide a student-centered, constructivist, learning environment. The site gives students and researchers the opportunity to freely navigate in the “virtual” art museums and to further explore what they want to study (NahTah Wahsh, 2002). Additionally, while the user becomes familiar with culture and art by exploring a painting or a museum, the GAP’s interface provides links and information from academics, letting the user get involved in educational processes (NahTah Wahsh, 2002). The GAP is an example that demonstrates the powerful mixture of on-line technology, informal learning and entertainment.

This thesis defines the GAP as a virtual art space, in which educational and entertaining types of experiences are blurred. The “virtual museums” presented on the GAP can be used in classrooms, to support learning interactions because of its edutainment nature. It could allow students and researchers, from other parts of the world, to compare and contrast their online “virtual” experience, aspects of their research, heritage, or culture depending on the different settings of the museums featured.

Regarding this museum’s “prime function” of education, which is supported by it being, “the reason for existence of a museum,” (Hooper-Greenhill, 1994:229), the

scholars immediately link it with the communicative function of the museum (Williams, 1981, as cited in Hooper-Greenhill, 1994:233). Particularly, Williams (1981, as cited in Hooper-Greenhill, 1994:233) characterizes it as a, “keystone in the conduct of the whole museum.”

2.6 Conceptualizing Social Roles of Museum: Communication role

Museums in the contemporary environment are recognized as important places of social activity and perceived by scholars as, “both mass communicators and interpersonal communicators,” in our society (Hooper-Greenhill, 1994:12). This is especially true when considering that the “virtual museums” featured in the GAP are online exhibitions involving one-way communication, like all forms of mass media (Hooper-Greenhill, 1994:13-14). This means that the GAP is first and foremost, “a single message source with a large group of receivers, and the messages themselves are in the public domain” (Hooper-Greenhill, 1994:14). On the one hand the public can visit the museum, on the other hand, by having the “virtual” counterpart of it accessible online, museums seem to, “deal with a great number of people in a less personal way,” (Hooper-Greenhill, 1994:14).

The diffusion of new media has changed the way of communication influencing the social structures. The similarities between the museum and new media are identified both by Schweibenz (1998) and Hooper- Greenhill (2000). In the “communication business” the museum serves educational, informational and entertainment purposes, as Silverstone underlines (1994, as cited in Schweibenz, 1998:187). Specifically, Silverstone states (1994:162), "Museums are in many respects like other contemporary media. They entertain and inform; they tell stories and construct arguments; they aim to please and to educate; they define, consciously or unconsciously; effectively or ineffectively, an agenda; they translate the otherwise unfamiliar and inaccessible into the familiar and accessible."

In order for museums to communicate and get connected with the public, the connection of the museum with its visitors, should create meaning and establish aligned context in the online and offline exhibitions (Schweibenz, 1998); they connect visitors, objects and information in a holistic and complementary way. Apart from the significant shift to the museum’s educational role, which is revived with the “virtual museum” and employment in the traditional museum space, studies into visitors were conducted in the past by researchers (Melora McDermott, 1988 as well as the Getty Center for Education and Arts, 1991) and underline the importance of the

communicational role of the museum. In particular, it was investigated how the context of the collection is communicated to the public -also emphasized by Treinen (1996: 65), who explains that communication is “the key” to understanding the museum’s objects. The myth that "objects speak for themselves" is deconstructed as the connectedness is of a prior importance to learn and establish the context (Schweibenz, 1998).

The communication models regarding the museum have been transformed; from the museum as a communication system that educates, to a communication medium that conveys ideas; as do art museums with the objects that are selected to be exhibited (Hooper-Greenhill, 2000). Hooper-Greenhill (2000) conceptualized the museum as a communicator and used the metaphor to describe those differences (2004) and emphasized that the emergence of new media placing the user in the centre influences its relation with the museum. The GAP represents the most profound case. She also proposes a new communication model in which the audience, in cooperation with “museums communicators”, is interpreted as “active meaning-makers” (Hooper-Greenhill, 1994:17).

More specifically, the museum can be seen, “as an information utility,” (MacDonald, 1911 as cited in Raywar, Twidale & Marty, 2003: 280) meaning that the information that museums contain are a precious resource, which has to be maintained and managed in order to be valuable. In order to perceive the form of the museum as a formal institution and understand its relationship with the audience, Hooper- Greenhill (2000) suggests this conceptualization of the museum as a communicator.

The Communication of the traditional museums via the GAP and their “virtual” counterparts is “as a shared experience” with the audience, looking at the model of communication as stated by Schramm (1973 as cited in Hooper-Greenhill, 1994:33). This approach of the museum’s social roles as a communicator and educator are essential for the purposes of the present study, as it considers the audience to be in the central position in the communication process between the “virtual museum” and the online visitors (Hooper-Greenhill, 1994). The fact that the GAP enables multiple means of interaction and positions the user at the centre of attention, contests the authoritative ‘voice’ of the traditional museum as a communicator of culture and knowledge, giving grounds for further research on that.

Concluding, the GAP has been characterized by both experts and users as overwhelming with regards to the possibilities and the accessibility that it offers to the

public to experience high art in high quality. But among the academics there is a debate, concerning the opportunities and the challenges that a project like this involves. Among the “virtual” users there are different opinions, perceptions, and experiences about this “virtual” art space, even contradictory ones that are presented in a later chapter (chapter 5). Understanding the complexity of the users perceptions and experiences at the GAP, was the primary aim of this study, as it is crucial for the museum’s identity. Most importantly the critical engagement of the users with the virtual art space, its capabilities and challenges, reveals a great potential about the museum online and offline realm. For these reasons, research questions along with a precise methodology were applied in order to qualify and quantify the GAP and approach the most important angles to deconstruct the case.

Chapter 3

Research Question (s): Quantifying & Qualifying The GAP

3.1 Introduction

The purpose of this chapter is to clearly state and define the main research question of this study considering the conceptual framework and drawing grounds from the theoretical framework presented in the previous chapter (chapter 2).

In this research, I delve deeply into the euphoric propositions regarding the Google Art Project and the virtual experience of the online art, by positioning the user as central – a "visitor-centered" (Hooper-Greenhill, 1994) study -, within the "virtual museum" (J.Andrews & W.Schweibenz, 1998). This study intends to shed light on the users' perception of the GAP, considering its characteristic of *connectedness*, which, as defined by Hoptman, is to, (1992 as cited in Schweibenz, 1998), "give visitors the opportunity to focus on their special interests by pursuing them in an interactive dialog with the museum," (Schweibenz, 2004). The Museum's transition from the traditional status to the "virtual" one is significant, as it is shifting from a "collection-driven museum" to an "audience-driven museum", as Hooper-Greenhill (1994:134) underlines. This shift focuses on the visitors instead of the collection itself, and this study considers that change as central.

The research question is**, *does the GAP democratize and globalize the experience and knowledge of art*?** In order to answer this main research question, combining quantitative and qualitative methods to explore this topic on a deeper level has derived three sub-questions. The sub-questions are:

1. *Who is using GAP and why? (Profiling the users of GAP)*
2. *What is users' perception regarding the online art and the online collection?*
3. *How do the user's experiences of "virtual" and "real" art compliment and interact with each other?*

The aim of the first sub-question is therefore, *to explore the global and democratic aspect*, specifically, the extent to which the "virtual museums" featured in the GAP are global (the range of nationalities, race, language of people using them) and democratic (the status quo, class and education of the users). I investigate usage in the three months (February, March, April) following its launch (February 2011). In

order to profile the users of the GAP and deconstruct notions of a global audience, I survey where these users come from, exploiting their overall profile, and investigate the assumption that the GAP is an international space for art consumption. The main aim of the second sub-question is to explore the opinions (beliefs, feelings, sense) of users about the online art and online collection. Overall, with this sub-question I attempt to analyze how users perceive the "virtual museum", its "auratic quality" and what is believed to be the key purpose of the GAP; simultaneously exploiting their motivation to access, experiencing it and getting engaged psychologically and emotionally with the art online. Additionally, I examine how they sense the relationship between the "virtual museum" and the traditional one. The comparison and relation of the "real" experience and the "virtual" one, as well as the idea of replacing the need to go to a museum, in addition to the argument that this virtual experience alters the experience of the original masterpieces are pushed further, gauging in depth how the global cultural museum visitors make sense of them.

Methodologically, this exploratory study employs a combination of qualitative and quantitative methods; in other words, an online survey and interviews. The study, in a general sense, intends to research how the "virtual museum" is interfaced with by the user and overall, to create some grounding to the hyped claims pervading the media landscape on "virtual museums" and online collections. Overall, this thesis serves as an ideal opportunity to shed some light on the "virtual museum" visitors' opinions, feelings and beliefs about the information access provided with the featured "virtual museums" in the GAP and their motivations for engaging emotionally and psychologically with the online art; helping to position the complex relationship between the online visitors and the "virtual museum", as presented in the previous chapter (Chapter 2).

3.2 The Case: The Google Art Project (GAP)

The focus of this study will be the GAP. It was launched on the 2nd of February 2011, and with its characteristics – presented in chapter 2 - considering the definition of the "virtual museum" proposed by Schweibenz (1998), could be defined as an online space as follows: "A selection of "virtual museums" with their "related collection of digital objects composed and in a variety of media," and because of its characteristic –as online platform- to provide *connectedness* and global access, it goes beyond the limits of the traditional social and communication roles of "The Museum"; as interactivity with the visitors is being, "flexible toward their needs and interests; it has no real place or space, its objects and the related information can be disseminated all

over the world," (Schweibenz, 1998). This definition is drawing on the statements by Schweibenz (1998) because he clearly states all of the characteristics and the capacities a "virtual museum" has that are reflected by the GAP.

Furthermore, here are more specifically presented main options you have in using the GAP as presented in the formal blog[3] :

"Dive into brushstroke-level detail"*:* the users have the possibility to select an artwork – each museum of the seventeen displayed has selected one to be photographed with highly resolution – and literally, "dive into extraordinary detail". Overall, the images displayed are 1,000+, except the additional external link and videos giving extra information for the artist and the displayed work, or period, once you are viewing an artwork, "an info panel lets you read more about an artwork, find more works by that artist and watch related YouTube videos," as stated by the GAP's official blog.

"Explore inside the museums": the Street View option of the interior of the museum gives the visitors the opportunity to "virtually" move around in the traditional museum space; the "virtual" experience. This feature enables, "smooth navigation of more than 385 rooms within the museums." In addition to this, "a new clickable annotation feature," is added, the "virtual" visitor can switch from "virtually" navigating to viewing a particular artwork, or jump to another museum, overcoming all physical gaps and "virtually" visiting museums at distant locations, all at the same time.

"Create your own collection": With this feature the users can become, "virtually" at least, a curator creating his/her own personalized collection, with his/her own interpretation of the artwork, as, "you can save specific views of any of the artworks." "Comments can be added to each painting and the whole collection can then be shared with friends, family or on the web," using the integrated features.

Overall, the reasons for choosing the GAP as the central case of this study are multiple as is shown in the previous sections and chapters. Considering particularly the debate regarding the traditional and the "virtual" museums, the constant discussion around the GAP and its capacities of democratizing and globalizing the experience and knowledge about art are the main grounds from which this study acquired motivation and inspiration to explore the users' perception. In the following

[3] http://googleblog.blogspot.com/2011/02/explore-museums-and-great-works-of-art.html

chapter the overall research design is presented with the methods for approaching and analyzing the rich data of this study in order to generate an understanding of the users' perception regarding the GAP.

Chapter 4

Research Design: Quantifying & Qualifying The GAP

4.1 Introduction

This chapter intends to provide a thorough description of the research design of the study; the whole data collection process and the methods of analyzing them, using a combination of quantitative and qualitative methods. The thesis uses an inductive research approach, as the case of the GAP and the emergence of the "visual museum" is a particularly new field, although its application was discussed years before as revealed in the literature used. Following the conceptual structure (Chapter 2), which focused on and bound the study, and after exploiting critically and defining terms (Miles and Huberman, 1994), Miles and Huberman (1994) stress the significance of considering ways in which qualitative and quantitative data can be combined in the same study.

A lack of significant research done is detected, on the impact of the virtual arts spaces, and by extension the GAP, on users and by similar "virtual museum" initiatives. Also, there is an academic interest to position the complex relation among new media, the amateur and high culture. This thesis entails the explorative nature of the research and thus the impossibility of making use of a full research design from previous studies. The in depth investigation into the users' opinions, experiences and beliefs about the GAP site will reveal not only the role of museums -from their perspective- at this time, but also how virtual experiences impact users both in terms of art engagement and interest in museums and if those findings make sense beyond the specific case.

The inductive research approach means the transition from observations regarding the case to broader generalizations and theories. For this study, specific observations were made of tweets regarding the GAP in two extremely different phases. The first, following the period from 2 February 2011 to 5 February 2011, was the week of the launch of the GAP, and comprised 1035 tweets. The second is from two months later, 04 April 2011 to 8 April 2011, and looked at 257 tweets. The tweets were collected with the search engine, named Topsy (http://topsy.com/), "a real time search engine powered by the Social Web," as defined by its site. Using the specific term "Google Art Project" and the dates stated above, this web search engine indexed all the results based on that request. Exploring the emerging themes

resulting from these tweets, tentative hypotheses were created and then a survey was designed and conducted using those observations as arguments, which was followed and explored further by online interviews of users of the GAP from all over the world. Overall, a “bottom- up” approach of the case was conducted, starting from the general content analysis of the tweets regarding the users’ perceptions to the specific deep exploration of their opinion and experience of the GAP. The process could be shown with the following sequence: observation of users’ tweets →emerging themes/patterns → surveying the GAP users → interviewing the GAP users→ analysis→ conclusions/developing general theories.

The qualitative and quantitative data used in this research, resulted from different processes, and analyzing all the data into a coherent whole was a challenge. For this reason a meta-matrix method was used, which is a second level of analysis used for triangulation, proposed by Miles and Hubernam (1994), and occurs following traditional quantitative and qualitative data analyses. These analytic methods include the creation of a matrix; transcription of data into the matrix; coding data and noting reflections, and seeking common phrases and isolating patterns and processes, as Miles and Hubernam (1994) defined the process in order to draw conclusions. This typifies the way that qualitative and quantitative data are, “becoming more comparable by standardizing them into the same metric,” (Miles and Hubernam, 1994:178); so that the researcher can gradually build a few generalizations, which are confronted with the theory (Chapter 2). The data approach was challenging, as triangulation of the results required connection to the differently approached results in order to get a more in depth conclusion to the case.

The entire research design supports an inductive explorative study about the users’ perception regarding the GAP. At this point, before presenting each methodology separately, it has to be mentioned that the entire design draws its inspiration from the grounded theory of Strauss and Glaser (1967, in Charmaz, 2007:252). The idea of simultaneous data collection and data analysis interaction (Bowen, 2006: 2) is supported, and therefore a grounded theory is constructed, “derived inductively through the systematic collection and analysis of data pertaining to a phenomenon (Strauss and Corbin, 1990 as cited in Bowen, 2006: 2). In this case, the inspiration drawn by the grounded theory is required, given the novelty of the platform, the dearth of the research in this area and range the emerging patterns regarding the “virtual” museum.

The grounded theory analysis is most commonly used in qualitative methods, such as observations and interviews, (Charmaz, 2007: 258), where patterns emerge from the data and build the theory (Bowen, 2006: 2). Parallel to that study, the themes emerged from the content analysis of the tweets, and these generated arguments that formed the survey. From particular interesting patterns that emerged there, topics were raised and were exploited in detail in the interviews. Overall, the methods analysis used, which is discussed in the following sections thoroughly, is influenced by strategies of grounded theory; particularly, "simultaneous data collection and analysis, pursuit of emergent themes through early data analysis, discovery of basic social processes within the data, inductive construction of abstract categories that explain and synthesize these processes, sampling to refine the categories through comparative processes and integration of categories into a theoretical framework that specifies causes, conditions, and consequences of the studied processes," (Charmaz, 2003: 313).

4.2 Quantitative Research: Online Survey

The survey was conducted in order to highlight trends regarding the profile of the users' of the GAP, three months after its launch, and intends to answer the first sub-question, namely: "*Who is using GAP and why?"* The participants of the survey should have used the GAP in order to reflect on key issues and questions about this online space. This made up the section criterion to continue with the survey. The intention of the survey was to explore where online visitors of the GAP come from (global aspect), what their opinion about this interactive art platform is, and to deconstruct the democratizing art consumption that the GAP is assumed to succeed at.

The survey was conducted using the Qualtrics survey tool and published on Twitter. The respondents were recruited through the tweets collection, as mentioned above, by posting an online link request to them (in their Twitter account with @-sign followed by their names) to participate in the survey. It is often claimed that generalizing from an Internet sample is problematic (Hewson et al., 2003), but in this study it was necessary to use one online survey, as the aim was to reach as broad a sample as possible from all over the globe that was using the GAP. Even taking into consideration these limitations (Twitter users and the GAP users), the extent to which the conclusions can be generalized, the evaluation of the GAP, and their profiles overall as GAP users, do give insight into general trends.

The online surveys have become an essential tool for empirical research over the last few decades, and the Internet is an increasingly popular platform for this research method, especially in the field of social science. In this study, the online survey was chosen because the scope of the research is to investigate the "virtual museum" visitors' perception of the GAP (an online platform) (Selm & Jankowski, 2006). The goal was to reach a diversified sample of users deriving from different places all over the world (taking into consideration the 'digital divide') and speaking different languages. It is certainly necessary to conduct an online survey in order to reach respondents who have used the GAP at least once. Additionally, Internet surveys can lead to higher data quality, as respondents fill in the questionnaire in privacy and at their own convenience of time and place (Vehovar & Manfreda, 2008).

The sampling methodology used in this study was a non-probabilistic one, by obtaining volunteer participants (Hewson et al., 2003). The author relied on Twitter users as participants to come across the tweeted announcement of the survey as I tweeted it to different Twitter users that were collected by the tweets for the observation of the online discourse in the two phases mentioned above. At this point, it is interesting to give some more details about the survey design. The survey was tested on 19 April 2011 with 15 people (convenient sample), and after their feedback it was launched on 20 April 2011, and remained open for 11 days until 30 April 2011. The link was tweeted on the first day from the author's account 57 times and was retweeted from other users 67 times (124 times on the first day), while 52 people participated on that day. From the second day to the eleventh day, it was tweeted and retweeted a total of 417 times, so in total 541 times. On the second day, 39 users responded, while from 22 April 2011 to 30 April 2011, 117 users in total took the survey (n=207). However, because 17 responses were partial, they were not included in the results, and the final responses analyzed are n=192 users of the GAP.

The randomly selected participants were clearly informed (by the tweet and at the start of the questionnaire, please find it attached at Appendix A) about the target group (GAP users) and the scope of the survey. It was also made clear that the findings and their IP address would not be delivered to third parties and that the survey would be short, about 10 minutes. After explaining in brief the initiative and purpose of the survey, the reaction received, and the feedback follow-up mails that random people who filled in the questionnaire sent me, was very positive; many were willing to continue to the second round of the research, namely the interviews.

A problem that should be mentioned is that it was not possible to calculate the response rate but only to acquire a general overview of the survey, as only the number of completed surveys is known (189) and not the number of individuals who have seen the tweet or the questionnaire and did not choose to fill it in, in the given time that was available. This not only takes into consideration the survey that was initially posted by the author, but also the fact that it was retweeted by other users and posted on two other art/technology blogs (after the author's permission was requested and given). This is not necessarily a 'contamination' of the data, as the respondents that were asked about their opinion about the GAP were users of the site and therefore part of the sample.

The response rates in Internet surveys are generally low, which is caused by different reasons, and a number of issues should be mentioned and considered relating to the representativeness of the sample. It was decided that the survey would only be launched on Twitter, due to the fact that museums and their followers are more active on that social platform, as has been observed, and that automatically implies that users' of the GAP that do not have a Twitter account have not been reached. However, as previously explained, this choice was made in order to succeed in the alignment with the observations done beforehand in the discourse regarding the GAP on that platform. Additionally, it could be supported that the fact that the sample consisted of only volunteers –users of GAP- who were interested and followed the link to the survey could be problematic as Vehovar and Manfreda (2008) underline as well; so, the sample can be presumed to be one that is art oriented and that only people interested in art or involved with art will have followed the link.

More limitations should be considered. A tweet including the invitation to a survey and questionnaire link may be treated as spam or simply overlooked. The sample is very dependent on who visited his/her Twitter account at the time and day the link was posted to his/her account. Tweets update quickly, so normally they push the survey announcement 'downwards'. Thus, in the first few days, many people reacted, so the message tweeted remained in a prominent place for a longer time than the following days. Overall, we can say that some factors may have caused problems with regard to the generalization of the findings, as the chance that people will participate is dependent on owning a Twitter account, when they check their account, and how many re-tweets the request received. Even though the mentioned limitations regarding the extent to which the conclusions can be generalized, given that the profile of the GAP users is up to the moment, it does not detract from the fact that the

perception of the GAP users and their evaluation of the “visual museums” give great insight into general trends about the online art and allow for a broad representation of the case.

Online Questionnaire

The online questionnaire was organized into four sections, exploring in brief the different topics concerning the scope of the study. It included 22 compulsory questions (for the purposes of this study, survey responses were considered valid if respondents answered all the questions of the survey), from which 20 were closed and 2 were open, in order to receive a more personal and extensive insight into the users’ perception and experience of the “virtual museum”. Quantitative and qualitative questions were therefore combined, which can lead to higher validity and quality of the collected data, and for this reason are highly recommended (Vehovar & Manfreda, 2008).

The main aim of the survey was to reach users of the GAP from all over the world and to question the global aspect of the GAP; the personal profile of the users is important as class, education, nationality and mother tongue reflects a great deal about the global reach of the GAP. The online questionnaire deals with different topics, for example: *art relation/knowledge/interest in general; access in GAP and general Internet statistics about the use of the site; opinion/perception about the GAP and “virtual museum’s” characteristics, and purpose of use (or not), and demographics*. I will discuss the topics of the questionnaire in this section (the actual questionnaire can be found in Appendix A).

Art relation/knowledge/interest: In examining users of the GAP, exploring their interest of art is essential. The extent to which they are interested and active in art is an important indicator of their profile. Their preferences among different types of art, and their intention to visit famous museums from all over the world are important with respect to their knowledge about art and the inherent interest in it; assuming that this characterizes the users of the site at that particular moment.

Access to the GAP and general Internet statistics: Firstly, the question of access is raised. Where do the users of the GAP browse for art online (at home, work, school or university, or using mobile internet)? Secondly, how do they become informed about the GAP? Thirdly, how active are they as users of the GAP (or not)? How much time do they spend in navigating the site? And lastly, how active were they in exploring its interactive features and available activities (e.g. creating their own

personalized collection). These variables will be indicators about the interest to explore, and get actively involved with the GAP, and if these are connected to their personal interests and work.

Opinion/perception about the GAP and "virtual museum's" characteristics and purpose of use: Apart from asking questions about general issues regarding the GAP, this section aims to explore in depth their opinions and perceptions about the characteristics the GAP possesses, and its potential as is claimed (accessibility to art knowledge, enjoyment of art, replacing the traditional museum being a good substitute of it). Additionally, the purpose of using the GAP is exploited as it is a very important indicator about the experience you take away from it (as supported by the theory presented), and its importance as an art platform overall in everyday life. Lastly some main factors that are supported to characterize the "virtual museum" were explored as to the extent to which they are essentially important for the "virtual" users as well.

Demographics: Regarding the demographics, the following variables were included in the questionnaire: education, occupation, class status (working class, low-middle class, middle class, upper-middle or upper class), mother tongue, country of origin, country of residence, race, age, and gender.

Overall, regarding the link to the questionnaire and the actual format of it, the author tried to make participating as easy and enjoyable as possible (taking into consideration the format, the font choice and the structure). This makes it easier for participants and should thus potentially increase the response. In order to check whether people filled out the questionnaire more than once, the IP-addresses were checked and double entries were deleted.

Analyzing the data (with SPSS) and detecting the trends regarding the users' profiles and their collective perception of the GAP, and the "virtual museum", were essential for the interviews that followed. Drawing inspiration from the grounded theory approach, this involved constantly collecting data and analyzing it (Dick, 2005) in order to get the emerging patterns that are in the scope of the study and that should be explored in more depth by the interviews afterwards. The interviews were conducted the week following the survey, when data collection was done, (1 May 2011 to 7 May 2011) as the survey data gave grounds for topics to be discussed further, and revealed interesting insights and debates about the users' perception of the "virtual" vs. the "real" experience of the museums, which was explored thoroughly

by the interviews.

4.3 Qualitative Research: Interviews

The method of semi-structured interviews was utilized to form the topics. The topics of the interviews were mainly derived from the data collected and analyzed by the survey. The open-ended questions addressed to the GAP users were divided into four main sections (please see the tables of the 11 cases representing the interviewees and the questions asked and their exact replies at Appendix B). Qualitative semi-structured experience-centred interviews (Witzel, 2000, Hoffman et al., 1995) were constructed, which were conducted after I had collected the data from the survey analysis, in order to, "neutralize the alleged contradiction between being directed by theory or being open-minded so that the interplay of inductive and deductive thinking contributes to increasing," the understanding of the different cases. The Internet was used as a channel of communication as the interviewees (11) are the GAP users from places all over the world (Europe, Africa, USA (South and North) and Australia).

Considering the argument that in order to exploit, "disciplinary assumptions and theoretical perspectives" (Charmaz, 2003: 319), the qualitative researchers use analysis based on the grounded theory, this study makes use of that grounding following on from some specific concepts that emerged and made sense to the author, through the content analysis of tweets, and further through the data of the survey. The process of "sensitizing concepts", as Blumer defines it - which actually defines the process of selecting key concepts - was followed as enhances the creation and construction of more precise concepts and arguments, (1969, as cited in Charmaz, 2003: 319). The debate about the "aura" of art (online and offline), the "virtual" and the "real" experience, and the impacts of the GAP on users' art knowledge, were some of these sensitizing concepts of this study. These were also the motivating and "interpretative devices" for the topics of these interviews (qualitatively took grounds to begin and go deeper (Glaser, 1978, in Bowen, 2006). Overall, there were some topics where focus was raised by the survey and was explored further in the interviews.

Interview Topics & Purposeful Sampling

The topics discussed in the interviews aim to explore not only the *users' deeper perception regarding the online art and the online collection as presented in GAP* (2nd sub-question) but also *the way the "virtual" visitors experience the "virtual museum"*

in relation and comparison to the traditional museum (3rd sub-question). Therefore, the topics discussed delve deeper into: *the distinguishing factors (both positive and negative) between the online and the offline art, in the physical context (museum or gallery); the correlation of the "virtual" experience in visiting the "virtual museum" in the GAP and the "real" one in visiting the physical version of it; the physical and emotional engagement with art in both dimensions and the debates arising from it ("aura" of art, substitution of the traditional museum); the educational and research potential of the GAP as a tool, and their overall opinion about the GAP and its key purpose of serving high art.*

Having established the topic for the process of the interviews, the sample selection process (Patton, 1990) was addressed. As mentioned in the discussion about the survey (Chapter 5.2), many respondents of the questionnaire expressed a further interest and motivation to participate in the interviews that followed; specifically 22 participants in the survey reacted and volunteered for the further study. Because the qualitative inquiry typically focuses in depth on relatively small samples, the (n=11) cases (interviewees) were selected *purposefully and critically (Patton, 1990)* taking into account their country or continent of origin and their gender – in order to be aligned with the survey results and analysis. Patton (1990) recognizes that sampling can be a combination of several criteria and not mutually exclusive; this is also referred to as a combination or mixed purposeful sampling (Patton, 1990).

The volunteer sampling is problematic as it can be assumed that the sample is made up of users of the GAP with an inherent interest in art or the art involved; which was proved following the selection process where 4 out of the total 11 (n=4/11) are somehow involved within the art and museum field, and this will be considered in the generalization of the results. However, it must be stated that what Yin (1989) points out was taken into consideration: that the results in the qualitative research are not intended to be generalized to the population but to be general in respect to theory. The purposeful sample is argued as that which encloses its logic and power in selecting *information-rich* cases for in depth study. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research; thus the term *purposeful* sampling (Patton, 1990:169)

"[…] What *should* happen is that purposeful samples be judged on the basis of the purpose and rationale of each study and the sampling strategy used to achieve the study's purpose…*The validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information-richness of the cases*

selected and the observational/analytical capabilities of the researcher than with sample size," (Patton, 1990: 184-185).

4.4 Cross-case Analysis

"Cross-case analysis means grouping together answers from different people to common questions or analyzing different perspectives on central issues," (Patton, 1990:425). One reason for choosing this method of analysis is, "to enhance *generalizability,*" as Miles and Huberman state (1994:173). Particularly in this study, I synthesize the different cases (interviewees) on the different common topics in matrices and analyze them. This "qualitative synthesis is [thus] a way to build theory through induction and interpretation," as the literature states (Patton, 1990:425). Conducting interviews on the collected data for this research, these "multiple cases, adequately sampled and carefully analyzed" (Miles & Hubernman, 1994:173) contribute to make sense beyond this specific case of the GAP. A cross-case analysis was done on the case studies. Another more essential reason for using this method of analysis is to, "deepen *understanding and explanation,*" as Glaser and Strauss characteristically stress (1967,1970, as cited in Miles & Huberman, 1994:173). The use of multiple cases and cross-case analysis, "help the researcher to find negative cases, to strengthen a theory, build through examination of similarities and differences across cases," (Glaser & Strauss, 1967,1970, as cited in Miles & Huberman, 1994:173), which creates a synergy in the research that adds value and importance to the findings.

Considering the *generalizability,* the results of the qualitative research of this study are intended to be general in respect to theory (Yin, 1989). "Reconciling an individual case's uniqueness with the need for more general understanding of generic processes that occur across cases," as Silverstone puts it (1988, as cited in Miles & Huberman, 1994:173), is essential in order to diminish the tension that occurs between the particular case and the universal case.

Pattern Coding

Coding is part of the analysis that leads to the actual analysis of the collected data (Weston et al., 2001), and there are many ways to create codes. It is a very intriguing and useful way to get the data transcribed and synthesized meaningfully (Miles & Huberman, 1994:56), while simultaneously, "keeping the relations between the parts intact," (Miles & Huberman, 1994:56). The class of coding that is used in this study is "*pattern codes*". In the scope studied, it is essential to grasp the users' perceptions

about the “virtual” and the “real” experience of art; “the patterns, the recurrences, the plausible why’s,” as Miles and Huberman (1994:69) state.

“Pattern codes are explanatory or inferential codes, ones that identify an emergent theme, configuration, or explanation,” as briefly defined by Miles and Huberman (1994:69). The patterns could be described as, “repeatedly observed behaviors, norms, relationships; local meanings and explanations; common sense explanations and more conceptual ones; inferential clusters and “metaphorical” ones; single-case and cross-case” (Miles & Huberman, 1994:70).

Concerning the qualitative analysis, Miles and Huberman (1994) stress that the focus is on data in the form of *words* – in our case, words that emanate from the interviews conducted. These words require processing, according to them, and this processing is itself a form of analysis.

Strategies for Cross-cases Analysis: A Mixed Strategy Analysis

Miles and Huberman (1994) explain the essential working principles, the aims and the strategies for cross-case analysis. “We need a theory that explains what is happening- but a theory that does not forcibly smooth the diversity in front of us, but rather uses it fully to develop and test well-grounded sets of explanations,” (p. 207). The aim is to help us to, “see the whole picture,” and manage to synthesize the “ “story” approaches” with the “ “concept” approaches” as Ragin states (1987, as cited in Miles & Hubernman, 1994:208). Considering the inductive grounding is essential to recognizing the different patterns and construct variables.

The way that the data will be analyzed is very important for any research study. Yin (1994) suggests that a general analytical strategy is essential to provide the researcher, “with a system by which she/he can set priorities for what it is they need to analyze and why,” (Yin, 1994:45). Herriott and Firestone (1983) consider the data from multiple cases as, “more compelling, and the overall study is therefore regarded as being more robust,” (as cited in Yin, 1994:45). Considering this, the two specific strategies that Miles and Huberman (1994) have presented and a third they identified, which is the combination or integration of the first two and are used in this study, are discussed.

Therefore, there are two *general analytical strategies* as Yin (1994) discusses. First is: “*Relying on theoretical propositions”,* which is considered as the most common strategy according to Yin (1994:103-104). Second is: “*developing a case description,”*

for which, according to Yin, little previous research has been done and it has not been used broadly. The specific two techniques of analysis that Yin (1994) refers to, and are proposed by Miles & Huberman (1984; 1994), can be used to actually analyze the data and are:

- Within-case analysis: Which refers to the method of analysis of the data of the case, while comparing them against the theory used, and which frames the case.

- Cross-case analysis: In this analysis, the data from one case (one interview in that study) is compared to the data within the other cases and is primarily used in this study analysis.

The third possible and "usually desirable" way of methodology to approach qualitative data that Miles and Hubernman identify is the *mixed-strategies* methodology (1994:176), which is a combination of the above-mentioned two strategies, and is followed in this study. After each case (interview) is well understood and analyzed in combination with the others (cross-case analysis), the patterns that "crosscut the cases" emerge, are identified, and are analyzed and discussed (supporting or contradicting) with the conceptual theory (Chapter 2) that frames the case of the "virtual museum" and the "virtual" vs. "real" experience.

Matrices are contracted for analysis with "decision rules" (Miles & Huberman, 1994:242) that the researcher decides upon in order to serve the analysis of the case studied (please see the matrices with the exact data from the interviews in Appendix B). Meta-matrices follow at the end of the analysis with emerging patterns from the survey data analysis and the interview data analysis; a juxtaposition of summarizing patterns adding validity and succeeding triangulation.

Three Step Analysis Process

Regarding the qualitative data analysis, Miles and Huberman (1994) define data analysis, "as consisting of three concurrent flows of activity: (1) Data reduction, (2) Data display, and (3) Conclusion drawing/verification," (p. 10). Upon first obtaining data during a "data collection period," Miles and Huberman explain these three stages of qualitative data analysis that were used by the author, namely:

1. *Data reduction*. This process should be considered to be as an essential part of the analysis as it helps to sharpen, sort, focus, discard, and organize the

data in a way that allows for “final” conclusions to be drawn and verified (Miles & Huberman, 1994). They specify that data can be reduced and transformed through such means as selection, summary, paraphrasing, or through being subsumed in a larger pattern. In this study the data reduction was achieved with developing matrices to organize all data, search for patterns, and comparing and contrasting the data with the framing theory this research relies on.

2. *Data display*. The second essential step that should be followed by the researcher is displaying the reduced data in an organized, compressed way so that conclusions can be more easily drawn. Miles and Huberman (1994) stress that good displays are, “a major avenue to valid qualitative analysis,” (p. 11). The creation and use of displays – cross-case analysis matrices- in this study is an indispensable part of the analysis.

3. *Conclusion drawing and verification*. This is the final step of the analytical process of the qualitative researcher. To successfully make decisions about the further meaning of the data, the researcher, as mentioned above, should note regularities, patterns, explanations, possible configurations, causal flows, and propositions. However, Miles and Huberman stress that the conclusions should be held lightly, maintaining both openness and a degree of skepticism.

Within-case analysis is a term used by Miles & Huberman (1994), but it is Yin (1994) who discusses comparing your findings to your frame of reference (i.e. previous studies) as one of two ways to analyze case study data. The main point of conducting within-case analysis of this study is to explore the emerging patterns among the cases in common topics to gain understanding of the topic researched and to show and explain how the findings fit with previous findings and other phenomena in our society.

Meta-matrix Method: Triangulation

The aim of the author was to have different methods of data collection and analysis, drawing inspiration from the grounded theory as explained, so that the data collected and analyzed has different biases, different strengths, and can thus complement each other’s findings (Miles & Huberman, 1994:267) to succeed in triangulation. Therefore, triangulation in this study is accomplished through the use of multiple sources for data, identification of consistency between those sources (alignment) and differently aligned points of view, in order to successfully provide meaningful

arguments to answer the main research question of the study.

The use of meta-matrix analysis is the key final step of analysis to succeed in the triangulation of all the data, sources and analyses used. Quantitative and qualitative data analyses are often separately analyzed, as they emerge from differing methodologies for data collection, management and analysis. However, the inductive exploratory nature of the current study led to the decision to manage triangulation using an emerging methodology, thereby allowing consideration of all data simultaneously through the use of a meta-matrix, where the main patterns emerged through survey and interviews combined into one matrix. The reason why this meta-matrix is used is to allowed pattern recognition, comparison and contrast across data sets. The possible emergence of relationships deepened the understanding of the results, the connection with other social phenomena, and assisted in identifying questions for further research.

The meta-matrix has been developed as a method to facilitate the uncovering of seeming contradictions or unexpected relationships; specifically, multiple complexities of data analysis in social science (Miles & Huberman 1994) and, therefore, the need to bring together a broad range of data. Using the meta-matrix approach allows a linkage of data in such a way so that underlying, “constructs in individual and social life can be derived” (Miles&Huberman, 1994: 4). The goal in data management, then, is to achieve “thoroughness and explicitness” (Miles & Huberman 1994:5).

This method provides an opportunity to evaluate all the qualitative data alongside the quantitative data (chapter 6) in an all-at-once methodology of triangulation (Lincoln & Guba 1985). Firstly, the qualitative and quantitative data were collected and analyzed separately, as dictated by the methodological considerations discussed (Polkinghorne 1983, Lincoln & Guba 1985, Congdon 1994). Then, the patterns that emerged inspired a triangulated exploration of all the data to determine if there were themes in the quantitative data that were reflected in, or supported by, the qualitative data and vice versa. Overall, there was a motivation to examine the data for patterns and themes shared across data sets that are presented in three arguments in the next chapter (Chapter 5).

Chapter 5

Resulting in Analytical Discussion

5.1 Expanded Utility: Educational to Sensational

The users of the GAP and visitors of the traditional museums always have to make some diverse decisions, and each decision is a personal one. These decisions include which museum to visit virtually, or how long to stay on the platform in each one, or on each object, and these decisions are made quickly. Taking into consideration the diversity of the global audience; their different backgrounds, interests, and prior knowledge and understanding; the learning styles and expectations they have; this study explores their perceptions and experiences at the "virtual" counterparts of the traditional museums, featured in the GAP, because is important to understand their complexity. As a result, three main areas of research emerged, from which derive the proposals through an in depth analysis.

The idea explored by this thesis, is the possibility that high culture has, at last, become accessible, where the "virtual" art space of the GAP is making art enjoyment and knowledge a democratic and global experience. In this chapter the three areas researched are: the Accessibility to the Content by the Users via this virtual art space. The most important finding after exploring these areas can be summarized as follows: The accessibility of the users to the art content via the virtual art spaces is they key component in this new relationship built between the physical museum and the "virtual" one, from purely educational to sensational, as presented in this chapter. The evolution of the digital content, with the creation of knowledge via self-navigation and the multiplatform distribution available in the GAP, creates a new audience of active cultural participants in this leisure-oriented online environment. The individual browsing in the GAP can create a personalized and enhanced (pre or after) experience of the art content, while he/she is encouraged into a deeper and longer lasting relationship with the museums. The GAP is a lens to view art, with expanded utility, from educational and active learning to creating sensational experiences for the users, promoting in that way an innovative culture and economy.

This chapter is an analytical discussion of the results answering the main research question and the sub questions stated before with each of the three areas or research respectively.

5.2 Accessibility

This first section of the chapter aims to profile the users of the GAP after the first three months since its launch, in February 2011, and provide all the details –including the capacities and limitations of the online space itself. It is a section devoted to the users profile and their perception about the space, and it answers the hype question about the globalizing and democratizing capabilities that this platform has in this art-and-leisure-oriented era. The key argument in this section is that the accessibility provided to the users via "virtual" art spaces like the GAP, to high art objects, is important for two reasons: links tightly the "virtual" and the traditional museum space and this strong link could foster the user's motivation to visit the physical space. This key potential of the "virtual" art spaces could be used strategically by the museums for a new positioning and branding of their image, altering and enhancing the users' and visitors perception about art; promoting an innovative culture and economy.

Profiling The Users

"Art, in the traditional realm, is a commodity that must pretend to universality," states Davis (1995: 381), meaning that the media revolution nowadays should democratize and globalize the knowledge and experience of art. However, this research of the users of the virtual art space of the GAP, takes a middle standpoint, arguing that, "museums will become more accessible and more democratic as a wider public gets involved," (Besser 1987:16). This is proved by the fact that after 3 months since the launch of the GAP (February, March, April), the profile of the users shows them to be mainly 'elites' with a good knowledge of art, a high level of education, and art-oriented interests (please see Appendix A for further information). Therefore, there are indications that the space is still not globalizing, popularizing and democratizing the knowledge and experience of art, but has a strong potential to create new culturally-oriented audiences, reinforcing the educational, social and communication role of the museum. These indicators are explored deeper at the qualitative part of this research (5.4), where the understanding of the complexity of the visitors perception and experiences of the "virtual" space via interviews, is crucial in contributing at this "audience-centered" study.

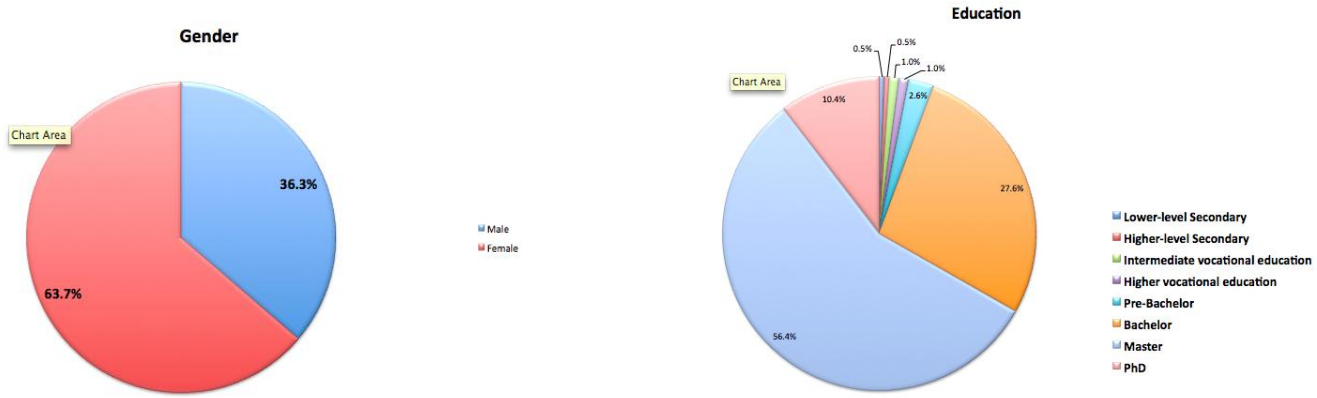


Figure 1: Average user profile; Gender and Education

Considering the social platform on which this survey was released (Twitter), with the capacities and the limitations this may have, and the overall research procedure, which is analytically discussed in Chapter 4.2 (limitations and opportunities), the charts above and the overall data (Appendix A) indicate a profile of the average user of this virtual art space. The profile could be described as, female (63,7%, n= 121) with higher education (Masters degree, 56,4% of the users), aged between the 20s and 30s (figure 2), working full time (figure 3) and considering herself as middle class (figure 3). She also speaks English (69/192 users stated English as mother tongue, Appendix A), lives in Europe or the U.S.A. (Appendix A), and has a great interest in art (figure 4). We should consider at this point that the survey questions were on English.

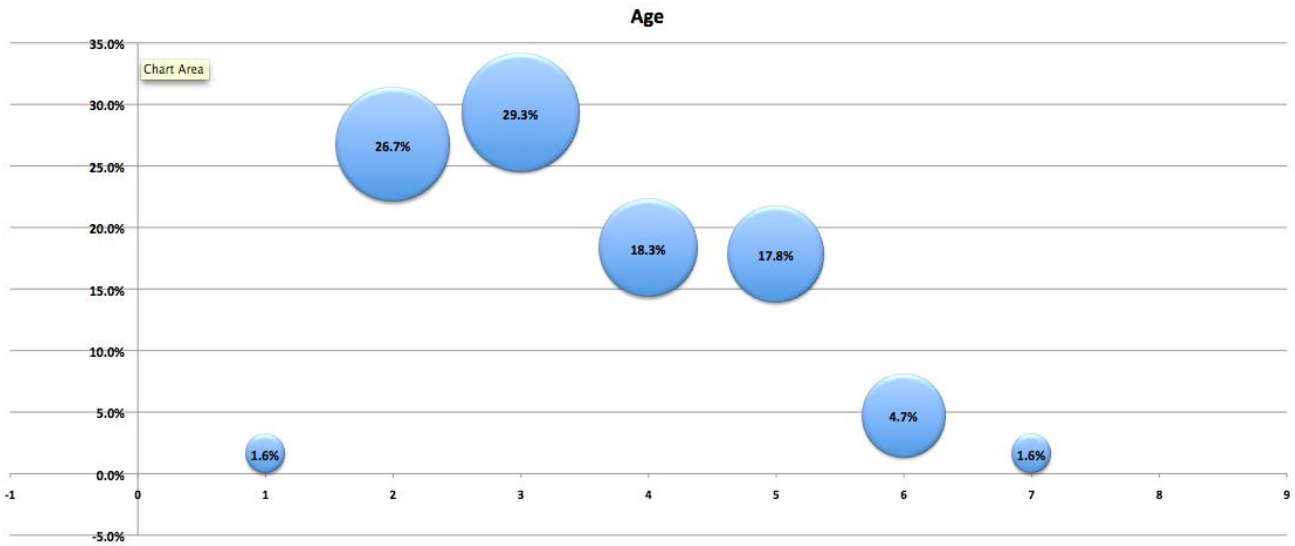


Figure 2: The chart above illustrates the age ranges of the Users of GAP

(1= 15-19, 2= 20-24, 3 = 25-29, 4= 30-34, 5= 35-44, 6= 45-54, 7=55- 642)

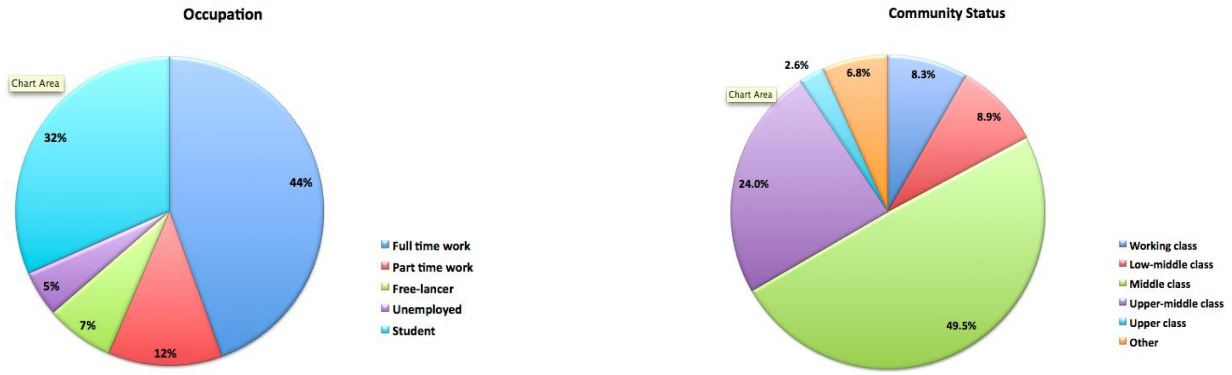


Figure 3: Average user profile; Occupation and Community Status

McTavish (2006) argues that the "virtual museums" are similar to the traditional museums, and are considered as "elitist institutions that both exclude popular classes and attempt to shape them into "civilized" members of society" (2006: 228). Considering the indications about the profile of the average user of the GAP in this survey (Figures 1 to 4 and Appendix A), the uncritical embracement of the notion that the "virtual museums", and specifically the GAP, "can democratize access in the museum is a careless one," (McTavish, 2006: 228). Similarly, considering the notion that the "virtual" art spaces can globalize the knowledge and the experience of it. Yet, they still have great potential as is discussed and argued later in this chapter.

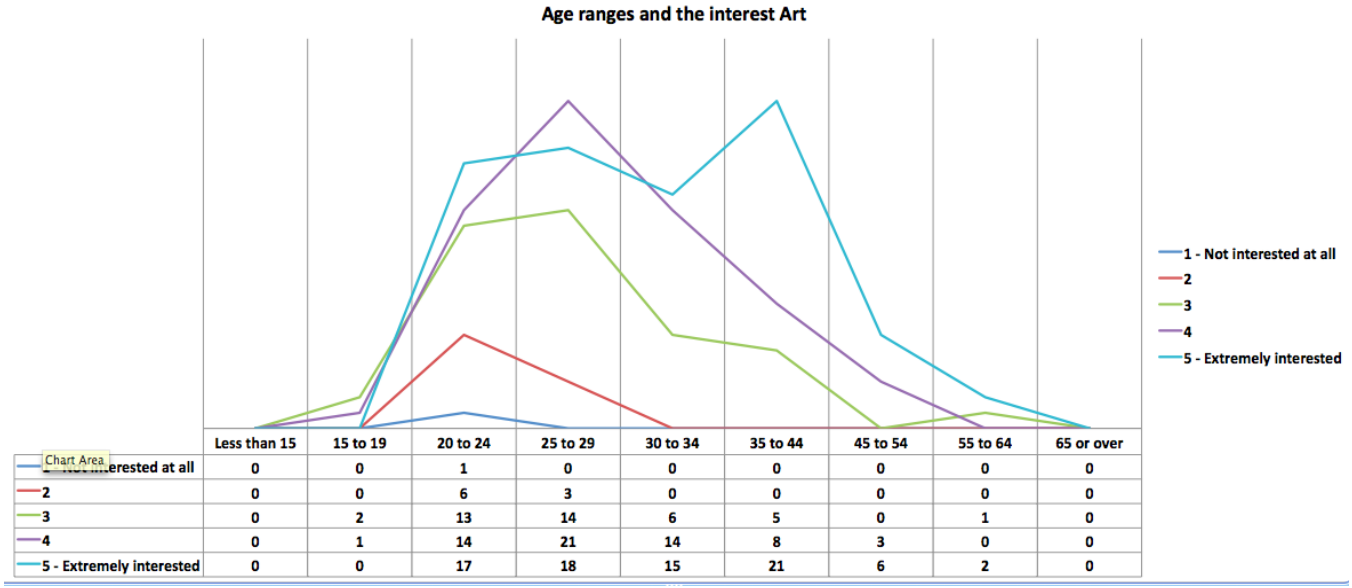


Chart Area	Less than 15	15 to 19	20 to 24	25 to 29	30 to 34	35 to 44	45 to 54	55 to 64	65 or over
1 - Not interested at all	0	0	1	0	0	0	0	0	0
2	0	0	6	3	0	0	0	0	0
3	0	2	13	14	6	5	0	1	0
4	0	1	14	21	14	8	3	0	0
5 - Extremely interested	0	0	17	18	15	21	6	2	0

Figure 4: The chart illustrates the age ranges in a parallel with the level of interest about the art of the users of the GAP

This is an important point to stress the museums have the potential to become popular and democratic via the virtual spaces. A museum, although designed for the

“public”, is in fact a conventionally elite institution. This practice is reinforced more in the digital realm, through such virtual platforms, like the GAP. However, with the rise of the middle class in the emerging market and its more edutainment/ popularistic function, it is worth contemplating how a museum can use such platforms to shift away from its elitist status; hence, while conventional museums are saddled with a history of elitism, digital museums have a chance of reinventing the notion and the practice of museum-going as a more popular mass leisure activity open to a wider public. Overall, the accessibility to the “virtual” art content, may have implications on the physical space, but is a key opportunity of reinventing the meaning of the museum itself to the masses through the digital realm.

It is interesting to note that almost half of the participants in that survey stated being “extremely interested” in art (41,7%, (n=80)), and 31,8% (n=61) “stated [being] very interested” (mean= 4.1/5). Also in the Figure 4 above, it is pointed out that there is an indication that the older a user of the GAP is, the more interested in art they profess themselves to be. Pauwels and Van Oost (2005:195) state that the art museums address their virtual counterparts to a “scientific ‘in-crowd’”, and considering the findings about the high interest in art and the high education of the possible users of the GAP, this is, to a certain extent, confirmed. This simultaneously reconfirms the arguments that the traditional museum spaces perpetuate traditional constraints in the museum field, regarding audience accessibility, social, and political constraints, as discussed in Chapter 2. This could be interesting as it goes back to he importance of content, highlighting its importance, as what will stimulate the youth interested in museums; it worth to be further explored the insufficiency of just a digital platform to stimulate and attract the next generation.

Concerning these social constraints, the data of the survey gives an indication regarding the global aspect of the users (diversity of languages and country of origin and/or residence). Reflecting the diversity of the community (users from 32 countries, presented below) that accesses the “virtual” museums featured in the GAP and by extension the “virtual” art spaces, the dominant Western oriented number of users, speaking mainly English, who participated in the survey pointed out that the space is still barely globalizing, popularizing and democratizing the knowledge and experience about art.

However, it can be argued that there is a potential of reaching a diversified number of users through the accessibility to the “virtual” museums featured in the GAP. The

indicators are firstly the 32 countries from all over the globe, (Appendix A) from which the users of the GAP who participated in the survey come from, (Austria, Hungary, Ireland, Japan, Latvia, Malta, New Zealand, Qatar, Russian Federations, Singapore, South Africa, Sweeden, Switzerland, Turkey, Brazil, Vietnam, Korea, Poland, Belgium, France, Italy, Canada, Germany, Australia, Spain, Greece, United kingdom, Netherlands). Secondly, the 22 different languages that they use, shows a good potential to reach more people and provide them with the knowledge and experience of art (Czech, Maltese, Hungarian, Portuguese, Portuguese Brazil, Slavic, Swedish, Urdu, Catalan, Latvian, Russian, Korean, Polish, Turkish, Bulgarian, French, Italian, German, Spanish, Dutch, Greek, English). The fact that the users participated in the survey were mainly English speakers, could be not argued as an indicator that this platform is western centric. English has proven itself to be the global language throughout western and immerging markets alike.

Overall, regarding the users' profiles, it could be said that there is always the possibility of information loop, and all the findings at the start of the launch of the GAP are just indications about the current users. The overall indication could be that the wider public is still not involved and engaged with this virtual art space, but the use of cyber-art spaces like the GAP will be a novel space to engage, attract and entertain more users; fostering the practice of museum going, promoting an innovative culture and globalizing the experience and knowledge about art. Overall, the "virtual" spaces is the chance for museums to strategically reinvent their identity, altering and enhancing the users' and visitors perception about art; promoting an innovative culture and economy, fostering the museum-going culture.

Figure 5: The average time spend by a user of GAP navigating in the site is 20 minutes

At this point, mention should be made of something interesting that emerged, namely the high average time of 20 minutes that users of the GAP that participated in the survey stated as the time they spend self-navigating and exploring the virtual art space. This indicator can be explained by the user's profile, interest and, from later sections, the purpose of visiting the GAP. Generally, it seems that on the web, people spend more time online than in a museum or a gallery, attracted by the virtual art content. It should be underlined that "the amount of time visitors spend and the number of stops they make in exhibitions are systematic measures that can be indicators of learning", as Serrell

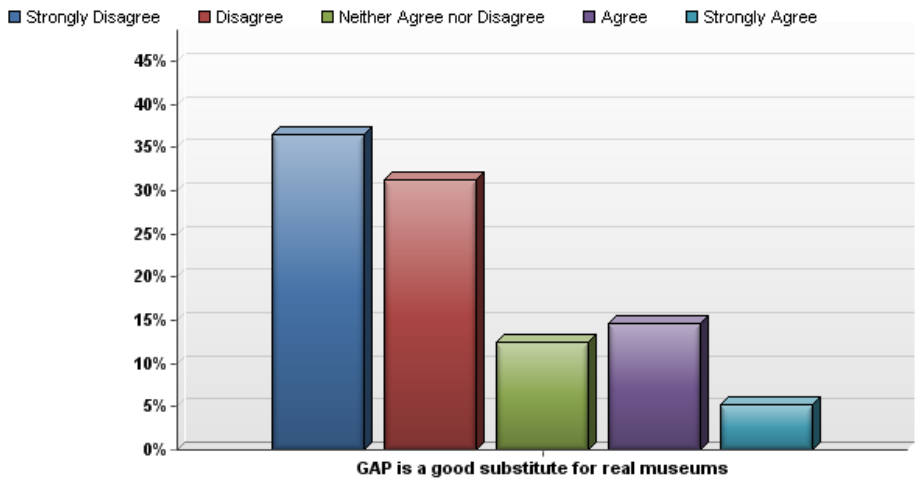
(1997:2) underlines in his research. The average amount of time that typical visitors spend in the physical museum or in an exhibition of "an average rate of 200 to 400 square feet per minute", based on the patterns of visitor behavior, Serrell (1997) defined, "visitors typically spend less than 20 minutes in exhibitions, regardless of the topic or size". Considering the fact that people typically may visit museums a few times a year and spend that time there, while, online they can spend 20 min but frequent it more often, the importance of the "virtual" museum is underlined, by its potential to influence the virtual visitors perception and desire to go to the museum. Precisely below are indicators of the frequency people visit museums, presented in the extensive research Marty (1997) conducted, regarding the relation of the museums and their websites:

"When asked ''How frequently do you visit museums?"13.5 per cent (163) responded Rarely, 16.4 per cent (197) Annually, 30.5 per cent (367) Quarterly, 27.8 per cent (335) Monthly, 8.9 per cent (107) Weekly, and 2.9 per cent (35) Daily (n_1,204)." (Marty, 1997: 344)

The different levels and amount of information may influence the user's decisions that s/he makes; the unlimited time that you can spend exploring the site and the works of art has an unpredictable influence on the audience about learning and enjoying art, at least in the scope of this research. Just because you have unlimited time to spend online, it does not necessarily lead to more time spent. The process and decision of spending time online in a "virtual" museum, as is discussed later on in the chapter, changes the perception for a work of art (either positive or negative, depending on one's interests and expectations), influencing users' and visitors' perceptions about the art exhibited virtually and the museum space itself, which in turn stimulates their desire to visit the traditional offline space to admire the collections they liked or are interested in spending time on. Overall, the engagement concerning the time seems to increase when a user comes online, as offline there are parameters (time pressure, costs, crowds, etc.) that limit the time or the opportunities (to visit) available. So this could be encountered as a chance of the "virtual" art spaces to strategically couple affordances of time and space with content to further engage and entertain a wider public.

There is a lingering hype question by the museum experts, "If visitors can access our digital collections, accessing Internet, will they still come to the museum in person?" (Marty, 2007). The same question has been asked about the net space in general and especially regarding the social network sites. It is thus worth challenging it by

applying the established theories (Pice & Haythornthwaite, 2006; Baym, 2006; Lievrouw & Livingstone, 2006), of the social network site to the “virtual” art realm. It should be pointed out that these questions continue to be asked, in spite of established research on social networks (Lievrouw & Livingstone, 2006), and the virtual realm in general, where it is shown that people do not replace relationships but sustain, enhance and extend them to this new space (Pice & Haythornthwaite, 2006). Pointing out the persistence of this concern, although the established research, it clearly shows our mindset towards new technological platforms and their implications overall. In this case, the majority of the users stated that the “virtual museum” is not going to substitute the actual museum space (Figure Appendix A) but may foster their desire to museum-going.



Question	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Responses	Mean
GAP is a good substitute for real museums	70	60	24	28	10	192	2.2

Figure 6: The chart shows the opinion of users of the GAP about substituting the physical museum space

As is illustrated in the chart above, 36,5% (n=70) strongly disagree with the statement that the GAP can be a good substitute for the actual museum space. However, 14,6% (n= 28) and 5,2% (n=10) of users believe that the GAP, and by extension the virtual counterparts of the museums, can replace them, and the reasons they give for this are discussed later in this chapter when the topic moves on to the accessibility of the space, its capabilities and its overall functionality.

More specifically some users stated, with regards to the substitution of the traditional museum space by GAP:

"Obviously the GAP is not a substitute for the real museum experience - it augments that experience & makes a simulation of that experience accessible to people who may not otherwise be able to visit the museum."
"According to my opinion GAP can motivate someone to visit a museum but cannot substitute a visit to it."
"I would probably rather see the exhibitions in the flesh - GAP gives me the opportunity to explore online, but **it's not a substitute for the real thing.**"

The below are the quotes from people who actually think it can be a good substitute:

"GAP is my substitute for being able to travel the world and see great art. In person would be even better!"

"There's still one substitute for seeing the real thing – the GAP- however sense of scale cannot be communicated on a screen. Texture, too."

"The real experience of a museum can be in some cases totally substituted by online visit"

"I´d see the GAP primarily as a taste of the museum. Ideally I´d like to visit it for real. That´s why GAP might be instrumental in getting me to visit a featured museum for real. I don´t expect it to be a proper subsitute for a visit any time soon, but it is very nice to have a substitute at all and get some more info about what I can expect."

Praising Accessibility = Succeeding Accessibility?

Fostering accessibility to technologies "*has put the power of communication, information gathering, and analysis in the hands of the individuals of the world."* George Freedman, The Changing Nature of Museums, 2000.

"New media, with the Internet at the top of the list, have become everyday technologies, thoroughly embedded and routinized in the societies that are most widely used," (Lievrouw & Livingstone, 2009: 1). The new media are defined as Information and Communication technologies related to the social environment and as, "infrastructures with three components: "artifacts or devices", "activities and practices" and "social arrangements or organizational forms," that develop around those "devices and practices" (Lievrouw & Livingstone, 2009: 2).

Most of the users of the GAP praise the accessibility of this virtual museum space as it is, "giving people globally free access to the world's art treasures, and an

opportunity to interact with and enjoy artworks that otherwise might never be seen," (Case 2, Q1, Appendix B). Some highlight that, "The key purpose [of the GAP] is to offer a glimpse into this highly-curated selection of museums. Google is expanding its product range to include non-commercial applications and provide knowledge to the general public," (Case 4, Q1, Appendix B). Specifically supported is the fact that this "virtual" space "Can bring more people closer to art by offering them a *first* approach to the world of museums and world-famous paintings. Museums are perceived to be 'boring/dead' places. Most people avoid them – do not consider them an alternative for 'going-out on a Saturday morning'" so, "Initiatives such as GAP might mitigate this," (Case 6, Q1, Appendix B). It worth to highlight how the perceptions of the users about museums are that they are 'old, conventional, boring', while for the GAP it is young, entertaining, interesting to engage with. This underlines the fact that the "virtual" spaces are key to foster the rebranding of the museum itself.

Question	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Responses	Mean
GAP and similar projects make visual knowledge more accessible	1.6%	0.5%	9.9%	37.5%	50.5%	192	4.3
This technology helps museums to make their art more accessible to people who might otherwise never get to see the real thing up close	3.1%	2.1%	7.8%	38.5%	48.4%	192	4.3
GAP is a good substitute for real museums	36.5%	31.3%	12.5%	14.6%	5.2%	192	2.2

Figure 7: The chart shows the importance of the accessibility online to the museums via the GAP (Appendix A)

As is illustrated in the figure above, more than 50% (n= 97) strongly believe that the GAP is fostering the accessibility to high art, and overall, 88% of the users of the GAP in this survey argue positively that accessibility (mean= 4.3) is one of the most important key functions of this "virtual" art space. Simultaneously, almost 50% (n= 93) and more than 85% (n= 167) of the survey participants and users of the GAP support that this technology gives the opportunity to people who have "multiple obstacles" (Pauwels and Van Oost, 2005) to overcome them (e.g. finances, distance, time…) in order to access the "virtual" museums. However, as pointed out later on regarding the space capabilities and limitations, some users highlighted navigation issues through the GAP and some point out that they had a hard learning curve, while they were not able to figure out how to move through these spaces easily. Some mention that they gave up due to difficult navigation issues, like trying to search for an artist or getting from one exhibit to another etc. One even created his own search tool in order to foster his navigation in the GAP: "[…] also, being able to

search GAP for related images and themes is helpful - something GAP doesn't easily allow you to do - requiring a work around! That's why I built a search engine for GAP - and have used it a lot!" (Case 10, Q8).

Only the 5,2% (n= 10) strongly consider the GAP as a good substitute of the museum (mean=2.2), and 96.9% (n= 186) of the users of the GAP that participated in the survey, reply positively to the hype question of whether they still want to visit at least one of the featured museums in the GAP (Appendix B). Hence, the GAP, as an interviewee underlined, is a, " […] project attached with many different interactive features whose full and wise embracement by the general public could bring significant results for the museum world, the art world and society. However, I highly doubt that such use of the GAP could ever be possible […] one has to be very careful and very moderate to argue that GAP is a revolutionary project," as Case 9 underlines (Case 9, Q1, Appendix B).

The online interactive applications and features of the "virtual" museum, Pauwels and Van Oost (2005) support, can increase the cultural participation among young users. Similarly, Marty (2007) argues that the relationship between the "virtual" museum, the traditional one, and the visitors, can be beneficial for the museum overall. The concept of cultural participation in the museum field is translated into rates of physical attendance (Pauwels & Van Oost, 2005). This is due to the fact that during the 80s, cultural participation was given a more economic approach, as attendance figures were used by the museums to justify their existence and to claim subsidies. Although we should not argue that the GAP is a revolutionary project, we cannot disregard that it is a project that could contribute in bypassing "multiple obstacles" (Pauwels & Van Oost, 2005:189) that may exist in visiting museums.

The "competency obstacles" (Pauwels and Van Oost, 2005:189) hamper poorly or uneducated people from experiencing the museum visit and high art in the same way that highly educated people do. Hence, with the GAP, "One is now able to "visit" a museum, see installation displays, research, and find details previously unobtainable when looking at art. It is providing a supplemental "art experience," where the world is smaller and we can grasp more", as one interviewee underlines (Case 7, Q1, Appendix B). However, "the concentration is Europe, UK, US as the museums are western art focused," (Case 9, Q1, Appendix B) is criticized by some users, and shown in the previous section, still more highly educated people experience this virtual space, engaging with the art. Concerning this, Pauwels and Van Oost (2005)

believe that the “virtual” counterparts of the traditional museum spaces are attracting existing and previously known audiences who are: interested in the subject of the museum; who have mastered the technical skills to use the Internet, and have access to the Internet.

“Financial and socio-demographical obstacles,” (Pauwels and Van Oost, 2005: 189) are another set of obstacles that prevent specific groups from enjoying the museum experience, as they are not able to afford to travel to the museum and pay the admission fee, or do not identify themselves with the exhibitions of museums. They also do not feel physiologically connected with the museum exhibitions, and the world those groups live in. With regards to this, the answer concerns social aspect. One of the cases shares an interesting point about the GAP’s capacity, explaining the importance of the “virtual” museum in bypassing these obstacles: “Imagine someone that doesn't go to a museum, not even if he gets paid. With the Internet you can send him an email invitation, he might get a sneak peek of what it is and he also might have the interest to learn more and see more since he or she doesn't have to make a big effort in going to a museum, paying and being all disgusted because he/she knows or thinks he/she knows is not nice for that person (to visit museums),” (Case 11, Q1, Appendix B).

Drawing on responses from the interviews, it is argued that, “The key purpose (of GAP) is to give everyone a chance to view great artworks that may not be able to travel to each of these museums,” (Case 1, Q1, Appendix B). “The only drawback to viewing the artwork in the museum is the cost,” as Case 1 argued (Case1, Q3), and Case 6 supported the same drawback of physically visiting the museum space as the museums are dispersed, “in different places around the world,” so you have to pay, “travel costs, museum entrance fees, etc.,” (Case 6, Q3).

“Geographical” and “time obstacles” (Pauwels and Van Oost, 2005:89) also widen the divide in cultural participation and the “physical obstacles” (p.89) make the access to the museum for the disabled and the elderly even more difficult (Pauwels and Van Oost, 2005). “The world is a big place, and you can’t see it all,” as Case 4 highlighted in the interview regarding the geographical distances (Case4, Q3), while Case 7 argues that, “when visiting a museum physically, you are subjected to crowds, loud conversations, screaming babies and other distractions that interfere with your own dialogue with the art,” (Case 7, Q3). Another interviewee shared his own story facing “time obstacles” in visiting museums: “I remember when being at

Palazzo Medici - I wish I could look at the Gozzoli Fresco for hours, but the attendant sits there and stares at you, and it feels weird, you eventually leave after 5 minutes. Unfortunately, the Gozzoli fresco is not in GAP," (Case 10, Q3). At this point, it can be argued that high tourism in museums and the high reproduction of important works of art, e.g. Mona Lisa, can result in the aura being lost, these two factors, the crowd and the camera converge. Hence, the question emerging is if the persistence of aura remains when you are able to experience this painting in a more meditative space, like the GAP.

The GAP is a complex configuration of visual data information curated perhaps strategically and intuitively designed for all to access, as supported by Sood (2011). Therefore, "the Internet is a great opportunity which the museums should use to broaden their audience," (Shweibenz, 1998: 194). The "virtual" museums as featured in the GAP have the potential to democratize accessibility to the museum space and reinvent the museum's identity; enjoyable, interesting and accessible. The users argue, "But that's not to say that viewing the works online and traveling virtually inside a museum is not an enjoyable or interesting experience. It's just not the same thing. Seeing the works online also makes me more interested to see the physical work up close," (Case 2, Q3). GAP, "Makes content available to larger masses," and it is more convenient, as there are no longer any visitors excluded from the museum's content, while its technology is, "bringing together in one place (Internet) information about the life/artwork of the artist," another interviewee supported (Case 6, Q4).

Overall, Pauwels and Van Oost (2005) highlight that Internet can play a crucial role in eliminating the multiple obstacles that were previously mentioned and bridging the divide in cultural participation, by allowing diverse groups to experience the art museums. The data supports that this is happening with the GAP "virtual museum" space and that obstacles can be overcome; the "financial", "socio-demographical", "geographical", "time obstacles" or "physical" ones, as defined by Pauwels and Van Oost (2005).

Apart from: the cost of time and money, the distractions in the museum space, and the crowded spaces; there are other "obstacles" to experiencing the physical museum space. Some interviewees mention these too, characteristically, Case 9 stated, "I find the lack of in depth information, which characterizes many museums and especially art museums, the main drawback of the museum experience in the physical dimension. I also find the narratives in the museum exhibition either chaotic,

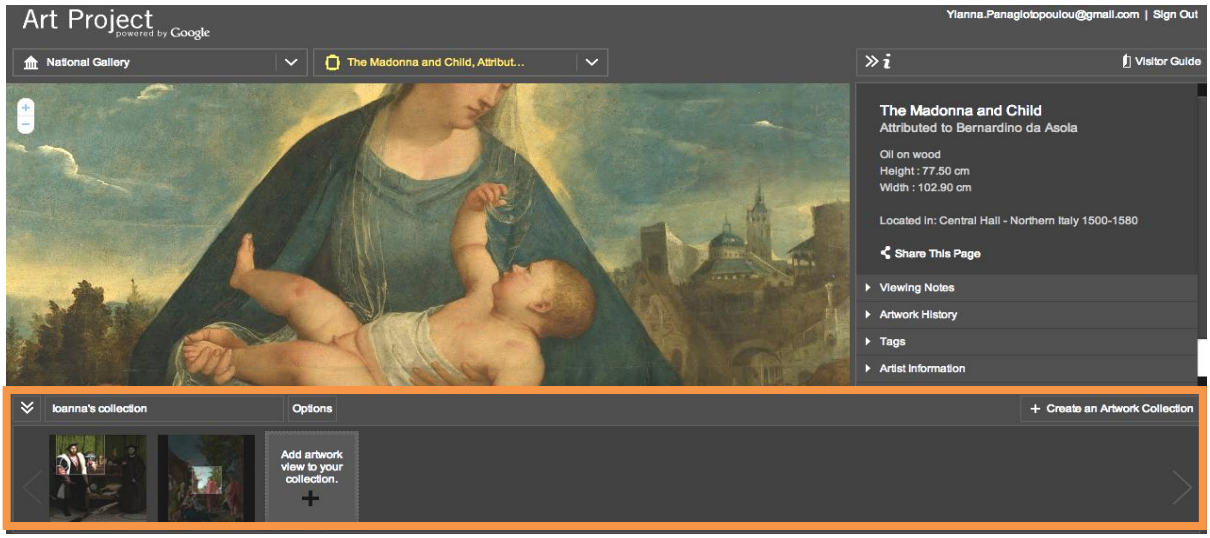
or restricted in a way to create specific messages and perceptions for the visitors. Although museum visitors are free in the museum space to lurk at their own will, the museum exhibition guides the visitors' path in a certain way," (Case 9, Q3). This interviewee underlines the lack of information in the museum space, which can be an important de-motivating reason for someone with no education to visit art museums again, as they do not have much, if any, knowledge or information to feel emotionally connected with the exhibition. Additionally, the chaotic spaces filled with many objects make the decision to focus on one object at a time even more confusing, within the "restricted" path of the museum.

Overall, there are many indicators from the interviewees that most museum visitors do not get the full value out of their visit and that museums could be more attractive to visitors by providing them with interactive activities, personalized experience and inspiring them to be creative (see Appendix B). Additionally, this section strongly argues that visitors behave as if museums were mass media: they linger, in particular, in front of objects, which they have already visited "virtually". As long as they know something about the category of objects, the structure of the display and the physical context of the museum, then this prior information –retrieved from the GAP- stimulates thought to supplement knowledge (Treinen 1993: 90) and boosts the appreciation (this argument is further discussed in following sections in this chapter).

In conclusion, praising accessibility does not mean that it has succeeded entirely, when considering the different obstacles. Of course, the motivation of accessing the "virtual museum" can differ from person to person (Appendix B). However, the accessibility could be argued to be the key component in the relationship between the "virtual" and the physical museum space, as it enables the *Connectedness* (as defined and proposed by Hoptman, 1992) of the "virtual" museum with the visitors; links tightly the "virtual" and the traditional museum space and this strong link could foster the user's motivation to visit the physical space. "Connectedness does not merely mean to link objects together but to give visitors the opportunity to focus on their special interests by pursuing them in an interactive dialogue with the museum," as Schweibenz (2004) points out. This key potential of the "virtual" art spaces could be used strategically by the museums for a new positioning and branding of their identity, altering and enhancing the users' and visitors perception about art.

***Connectedness* : Space Capabilities & Limitations**

The possibility to construct personalized content in the GAP – cultural production and consumption - and therefore personalized experience[4], are characteristics of the "virtual" museum that strengthen the link between the users' and the virtual content, as they can focus on personalized interests. This point of view is strongly supported by Case 9 (Case 9,Q2): " […] In the case of the GAP, users can easily retrieve in depth information as well as have a more intimate experience with the work of art through the interactive options offered. Users can express their opinion about a work



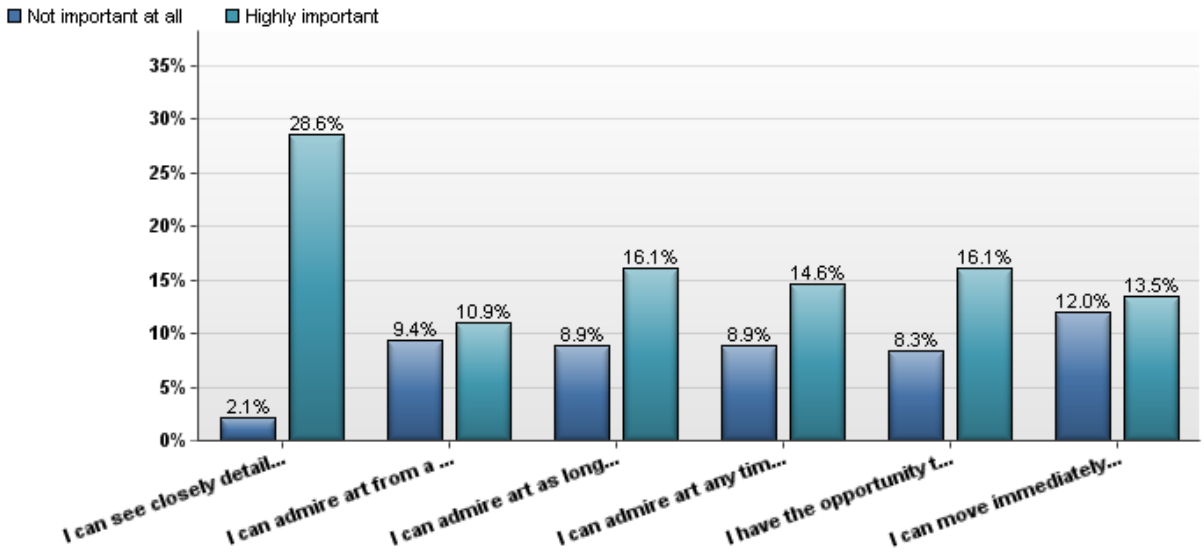
of art and they are enabled to personalize their museum experience, something that is not possible in the physical dimension of the museum. […] " So, opposed to the physical visit and the obstacles emerging from it, the Internet, and specifically the GAP, has the potential, as pointed out by its users, to offer personalized content and to further allow the creation of communities that are based on common interests by sharing their self-made collections; these are some of the Internet's unique characteristics that influence cultural participation (Pauwels & Van Oost, 2005).

The same interviewee continues, " […] there are some cases where I believe that the users can gain a more eye-opening experience online, as the interactive features offered through the GAP and other similar online applications give them the opportunity to have a more intimate experience with the work of art, whereas in the

[4] For instance, in the GAP there is a feature, as mentioned before, with which the user can create his/her own personal art collection and become a "virtual" curator – self-curator - by tagging his/her online choices, by using their own words and by labeling the art works they select from the virtual collection of the different featured museums (Simon, 2007).

physical dimension of the museum, the museum visitors' behavior is restricted to a walking past the paintings, standing in front of them at a certain distance and staring at them," (Case 9, Q7). Simon (2007) similarly argues that the employment of interactive applications in the virtual museum enhances the visitors' engagement with the museum content, and they also prefer them (Simon, 2007). She (2007) also points out that the personalization features in the "virtual museum" give the user –or "virtual" visitor- the capability of selection. The visitor has the opportunity to select the content that s/he desires to access and at the time s/he wishes to (Simon, 2007) by becoming a self-curator of his/her own collection. Also, by creating their own personal collection in the GAP and with the possibility to share it via the social media, they satisfy, "the narcissistic desire to be known and noticed," (Simon, 2007: 264).

In the chart below, the most and the least important characteristics of the virtual space, as perceived by the users of the GAP, are illustrated, showing the demanding needs of users nowadays, and their central role in using and consuming the art spaces online.



#	Question	Not important at all	Not very important	Important	Very important	Highly important	Responses	Mean
1	I can see closely details (zoom option) that are not normally visible to the human eye (or usually not allowed in museums)	2.1%	14.1%	28.1%	27.1%	28.6%	192	3.7
2	I can admire art from a seated position in the comfort of my home or any place	9.4%	24.0%	29.2%	26.6%	10.9%	192	3.1
3	I can admire art as long as I want without being blocked by other art lovers	8.9%	27.1%	25.0%	22.9%	16.1%	192	3.1
4	I can admire art any time I want without being jostled by other art lovers	8.9%	24.5%	27.1%	25.0%	14.6%	192	3.1
5	I have the opportunity to enjoy online virtual tours in the museums (or the galleries)	8.3%	17.2%	31.8%	26.6%	16.1%	192	3.3
6	I can move immediately across exhibits without having to go through the entire thematic display	12.0%	22.4%	29.7%	22.4%	13.5%	192	3.0

Figure 8: The chart illustrates the most and the less important characteristics for the users of the virtual art space of the GAP (Appendix A)

The most important characteristic (28,6%, n= 55, mean= 3.7) of the virtual art space for the users is to spend time and navigate in the "virtual museums" illustrated in the GAP. So too is the possibility to see the art works up close (the zoom option), observing details that are not normally visible to the human eye, or not allowed in the physical museum space; "I prefer my personal experience of physically being in the gallery space over visiting online. But in the case of MoMA, which is notoriously busy and hectic, the GAP allows one to personally and privately navigate the museum and interact with the art through the catalyst of the digital museum," (case 7, Q2). One other user stated, "I am just looking at a Vermeer from Berlin up close, so exquisite! You never get so close to visit there," (Case 10, Q9).

The second characteristic (16.1%, n=31) of the online space, which can be a motivation for the users to visit the GAP are twofold, the unlimited viewing time, as the user can admire the art objects as much as s/he desires at his/her own comfort, and the fact that via this virtual art space the user has the opportunity to enjoy online virtual tours. The capacities such as the time freedom and the zooming options are unique characteristics of the virtual museum that set it apart from its traditional counterpart. On the other hand, the least important (12%, n=23) characteristic of the space is that it offers the users the freedom to move across the art objects of their own free will without going through a thematic display. This could be an interesting point for further research, as people may not be actually demanding to be self-curators but may like to be guided. Freedom is in fact overrated in this art realm and expertise is perhaps not as much of an issue. The question that emerges in this case is, do amateurs have less issue with the experts than expressed in contemporary scholarship?

The GAP is a tool that can advance the position of the simple user with the high-resolution and zoom options, or the virtual creation of the personal collection. Furthermore, this virtual art space has a "universal design"[5] that to a great extent does not exclude groups of people with disabilities to access art online.

Simultaneously, the changing needs of the audience are getting more demanding and the space, although it has great possibilities, is characterized by the limitations of its users. The users demand high resolution access to all of the art works, as an example, "the resolutions is way too low and the navigation is awful," (Case 4, Q1), or expressing their disappointment as, "some of the artwork is blurred out for whatever reason, copyrights ect. […]" (Case 5, Q1). Pauwels and Van Oost (2005) underline the serious problems emerging with intellectual property, especially for the art museums, with the creation of their virtual counterparts. The low quality of the virtual representation of the art works in the "virtual museums" featured in GAP reaffirm the notion that the "real" art can be only experienced in the traditional museum space, as McTavish (2006) argues. Also, disappointment is expressed by the users as to the limited number of museums and their westernized selection, ("the museums now are more western" Case 11, Q5), which was critically discussed with the limited amount of art work and, overall, the initiative is characterized, "as a good start," (Case 5, Q1) or, "its OK for a starter (point)," (Case 10, Q1). The limited display of art objects in the virtual museum in contrast with the art objects displayed in the traditional museum space might become another obstacle in the divide of cultural participation, as Pauwels & Van Oost underline (2005). Of course all the above-mentioned limitations can be overcome, with time and technological advancements.

[5] "Universal design" means the design of products, environments, programs and services to be usable by all people to the greatest extent possible, without the need for adaptation or specialized design, as defined by United Nations Convention on the Rights of Persons with Disabilities.

#	Answer		Response	%
1	Every day		2	1.0%
2	Every couple of days		3	1.6%
3	Once a week		17	8.9%
4	Once a month		42	21.9%
5	I visited it one time and want to visit again		109	56.8%
6	I visited one time and do not want to visit again		19	9.9%
	Total		192	100.0%

Figure 9: The table above shows the frequency of visiting the GAP

In addition to the above mentioned, as is illustrated by the table Figure 9, although more than half of the users, 56,8% (n= 109), show the desire to visit the GAP again, and consume art online, 10% (n= 19) of the users who participated in the survey are disappointed by the online virtual space. They believe it is perpetuating the traditional constraints of the museum, expressing the above mentioned limitations of the tool that leaves them disinclined to return to the site. Schweibenz (2000:259) emphasizes that traditional museums have to face problems emerging from, “quality control, integrity, and paternity.” Therefore, the “virtual museum” has to provide high quality content online, and then has to ensure that users will not change the digital content through interactive applications that are available on the website (Schweibenz, 2000). Regarding paternity (who is the creator of an art work), the art museums in particular have to clearly attribute the art exhibits to their creators, as the original art work might change through the interventions of the users - like the creation of the personalized collection feature in the GAP. The users are given the possibility through an application (Schweibenz, 2000) to select specific parts of the painting in order to create their collection in the role of curator in the platform of GAP.

To wrap up this section, which was devoted to the users profile and their perception about the space, strong grounds for further research is given, as this section lights up the relationship of the amateur and the expert in different angles. The key argument here is that the accessibility provided to the users via “virtual” art spaces like the GAP, to high art objects, is important for two reasons: it links tightly the “virtual” and the traditional museum space and this strong link could foster the user’s motivation to visit the physical space. Regarding the users’ profiles of this “virtual” art spaces, there are indications that the use of cyber-art spaces like the GAP will be a novel space to engage, attract and entertain more users; fostering the practice of museum going, promoting an innovative culture and globalizing/popularizing the experience and knowledge about art. All in all, “virtual” spaces are the chance of museums to strategically reinvent their identity, altering and enhancing the users’ and visitors perception about art.

5.3 Content

In this section of the chapter it is argued that the GAP is a lens with expanded utility in enjoying the art content online, giving the chance to the users to experience the art content from an edutainment standpoint. It is therefore argued that the GAP is an extension of the physical space of the traditional museum, enabling the accessibility to the online art content, educating and communicating high art to a wider public. The evolution of the digital content, the creation of knowledge via self-navigation and the multiplatform distribution available in this "virtual" art space, are the key contributors in building the relationship between the "virtual museum", the traditional and the "virtual" visitor, as is described at this section. Museum has the change via its "virtual" counterpart, to create a new audience of active cultural participants in this leisure-oriented online environment, encouraging the practice of museum-going.

Educational & Informational Acquisition Role

The Internet can enhance the educational role of the museum, as proposed by some scholars and illustrated by the data of this study. Museums have started digitalizing their collections making them accessible to the users and by taking it a step further; they employ interactive features, enabling interactivity between the users and the virtual exhibitions. The museums are shifting slowly from dictate to dialogue by participating in virtual art platforms like the GAP; "(GAP) expands the availability of the objects and educates the viewer," (Case 1, Q6). This quote could be argued that reinforces the dictate vs dialogue stage of museum, as it "educates the viewer". Marty (2007) emphasizes the potential for learning in the physical museum space, or its virtual counterpart, through interaction with the online art works and exhibitions (Marty, 2007). For instance, in the GAP there is a feature, as mentioned before, with which the user can create his/her own personal art collection and become a "virtual" curator by tagging his/her online choices, by using their own words and by labeling the art works they select from the virtual collection of the different featured museums (Simon, 2007).

Apart from these ways that evolve interactively, and could help in building unconscious knowledge (Schweibenz, 1998), the GAP offers access to researchers and scholars through the provision of these art exhibitions from different museums and artists of the world (Schweibenz, 1998); as a user stated, "Art online is certainly where most museums are headed. I believe more accessibility and transparency are good things, and I personally want more access to the collective knowledge of all museums for the good of all," (Case 4, Q9, Appendix B). By using the term

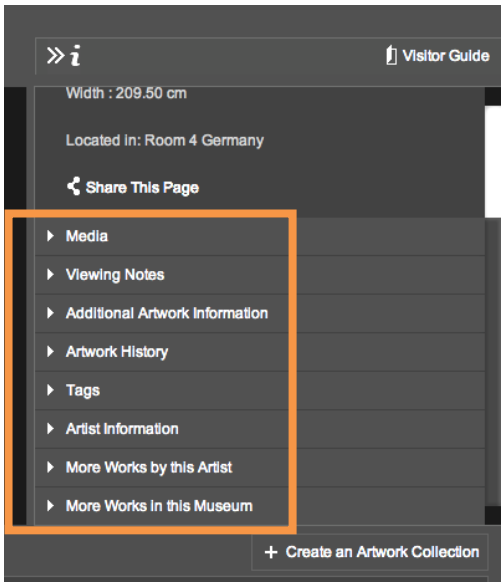
transparency in that context the users mean, extensive accessibility online to as much art content and art knowledge as possible to each museum featured “virtually”. This informative acquisition role of the “virtual” art spaces, could contribute to enhancing the educational role of the museum as is illustrated by the data of this study in that section; the creative exchange of academic ideas and the retrieval of scientific information becomes easier through this virtual art realm.

“GAP can be a useful tool in education,” (Case 9, Q1), as, “it gives a tons of information that the audio guides in museums don’t give and they put a nice perspective on the work,” (case11, Q9). The GAP is also characterized by the users as, “a great tool of information and of learning and sharing,” (Case 11, Q1). This informative capacity of the “virtual museums” featured in the GAP allows for going beyond the abilities of the traditional museum in presenting information and evolving the learning process to another level (Hoptman, 1992 as cited in Schweibenz, 1998).

At this point it should be pointed out that the data emerging from both the survey and the personal interviews of the users of the GAP illustrate this. Most of them perceive its learning and educational role as the main role; enhancing the learning process and knowledge about art. More precisely, it is a tool used by students, teachers, or researchers at work, and they characterize it as a, “great project for learning,” underlining that, “[it] would be a wonderful teaching tool,” (Case 4, Q8), as, “it can make the lesson more interesting, more attractive, and more enjoyable,” (Case 3, Q8). Also, “for research, [it] could be amazing,” (Case 4, Q8). One interviewee points out that it is particularly useful to, “students [mostly in countries that do not have the opportunity to visit such museums], so they have the chance to study art and at the same time watch what they study,” (Case 3, Q8). It is an, “educational tool as it provides access to information and images you only get from catalogues, which are expensive and not accessible,” (Case 10, Q8) and it is “[an] easy to use tool for learning or researching,” (Case 8, Q8). The educational role of the museum is a complex one, as Hooper-Greenhill (1992) points out, and, “knowledge is now well understood as the commodity that museums offer,” (Hooper-Greenhill, 1992: 2).

The GAP via the navigation path offers visitors the possibility to exploit the digital representation of works of art. Its’ navigation build allows them to simultaneously compare and contrast works by the same artist, or artists that have influenced him/her, or art works of the same style. This also includes artists of the same period that are exhibited in different museums or galleries around the world and which are

otherwise not accessible at the same time. Overall, these capacities could be the grounds for contributing, in terms of conceptual associations in the arts and with this freedom to juxtapose different art with one another. The GAP could provide the opportunity to create new cognitive understanding of art; the possibility of self-curating and knowledge construction via the active navigation in the virtual art space could have implications for the relationship among the museum, the amateur and the expert.



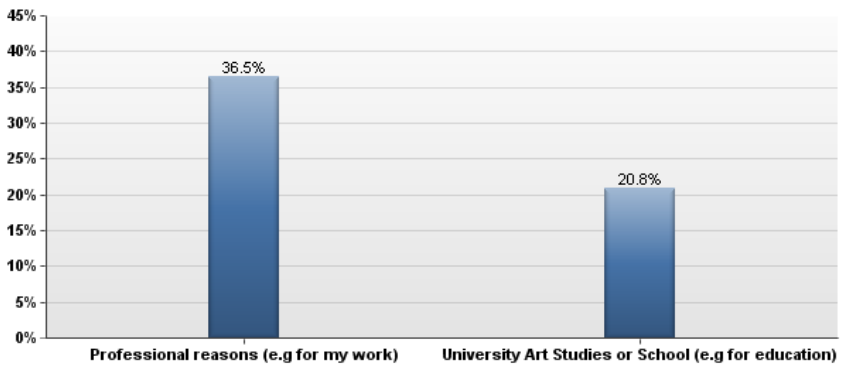
Museums, as discussed before, are constantly evolving in order to meet the audience expectations, and along with this change, a shift in their role in the educational field is emerging. Hooper-Greenhill (2000) points out that the change that museums undergo influences the museum's educational role. Meaning that, as museums become more audience-centered or visitor-oriented their displaying and educational policies, need to evolve to meet the new challenges opened up by their "virtual" counterparts. One can conceptualize this shift of the museums, from educating to engaging with the visitors and the communities via the "virtual" counterpart, as a chance of the museums to offer lifelong and educational leisure, reinventing their perceived obsolete image.

"Using GAP in the classroom is an excellent tool, not only to see the details of a piece, but you also see the context of the museum," says a history teacher in the interview (Case 7, Q8). Also, it is stated by another user that, "the use of GAP is based on the need for easy retrieval of information either before, or after, the museum or gallery visit. I can imagine that people with different needs, such as students of different levels of education, or teachers and professors, can have a different employment of the GAP," (Case 9, Q2). One can clearly argue that is not just about the information provided in this "virtual" space, as Google itself and other web search engine can provide, or would Wikipedia; its about the form information takes within this space that makes it engaging and contextual, highlighting a new venue of experiencing art. Museums, with their exhibited objects and collection have the potential to change the way society and everyday life is perceived and thus to educate (Hooper-Greenhill, 1992) their visitors in an entertaining way via their virtual

counterparts.

Mckenzie (1997) categorizes the “virtual museums” into two divisions, the “Learning Museums”, or in other words, “Web sites that offer resources for on-line learning, inviting the visitor to investigate and to explore the available information,” (Schweibenz, 1998), and the “Marketing Museums”. These two types of museums as per his categorization, are not mutually exclusive , as it could be argued that legitimate museums are both learning and marketing oriented, in this leisure-oriented era. The GAP, as a “virtual” art space, could be put forward as one that features these two functions; educational, as it provides all the information resources, “the interactive features and the in depth information,” (Case 9, Q8) and marketing, as is opening the opportunity, argued by that study, to the museums to market differently to their customers.

The site gives the opportunity to students and researchers to freely navigate through the “virtual” art museums and to further explore what they want to study (NahTah Wahsh, 2002). “I have used it many times in my own art history research”, one researcher states (Case 1, Q8) and, “it is great for self-learning,” another points out (Case 11, Q8). Additionally, while the user gets familiar with the art works by exploring a painting or a “virtual” museum, the GAP’s interface provides links and information stimulating the user to get involved in educational processes (NahTah Wahsh, 2002). The GAP is an example that demonstrates the powerful mixture of on-line technology, educational and wide range of information. The “virtual” museums presented on the site are used in classrooms, as many users stated in both the survey and the interviews, since the construct is a system that is designed in such a way that intends to support learning interactions.



#	Answer		Response	%
1	Professional reasons (e.g for my work)		70	36.5%
2	University Art Studies or School (e.g for education)		40	20.8%

Figure 10: The chart above illustrates the use of GAP by the users for educational purposes

The data from the survey underlines the great use of the GAP as an educational and learning tool. 36.5% (n=70) of the participants are using it for professional reasons, either being educators, artists or researchers. Although, Google did not intend to have it be used mainly for educational purposes, as it is not stated in the press releases. Considering the budget cuts in schools of art classes and the pressure to engage students through the digital means, the GAP may have been embraced by schools globally, just like Second Life[6] and other simulation environments. The 20.8% (n=40) state that they are using the online art space for their studies (university or school). Certainly, these percentages are strong indicators of the potential use of the GAP in education. Yet, we should keep in mind that the survey took place three months after the launch of the tool, and its users are more art oriented, as was shown by their profile at the start of this chapter.

One user emphasizes, "[GAP] can be really useful among users, art lovers, students, teachers and researchers," (Case 9, Q8). The indicators are positive about its main use in education, and knowledge about art, as its capacities are essential for art learning, accessibility to art content and especially for research. The development and maintenance of the GAP, featuring "virtual" learning museums, seems at first glance, and for some users, as an ideal way to provide a student-centered, constructivist, learning environment.

Overall, we can conclude this section by arguing the incredible potential the GAP, and by extension the "virtual" museum, has in playing a significant role in education, enhancing and boosting, again, the educational and communication role of the museum, by playing the role of the mediator in the communication process (of knowledge, experience and values) between the user and the traditional museum.

6 *Second Life* (SL) is currently the most mature and popular multi-user virtual world platform being used in education, as coined by Steven Warburton (1999)

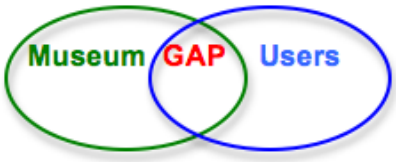


Figure 11: The layout is created by the author and draws inspiration from Schramm's model of communication (as cited in Morgan and Welton, 1994:33)

Institutional Extension in Online Space

Embracing active learning[7], this research argues that the GAP is stimulating self-learning online, creating a virtual learning environment that is "constructivist" (Hooper- Greenhill, 2004). It is a virtual art space that facilitates the discovery of art, and as can be seen by the table below the virtual exhibitions can be compared with the social media characterized by the adaptation to the user's convenience and interest, offering a personalized experience of art and self-navigation in the "virtual museum" space. Similarly to the social media experience, users have control over the navigation, the time, and the place where they enjoy and consume art online. Overall, the users are actively involved and engaged in higher thinking when they decide to explore the GAP and the "virtual" museums" featured.

Constructivist exhibitions (Hein)	Social media/Web 2.0
• Free choice	• Free choice
• Many entry points	• Many entry points
• No specific path	• No specific path
• Prior knowledge and experience	• Prior knowledge, experience and **interests**
• User-controlled	• User-controlled
• Visited in own time or structured educational experience	• Visited in **own time & place**, may be part of structured educational experience
• Many points of view	• Many points of view
• Museum seen as authority	• **Shared authority**
• Experimentation, conjecture, conclusions	• Experimentation, conjecture, conclusions, **collaboration**
• Leisure, entertainment & learning	• Leisure, entertainment & learning
• Difficult to update	• **Constantly up-to-date & changing**

Figure 12: The table compares and contrasts the Constructivist exhibitions featured in the GAP with the

Defining the constructivist learning and the way it takes place, Good and Brothy (1994) define it in details and it is briefly explained here. The, "learners construct their

[7] Active learning is an umbrella term that includes "strategies promoting active learning", such as "instructional activities involving" the learners "in doing things and thinking about what they are doing" as Bonwell and Eison (1991) define it in their research.

own meaning," while the, "new learning builds on prior knowledge, [it] is enhanced by social interaction, and develops through 'authentic' tasks" (Good and Brothy, 1994, as cited in Cooperstein and Kocevar-Weidinger 2004:142). The constructivist learning process during self-navigation in the GAP moves from the experience of the 'virtual' space and art content to the knowledge of it; the user makes a deliberate effort to navigate and explore the art content in the virtual museums, and the processes the different information that crosses their path. Discovery, or constructivist learning, takes place, moving from experience to actual learning (Cooperstein and Kocevar-Weidinger, 2004). "Constructivist learning is inductive," as Cooperstein and Kocevar-Weidinger underline (2004:141).

135)	**Building my knowledge base about the art virtually deepens my understanding.** I would be thrilled to see something I have been able to study up close.

Source: The answers to the open questions in the survey, No. 14 (Appendix A). The users explain why they would, or wouldn't, visit the physical museum space after having visited the virtual museum in the GAP.

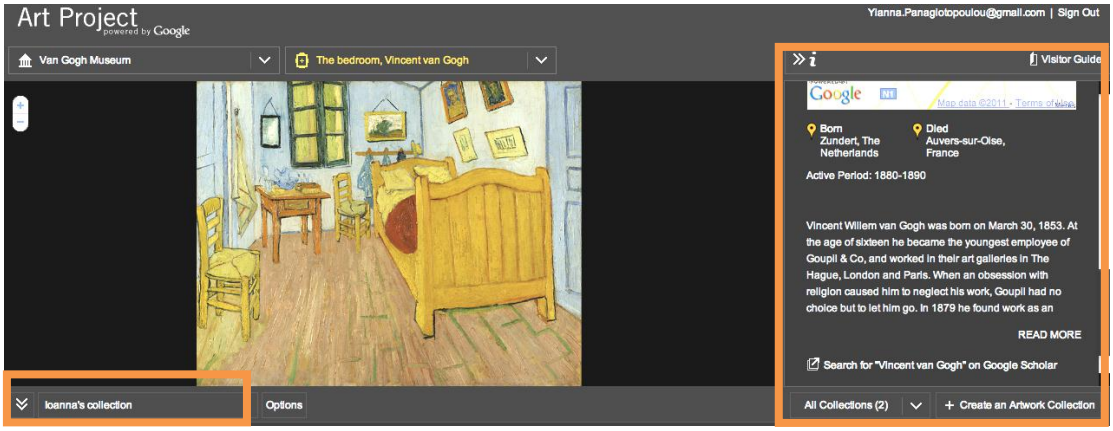
The GAP, illustrates that the knowledge of art is moving towards the users in the "virtual" art spaces, rather than the user being "pushed" to learn about art. The users navigating the virtual art space are actively engaging with the information as they are searching alone, creating *more memories* about the "virtual museum", and having fun; "it is fun, in many cases, to learn more [about] some queens or historical persons," (Case 11, Q5). In addition, the same user states that the GAP, "will help you to plan your real route," (Case 11, Q9), "You see it (the work of art) on your computer and of course you can identify some characteristics. You get familiar with the portrait. You learn to identify it," Case 11 states about the online navigation in the GAP (Case11, Q4), and perhaps after the experience the user will want to physically visit it, "I've used it to check out museums I don't know for learning. For example, I navigated it for several hours the first two days I found out about it and it was quite entertaining and motivating to visit the museum," (Case 11, Q9). Also, this study discovered that the more you explore and learn online about the art content and the "virtual" museum, the more you will appreciate the actual visit to the art work later, or vice versa, as is discussed later on in this chapter.

Through this study, it is suggested that the users of the GAP, as illustrated by the

data, are potentially having more complex experiences in the “virtual” art spaces, rather than in the physical ones; including a range of emotional responses and intellectual engagement. Some “virtual” users of the GAP encountered the virtual art representations to be of inherent educational or entertainment value or both. The active and critical engagement with this “virtual” art space –especially the critical engagement by some participants in this study – challenges the characterization of the museum’s visitors as ‘passive’, who just indulge themselves in “cultural window shopping”, (Treinen 1993: 90) while are navigating physically in a museum.

The GAP, is a simulation of the physical museum space, with the self-navigation and the features for external linked information designed in such a way to actively engage the users’ mind, “so that their thinking is related to actual practice,” (Wilson, 1996:21). The multiple ways of representing the information in the GAP (links, YouTube videos, photos, etc.) is a different way of “experiencing multiple perceptions” (Wilson, 1996:21) of the art content exhibited virtually in the space. The GAP seems to have the role – or function - of the instructor in this learning process, between the experience of the “virtual museum” and the user’s knowledge construction. Wilson (1996) states that, “by combining several types of media in a learning environment, the designer allows learners to see the world in different lights, so that their understanding of facts, concepts, procedures and principles is rich and multi-faceted,” (Wilson, 1996:21-22); the GAP is a “virtual” art space that, “arranges the condition of learning,” (Wilson, 1996: 23).

“Self-directed learning is at the heart of the knowledge construction process,” (Wilson, 1996:18). The design of the GAP, as has been argued in previous sections by its users, provides to the virtual user, “a level of autonomy in the learning process,” (Wislon, 1996:18) of high art. The feature next to each artwork, where you can retrieve all the information about the painting, the era and the artist or the museum where it is exhibited, guides the users to pursue topics that interest them the most or that are relevant to their knowledge level or the purpose of visiting the site. They can “play” experimentally with the various links and manipulate the information available. Overall, they can “experience” the art and simultaneously form or re-form their knowledge about it by actively discovering it “virtually” (Wislon, 1996:18).



Therefore, as Bruner suggests (1961), the users of the GAP who actively or critically engage with the material online are more likely to recall information (Bruner 1961). There are academics opposed to that argument, such as: Anderson, Reder and Simon, 1998; Mayer, 2004. Mayer (2004) argues that the learners should be cognitively active rather than behaviorally active during learning; which is what happens with the users of the GAP because they are visiting the virtual space with a purpose, which is different for each person and could be educational, work-related, for leisure or curiosity, for entertainment or self-learning. Understanding the complexity of the "virtual" visitors perceptions and experiences in the "virtual" museum is crucial, as this could influence museum's identity, the contraction of personal or group identity.

The learning process is an essential part of being human, as it is inherently linked to our identity and sense of self. People have an intrinsic desire to learn and, nowadays, with the evolution of media in our everyday lives the amount of people expressing this desire is steadily growing. Self-learning is, "self-directed, voluntary, and guided by individual needs and interests - learning that we will engage in throughout our lives," (Falk and Dierking, 2002), as mentioned above. The online critical attitude in engaging with interactive art spaces, like the GAP, enhances the knowledge and boosts the positive feelings and impression about art, similarly to the Socratic method[8] in the education field; active self-learning by searching, actively and critically engaging with materials online, or high art in our case.

To conclude this section, the GAP is a virtual art space that facilitates the discovery

[8] The Socratic method, which is also known as method of elenchus, eclectic method, Socratic irony, or Socratic debate, is named after the classical Greek philosopher Socrates. This method is a form of debate between individuals with opposing viewpoints based on asking and answering questions to stimulate critical thinking, self-learning and to illuminate ideas (Jarrat, 1991)

of art through the self-navigation of the “virtual” space. Learning about art in the GAP can be generally defined as unique to each individual; shared, and taking place over time, as an active process; shaped by the prior knowledge and experience of the person; creating meaning and new creative connections with the art space in an innovative enjoyable way; a mentally healthy experience.

Knowledge with Enjoyment: Edutainment

The GAP in this study, as mentioned previously, combines entertaining and educating elements in a unique hybrid way, potentially enhancing the value of the “virtual” experience of art. Its edutainment nature suggests a different venue in learning and enjoying the art content via the interactive features that provides. “I truly enjoy the experience of viewing the museum with the Google Street view technology,” says Case 1 (Case 1, Q1). Users of the GAP unveiled the feeling of enjoying a great experience through their navigation of the GAP that they will treasure in their memories. The “virtual” museums in the GAP represent the technological approach of traditional museums and could be considered as being the next step in taking the museum experience beyond entertainment into something much more significant in its potential to have an impact on learning; in other words, edutainment. Educational functions combined with interactive information processes have developed in the GAP, and opportunities for knowledge, inspiration, enjoyment and information are being opened up by the exploration of the virtual art platform; adding value in the users experience.

“It is really fun navigating in the GAP, wondering around in the museums from different places,” (case 11, Q5), a user underlined. Illustrating that the process of navigation itself contributes to the experience online, than perhaps in the physical space, although experiencing museum space itself has shifted too. One other pointed out that, “the experience of art for me is based on the motivation for enjoyment and a certain kind of satisfaction that derives from experiences such as going to the theatre or attending a visual performance,” (Case 9, Q2), comparing the art experience with some other leisure activities and continuing later on to say that, “our main concern should be whether the combination of those two can force museums to make a step towards the future and become environments of active learning and enjoyment,” (case 9, Q6).

Hooper-Greenhill (2000) points out that education and entertainment synthesize a synergetic effect that enhances the museum experience. “The museum has become

an establishment for learning and enjoyment," (Hooper-Greenhill, 2000: 2).

#	Answer		Response	%
3	Entertainment (for personal leisure)		137	71.4%
4	Other private/personal moments (for learning about art)		95	49.5%

Figure 13: The table shows the percentage of the GAP users that visit the platform for leisure or learning purposes.

The data from the survey supports the statement, as 71.4% (n=137) of the users of the GAP replied to the question regarding the purpose of visiting the virtual art space that entertainment and personal leisure are important reasons for consuming art online. Considering how many investments have been made into new architectural designs of museums by famous architects, combining the unique space and the art content side by side, in order to gain the attention of the user (e.g Guggenheim, or the new Antwerp museum etc), it could be interesting to see the importance of the virtual art spaces continuously growing in the contemporary environment.

The aspect of entertainment gives the museums a competitive advantage (Schweibenz, 1998) in this leisure-oriented era. Also, almost half of the users (49,5%, n=95), are visiting the site for self-learning about art. One interviewee stated, "I enjoy seeing works in their physical setting and the experience of travelling to a gallery or museum, whether locally or overseas. It's also about being removed from your everyday setting –not as possible when you are on the other side of your computer. But that's not to say that viewing the works online and travelling virtually inside a museum is not as enjoyable or interesting an experience. It's just not the same thing. Seeing the works online also makes me more interested to see the physical work up close," (Case 2, Q3).

There are more and more museums nowadays that are experimenting a bit more with the virtual environments and virtual visitors by adding gaming features. For instance, the International Spacelight Museum created "Second Life" environments, in which the users can do activities that cannot be done in real life, such as flying, and in this way creating anticipation and desire in the users for the physical visit to the museum.

The current implementation of the virtual interactive spaces by the museums is

actually shaping the future and influencing the perception of the users about art, as we saw above. Additionally it fosters their desire to visit the actual museum through the informative and engaging activities online. Discovering the art virtually fosters the offline appreciation of it: “I believe that most of the times, the museum visitors who have seen, for example, a painting online, would be positively surprised while facing an original Van Gogh,” (Case 9, Q7) as he/she will have “informed expectations, […] this will lead eventually to a positive, reinforcing attitude about museums,” (Schweibenz, 1998).

Source: The answers to open questions in the survey, No. 14 (Appendix A). The users explain why they would, or wouldn’t, visit the physical museum space after having visited the virtual museum in the GAP.

Because I would need to want the real exhibition after I will be virtually exposed to it**. It will trigger my motivation to visit them.**
Because GAP would have motivated into going to see and experience the real artwork I am interested in.
When you've already gone through a collection you know whether it's to your liking or not.
There are some museums, which I have only heard of but after seeing them on GAP I've put them on my list of places to visit.
Online tour made me feel like visit the real museum more than before
Because the indoor Street View gives a glimpse of how amazing the galleries are.
Virtual in this case does not really substitute the experience on visiting a museum in "real life". The way I see it, it work as a trigger and education tool.
If I like the virtual thing, I want to see the real thing.
The virtual experience cannot replace the real thing! I use GAP to pique my own interest, or to be inspired for further learning... GAP opens the door to museums but it can never replace the experience of standing in the galleries.
It’s always good to look again and it would enhance the experience.
To remember my former experience and admire once more the exhibits
Because I want to see in real whatever I’ve seen in virtual
To confront my expectations with experiences. To gather more impressions. To place those memories in the flow of time.

Therefore, although education is the primary goal of the museum, the strategic synergy of it with entertainment, that the GAP offers, could be utilized as an venue

that enhances the value of the visitor's learning experience in the "virtual" museum through the provision of an exciting entertaining process (Hooper-Greenhill, 2000); thus reinforcing the educational role of the museum. The GAP can be characterized as a learning environment with "engaging and fun-filled" (Song, Elias, Martinovic, Mueller-Wittig & Chan, 2004) activities. These have been created in order to allow the discovery of the enjoyment of art virtually. As a user states, "[I want to visit the physical museum] to confront my expectations with my experiences; to gather more impressions; to place those memories in the flow of time," (#154, Appendix A2). The evolution of digital content, the creation of knowledge via self-navigation and the multiplatform distribution available in the GAP are key components, which blur the users experiences –entertaining and educational experiences – revealing an edutaining venue in experiencing art.

The GAP enables multiple ways of interaction and positions the user at the centre of attention, contesting the authoritative 'voice' of the traditional museum as a communicator of culture and knowledge that is why the last section is devoted to the users. The primary contribution of this study to the area lies in the attempt to understand the complexity of the "virtual" visitors' perceptions and experiences at the GAP.

5.4 User

In this multilayered relationship, which has previously been described, between the “virtual” museum and the traditional one, the last variable that plays the most significant role is the User. The active exploration of the “virtual” space and the online content, along with the browsing and manipulation of the information, synthesize a strong stimulus for the user to get the most value of an enhanced and personalized (pre or after) experience of the art via the GAP; encouraging a deeper and longer lasting relationship with the museums.

The GAP as this thesis argues is a lens with expanded utility in enjoying art, evoking from educational to sensational experiences and memories for the users, opening a new venue for museums to market their identity to the visitors. This final part of the chapter argues that GAP is potentially mediating our mind, our senses and maybe our memories. It may do this by either creating new or evoking “real” memories and emotions through the virtual navigation or the active and critical engagement with the features of the space and the art. The experiences of the users in this “virtual” art space are blurred – educational and entertaining experiences – highlighting an edutainment nature of art.

Mind Mediation: From “Real” to “Virtual” and vice versa

There are two cases identified in comparing the “real” and the “virtual” experience of the art by the users. As previously explained, if the visitor has visited the “virtual” museum in the GAP before going to the traditional museum, s/he has "informed expectations" about the traditional museum visit. In that case, there will be a, “close fit between the expectations and the actual visit,” (Schweibenz, 1998) as is presented by the data below. Eventually, as Schweibenz (1998) emphasizes and the results of this study present, “this will lead to a positive, reinforcing attitude about museums.” In the other case, if the user of the GAP has previously visited the museum and then the “virtual” one, this has reinforced his/her appreciation of the art works that he/she admired and has the chance to use the capabilities of the virtual art space to enjoy art virtually and may recall, repeating his/her “real” sensational or emotional experience. The “virtual” museum is an extension of the physical museum space and their complementary relationship can enhance the overall art experience and therefore the appreciation of art as the qualitative data of this research coin. The “virtual” art spaces could form a strong branding and marketing tool for the museums, as the offline experience is strongly preferred and suggested by the users of the

“virtual” museum, while the “virtual” one is more complex.

With regards to the comparison of the “real” and the “virtual” experience of art, and the possibility of altering their experience and perception of it, the users themselves stated:

“Now, we are stuck behind lines and plates of glass and crowds - it is impossible. The GAP allows us to bypass that [...] Museums are a sterile environment - and not always the best way to appreciate the history of an artwork,” (Case 10, Q7). “If actual viewing is before virtual viewing, virtual experiences can add to original perception. If virtual viewing takes place before physical viewing, there is already a preconceived notion of how the work of art ‘is’. Mainly in size, brightness of colors,” (Case 6, Q7), “I don’t think that the virtual experience alters the personal physical experience of viewing art. They are on different playing fields. Since there are qualities that do not translate into the digital realm, one cannot expect to have parallel experiences. Inherently, a lot gets lost in translation,” (Case 7, Q7). “I believe that the argument of virtual experiences altering the experience of the original masterpieces is valid. For example, an online viewing of a Van Gogh painting creates to the user a certain impression about the work of art and certain expectations about the one that is exhibited in the Van Gogh museum. However, I believe that most of the times, the museum visitors who have seen, for example, a painting online, would be positively surprised while facing an original Van Gogh […] Still, I believe that the one experience can not replace the other and that these two can be very complementary to each other,” (Case 9, Q7, Appendix B).

Considering all of the above perspectives and arguments, the question which is crucial to the “virtual” museum and as posed by Argoski (1995) follows: “Is it possible for the patron to have a meaningful or “real” experience visiting a virtual museum?" (Argoski, 1995). In a way, this is answered by the last statement that, “ […] these two can be very complementary to each other,” (Case 9, Q7, Appendix B). This question leads to an extensive exploration of the visitors’ perspectives with regards to the comparison and contrast of the “real” and the “virtual” experience of the museum space. More users’ statements follow with respect to this. In answer to the question about the reason why they would visit the physical museum space after having visited the “virtual one”, the users argue the complementary nature of the two experiences and the missing features – such as the “aura” of art which is discussed in next part–of the virtual experience.

Experiencing the actual artwork has even more value after exploring it online
Because then **I can compare real museum experience with online experience and draw conclusions about the usefulness of GAP.**
There's nothing quite like seeing works of art in person. **I tend to feel a stronger connection in person than through the computer screen. I think GAP is a great tool to help me figure out what I might like to go see in person.**

Because **GAP would have motivated into going to see and experience the real artwork I am interested in**
I would visit the museum again, **especially if I was impressed from my virtual tour**. On the other hand **I would be less enthusiastic in spending a significant amount of money visiting a city if I could just see everything virtually**. That could work the opposite way if I was very much positively surprised from what I see

Visiting and seeing art in real life is completely different than seeing it online. **When you've already gone through a collection you know whether it's to your liking or not.**
The experience of watching art in a museum is not comparable to watching it from a screen. **I would rather use GAP to revisit the museum after I've visited in real life.**
The issue of presence seems very important for me **in getting acknowledged with high arts.**
It is always better to see art in the museum environment. It is a way to get out home and enjoying art. **However, GAP is a good way to have an overview of the museum... in order to see if the museum worth.**
If there are many **art pieces that I like I would highly consider visiting it**
Seeing art in person adds other dimensions of meaning to an artwork that is inaccessible via a computer screen: scale of work to person, tactile qualities, and museum display.
Although looking at art through **GAP allows you to zoom in and examine details far deeper** than when you are **standing in front of the actual artwork**, visiting a museum to **see that same artwork in person** is essential to get the size of the work. **Its scale in relationship to you can carry a different layer of meaning and alter one's perception of what you have already seen online**
Because I think it is quite important to **have physical contact with the museums in order to understand better the art.**
The feeling of actually being in a museum is totally different. **The location of yourself inside the museum and around the pieces of art can give you a different perspective that is worth experiencing, even if I have already visited virtually a museum.**
Nothing beats the real thing!
To **see the colors in reality** rather than through my particular computer screen... **to see the artwork in real life to get a sense of scale and to experience the work.**
I feel GAP is **a wonderful complement and introduction to the art in the museums**, but seeing them **in real life is a priceless experience**
Because it's not the same - the physical experience is irreplaceable. **But having gotten a taste would make me want to go more than if I hadn't tried it online**
Its always **good to look again live as it would enhance the virtual experience**
To see **the difference to see if I like it as much as I liked it online**
Because I've the opportunity to watch the collection on real that is the better experience that you can have with art. **GAP allows me to see the collections before or/and after the "real" experience at the galleries/museums, and help me a lot at work and learning more about art**
The two experiences are not mutually exclusive they are mutually necessary.

Just to see again a painting that I like, but also to compare and assess the quality of GAP (real tour VS virtual one)
Because I think there's something to be said for seeing the work in real life. **GAP sparks the desire.**
It is interesting to **see the building, paintings and setting in reality and then compare with how they looked online.**
I'd see the GAP primarily **as a taste of the museum**. Ideally I´d like to visit it for real. That's why GAP might **be instrumental in getting me to visit a featured museum for real**. I don't expect it to be a proper substitute for a visit any time soon**, but it is very nice to have a substitute at all and get some more info about what I can expect.**

Source: The answers to open question in the survey, No. 14 (Appendix A). The users explain why they would or wouldn't visit the physical museum space after having visited the virtual museum in the GAP

Overall, the visitors of the physical dimension of the museum should be inspired to visit the "virtual" counterpart of it, as Marty (2007) argues, in order to enrich their "real" museum experience with additional information discovered online about the collection and the museum itself (Marty, 2007); "We want authenticity. We do not care about a photo of a celebrity printed in a magazine, we want to see them in person, in context," (Case 7, Q6), "Seeing the physical painting calls all the senses into play at once, opening the mind to the magnitude of the vision," (Case 1,Q3). Simultaneously, the virtual visitors seem to be inspired and lured to visit the "real" museum space and enhance their experience by viewing the museum's architecture, the texture of the painting, and the sense of the atmosphere that encloses the art and the surrounding features; the "aura" of art.

Considering this, many people interconnect the process of visiting the physical museum place with enjoyment and travelling; "I consider visiting a museum an entertaining experience as I personally enjoy visiting galleries and other places where art is exhibited. I must also admit that many of my past museum experiences are mostly connected to trips that I took abroad. For example, when I visited London, I devoted one or two days to visiting Tate modern and the British museum. The same goes for the time that I travelled to Amsterdam when I immediately visited the Van Gogh and the Rijksmuseum. In my mind, museums are mostly connected with high art and travelling in metropolitan cities," (Case 9, Q3). "I enjoy seeing works in their physical setting and the experience of travelling to a gallery or museum, whether locally or overseas. It's all about being removed from your everyday setting […] Seeing the works online also makes me more interested to see the physical work up close" (Case 2, Q3). The virtual navigation not only motivates users to see the "real

celebrity" work of art, but also recalls the memories from travelling to the place and reviving the images; the educational and sensational journey is revived on the users' screens through navigation in the "virtual museum", which evokes the anticipation to relive the experience.

26)	The education of traveling abroad and experiencing the culture, gastronomy, and environment of the artist is as important as visiting the museums
109)	I would like to go to The State Tretyakov Gallery, mainly because I have never been to Russia and I did not know about the gallery before GAP. Though I wouldn't go because of GAP
113)	Because I like the sense of physically being in a museum (space, people, happenings etc.). For me, visiting a museum is an experience by itself and is as important as the masterpieces exhibited. Moreover, I enjoy visiting museums with friends, discuss and comment on exhibits and even spend time in there is a form of entertainment
174)	Because the GAP. It gives a virtual taste and not the entire experience. I also enjoy the architecture of museums and their location in cities of the world

Source: The answers to open questions in the survey, No 14 (Appendix A). The users explain why they would or wouldn't visit the physical museum space after having visited the virtual museum in the GAP

It is the answer of one of the interviewees that concludes this section; an answer that underlines the complementary nature of the two different experiences, and is mentioned to give stronger grounds to the argument of the author that the "virtual" museum is an extension of the physical museum space and their complementary relationship can enhance the overall art experience and therefore appreciation of art:

"I think that both experiences can be very complementary to each other but by no means can those two be considered as similar. On the one hand, the experience of art for me is based on the motivation for enjoyment and a certain kind of satisfaction that derives from experiences such as going to the theatre or attending a visual performance. On the other hand, the use of GAP is based on the need for easy retrieval of information either before or after the museum or gallery visits. I can imagine that people with different needs such as students of different levels of education or teachers and although, as I previously said, the physical museum experience and the one GAP offers are considered different, can be still compared to each other as they both revolve around the same subject: works of art. Therefore, in the case of GAP, users can easily retrieve in depth information as well as have a

more intimate experience with the work of art through the interactive options offered. Users can express their opinion about a work of art and they are enabled to personalize their museum experience, something that is not possible in the physical dimension of the museum. At the same time, museums in the physical dimension offer a specific frame to works of art. The museum atmosphere, an environment where only the remarkable masterpieces are exhibited, is constructed in a way to offer visitors the opportunity to associate themselves with high art and gain a unique experience, almost a ritual." (Case 9, Q2)

Regarding this, Bowen, Bennett and Johnson (1998, in Schweibenz, 1998) show that museums should use the potential of the "virtual" museum in order to attract "virtual" visitors who, after visiting the online museum, would then desire to visit the "real" museum as well. At this point, it has to be mentioned that the question regarding the "real" and the "virtual" experience is partly approached by Lynne Teather (1998) and Falk and Dierking (1998: 8), (as cited by Schweibenz, 1998). They draw parallels between museum-going and visiting museum Web sites and suggest – based on the modest research that is available – "that creating a Web experience is as complex a behavior for virtual visitors as museum going because both are centered on free choice learning," (Schweibenz, 1998). A successful complementary interrelationship between the traditional museum and its "virtual" counterpart can have positive results for both the spaces (Marty, 2007, Schweibenz, 1998).

Sense Mediation: The persistence and the transience of "Aura"

The lack of the actual sense of the art work and the "aura" (as Walter Benjamin refers to in "The Work of Art of mechanical reproduction", 1936) of being in the physical space are qualities that the "virtual museum" lacks, as some academics support, and this research aimed to delve deeply into the users' perceptions about their sense of it (if it is lacking, or not). Regarding the virtual representations of the museum collections and art works, an open-ended global debate is taking place about the loss of "aura" of online art; is the art in virtual environments being enhanced or betrayed? Does the concept of aura persist in this era of copying high art?

16)	It is important to experience an actual museum **to smell and see** the actual sizes of works.
66)	You **cannot replace the smell** and **aura of artworks** with a computer screen. I want that experience too.

74)	Because it's not 'the real thing', you just want to witness certain pieces of art in real life. 'De Nachtwacht', for instance. However beautifully pictured in GAP, the painting has to be seen **in real life to grasp the beauty of its entirety**.
85)	GAP might be a great project**, nothing beats the experience of seeing the art 'in the flesh'; the feel of the room, the atmosphere of the museum** etc.
189)	Because I want to feel the **aura** of the museum

Source: The answers to the open questions in the survey, No. 14 (Appendix A). The users explain why they would or wouldn't visit the physical museum space after having visited the virtual museum in the GAP

"The experience of the actual visit is completely different, the main drawback of the online or digital or printed representation of works of art is the loss of aura and the degradation of the details that make the work of art so unique. Again, this also very much depends on the work of art and it applies mostly to paintings." (Case 9, Q4)

McTavish (2006) raises questions concerning the authenticity and the loss of aura especially for objects of art. The quality of the depictions online is rarely satisfactory and is highly dependant on the hardware and software applications of the user, (McTavish, 2006). "Incorrect attributions of the piece are the biggest issue online," (Case 1, Q4). "These reproductions (meaning the virtual and digital) are another method of viewing art, but often skew original significant attributes of the original, such as color, texture, and size. Art is taken out of its original context and given a separate aura, often the one of commercialism, as in the case of famous paintings on coffee mugs and tote bags," (Case 7, Q4). McTavish (2006) states that this low quality provided by the online collection – either caused by technological issues or copyrights - reinforces the statement that "real" art can only be experienced in the physical place of the museum (McTavish, 2006).

In contrast, there are scholars supporting that, "there is no longer a clear conceptual distinction between original and reproduction in virtually any medium," (Davis, 1995:381). The more progressive academics support that between the two states, the "pure and original", and the "imitative and impure", there is no difference and that the, "images, sounds, and words are received, deconstructed, rearranged, and restored wherever they are seen, heard, and stored," (Davis, 1995:381). "Digitalization transfers this aura to the individualized copy […] the dead replica and the living, authentic original are merging, like lovers entwined in mutual ecstasy," as Davis points out (Davis, 1995: 381). Hence, most of the users of the GAP

participating in this research –with few exceptions- miss the sense of aura that surrounds the original work of art in the physical dimension of the museum space.

In an extension to the above arguments, Manovich (in McTavish, 2006) argues that the interactive features in the "virtual" museum are employed to simulate real life interactions rather than to engage online visitors psychologically and intellectually; "You are merely seeing a reproduction […] essentially an interpretation of the actual work…you are not viewing the artwork. You are viewing an image of the artwork. Aura cannot be completely replicated. You can't smell oil paint and varnish from a computer screen," (Case 4, Q4).

Overall, the argument of the author, after delving deeply into the users' perceptions in this study, is that the "aura" of art has, "by far its most provocative extension into the intimate bowels of our body, mind and spirit," (Davis, 1995:381). It is inherently inside us (Davis, 1995), and the complementary interrelation of the "virtual" and the "real" experience of it is what unwinds the catharsis that the art is aiming to cause in our mind, senses and memory. One can argue that we have romanticized the aura of the physical as the commercial and touristic aspect of experiencing art may actually take away from this aura. The 'aura' is actually the sense, of being one with the artwork, and the online realm allows you to do so; as the "virtual" space gives the opportunity to the user to enjoy the art up close and personal (as some users stated previously) without any noise, distraction or restriction. "Even now, in an age when copying is high art, the concept of aura persists," (Davis, 1995:384) because of the fact that it is inside us; any deconstruction of a meaning or memory or sense or experience of an artwork means that a new one is created, "that is inevitably unique, no matter how ordered or predestined," as Davis argues (Davis, 1995:384).

Memory Mediation: A Trigger to our Memories

This thesis argues that the GAP can possibly mediate our mind with the "real" and the "virtual" interrelation of art representation; our sense of experiencing the art; it's "auratic quality" online and offline, and eventually may mediate our memories; either by possibly creating new or evoking "real" memories and emotions through self-navigation and active engagement with the virtual features of the space and the art.

McTavish argues that, "individualized intellectual operations, such as remembering, identifying and problem solving, are not encouraged by 'interactive' computer software," (2006: 232). This chapter created some grounds to challenge this statement and to eventually argue to an extent that the engagement of the user with

online art content may trigger his/her previous memories of the art experience or maybe creates memories to be contested in the real physical museum space.

127)	(I want to visit the physical museum space) to remember my former experience and admire once more the exhibits

The art objects online work like hooks, which attract the users to "unlock" them, and these objects by revealing the stories that are attached to them, they add value to the personal "virtual" experience of the user; as in many cases these objects are "hidden" in a physical museum space, which may lack information to help the visitor to "unlock" their story. The online visitor-as-explorer potentially collects memories through the active discovery of the virtual art space. By "unlocking" the artworks virtually, the user may not only learn but also may become deeply connected with the art and the "virtual" space, and therefore get motivated to visit the physical museum space to admire it in the flesh. One can argue that it is easier for a museum to collect and curate objects, than collecting and curating visitors' brains and memories, which is the key to make them feel attached to the museum space and collections.

"Web 2.0 puts users and not the organization at the centre of the equation. This is threatening, but also exciting in that it has the potential to lead to richer content, a more personal experience." Ellis and B.Kelly (2007)

In conclusion, the museum space should blend its physical-traditional dimension with the "virtual" one, adding layers to the art objects, "a museum without walls," as Lynda Kelly defines it (MuseumNext 2011). Now is the time to blend the online memories of the visitor with the offline and blend online emotions from active engagement with the offline experience, precisely because of their edutainment nature. "The Museum" preserves memories and tell stories and it is a place where both individual and group identities are formed and negotiated; its collection includes objects that are fundamental to the community we live in and its space facilitates a range of emotional and learning experiences. With this interconnectivity between "virtual" and "real", the social role, the educational, and the communicational role of the museum could be reinforced. The users tend to relate their "real" experience with the "virtual" one and this complementary interconnection of the experiences can lead to strong branding of the museums; a brand is what people think it is!

The visitor's virtual "journey" in art is the navigation path on the GAP site. The experience flow is the emotional side evoked possibly by recalled or created

memories of that “journey”. The goal should be, to be discovered and shared by more people in order to unlock new minds through this “journey” in the “virtual” museum. Museums need to transform themselves from, “being about something, to being for somebody,” (Wein, 1999).

Chapter 6

Conclusion: Mind The Semantic GAP

Overall, it can be argued that there is a 'semantic gap' between everyday experience and the knowledge of the general public when it concerns high art. In the past, the traditional museums used to preserve an “elitist” identity, limiting visitors from diversified social levels and political positions from getting engaged with art content and feeling connected with art objects. In this situation, the solution could be the introduction of the “virtual” museum and the virtual art spaces, such as the GAP, which signify an important step towards the “audience-driven” or “visitor-centered” museum era (Schweibenz 1998; 2004). This project opens up museums and art experiences to a wide and diverse audience and several studies have already emphasized the possibilities that the Internet, new media and Web 2.0 can offer (Anderson 1997; Argoski 1995; Bearman 1995; Bowen/Bennett/Johnson 1998; MacDonald/Alsford 1997).

The audiences are changing; the, “communicative networks ribbing the globe,” (Davis, 1995:381) are changing the world, resulting in changing expectations and relationships and social reconstructions. The convergence of new technologies allows more people to participate and experience the art world; referred to as the “participatory culture”. Museums try constantly to attract and engage more and diverse audiences. With many methods, they entice into them people who have with different lifestyles and learning styles, coming from various cultural backgrounds and social perspectives. People’s return to the museum depends, to an extent, on whether they can make personal connections and see something of themselves there, or believe that they will have a unique experience in the physical museum space. This is also dependant on whether museums can sustain competitive positioning with the profusion of social, educational, and cultural activities vying for people's attention (McLean, 1999). This thesis argues, that the GAP is a tool that lights up the opportunity of the museum, to reinvent its identity and synthesize a strong stimulus for the user to get the most value of an enhanced and personalized (pre or after) experience of the art; encouraging a deeper and longer lasting relationship with the museums.

Audience expectations are changing; we live in a technological leisure oriented era of

the X-box and the i-Pad, and museums should evolve in order to fulfill the different users/consumers tastes for online art. Today's museum visitors are going there with more technology and "memory" in their pockets than the museum has itself. By introducing technology into the physical museum space, the visitors' engagement with art will probably be enhanced, as the "virtual" and the "real" are inherently interconnected. By inserting technology into the traditional museum space as well (e.g. i-Pad(s) in the museum), the digital and cultural divide could possibly be bridged, to a certain extent.

A museum has to be more than objects in order to attract and engage the different diversified audience profiles, as is illustrated in the image above. The diversified users in the leisure-oriented period we live in, should be approached with personalized experiences; museums have to represent stories that are accessible and linked to all types of user. The GAP is a virtual art space that offers the possibility of the personalized experience, and has the potential to build a network of people who are enthusiastic about going to museums. This thesis proposes that the GAP is a lens with expanded utility in enjoying art, evoking from educational to sensational experiences and memories for the users, opening a new venue for museums in market their identity to the visitors by blurring the different personalized experiences. The mind, senses and potentially the memories of the user are awakened in the "virtual" museum space, before the actual visit to the museum, stimulating them to not only want to visit it, but also to get more emotionally and critically engaged in the physical museum space. Blending user's senses virtually with holistic media projects builds a nostalgic sense of the previous experience in the physical museum space, or an anticipatory desire to have one!

Museums should be platforms for exchange, as Simon (2007) states, "If museums want to become venues for discourse, the Web's transition to 2.0 is a powerful model," (Simon, 2007: 258). If it is accepted that everyone can have something valid to contribute, then museums should probably look beyond delivering the same experience to all their visitors and use technology to provide personalized

experiences, boosting the creativity and experience in the museum (Richardson, MuseumNext, 2011). Simon (2007), in coining the term “Museum 2.0”, underlines the potential of the “virtual museum”. Web 2.0, as she states, can engage the virtual visitors’ physically and emotionally with the virtual art objects and space. The museum experts should recognize the impact created by Web 2.0 and the social media on their visitors’ physical experience, and that the virtual art spaces are changing the way people learn in the physical space of the museum as well. They are complementary experiences; the “real” and the “virtual”. The GAP is a tool that enables visitors, learners, and users to become participants of art consumption, wherever they are and however they choose, as Simon (2007) emphasizes, the emergence of Web 2.0 has contributed to this change (Simon, 2007).

In an opposite approach, McTavish (2006) questions the possibilities and opportunities that Internet, and by extension the GAP, poses for the art museums participating. Pauwels and Van Oost (2005) also argue that opponents of the exploitation of new media in the museum field stress the fact that public participation in the museums will decrease, classical institutions will “sink” and works of art will lose their “aura” (Pauwels & Van Oost, 2005: 186). In addition McTavish (2006) stresses concerns of the degradation of authenticity and artistic quality in digital exhibitions, and the deterioration of educational purposes of the museums by promoting passive methods where knowledge for the artwork can be obtained by a simple click of the user, as is featured in the GAP. Finally, McTavish (2006) questions the new educational methods that might emerge through the embracement of the possibilities of the Internet. These are all arguments that were considered during this in depth study, and they have all, to a certain extent, been reshaped by the perceptions presented concerning the GAP.

Additionally, scholars (Marty, 2007, Schweibenz, 1998) underline the main concern regarding the role of the “virtual museum”, referring specifically to the impact of the latter to replacing its traditional counterpart. Marty (2007) argues that research has shown that the virtual collections enhance museum visitation, and this research argues the same. Hence, as Marty (2007) emphasizes, the museum professionals probably lack or ignore scientific information, constraining the prevalence of the “virtual museum” (Marty, 2007). However, this research underlines that a great amount of users believe that, “nothing replaces the direct experience of an icon, nothing!” (Appendix A2); answering the hype questions of whether the GAP, and the virtual museum by extension, replaces the experience of seeing masterpieces in the

physical museum space (Chapter 5).

As mentioned previously, in Chapter 1, this thesis aims to contribute in positioning the complex relationship among the new media, the amateur and the high culture. The idea explored is the possibility that high culture has, at last, become accessible, where the "virtual" art space of the GAP is making art enjoyment and knowledge a democratic and global experience. For this reason, it was essential to show how the in depth investigation on how the "virtual" space and the users' experience connects with the "real" ones, as the "virtual" and the physical blurs in the contemporary environment. To this end, the question that this study shed light on was: ***does the GAP democratize and globalize the experience and knowledge of art*?** In order to answer this main research question, three sub-questions were formulated to address different aspects of this main research question. In doing so, this thesis combined quantitative and qualitative methods. The sub-questions are:

1. *Who is using GAP and why? (Profiling the users of GAP)*
2. *What is the users' perception regarding online art and the online collection?*
3. *How do the user's experiences of "virtual" and "real" art compliment and interact with each other?*

After delving deeply into the euphoric propositions about the virtual museum and positioning the user as central within this virtual museum world, the idea of accessibility is pushed further, gauging how users make sense of the virtual representations and indexing of the art online. While visitor studies are an emerging discipline in museum field, research on virtual visitors is still a comparatively new field and not deeply researched. This thesis, after focusing in three areas of research, aimed in understanding the complexity of the "virtual" visitors perceptions and experiences at the GAP, in order to contribute in positioning the relation between the amateur and the online art realm.

The primary contribution of this thesis to this area lies mainly in the qualitative data collected, which suggest that the "virtual" visitors of the online art spaces are potentially having more complex experiences at these spaces, including a wide range of emotional responses and intellectual engagement with the art online, as presented later at this study. Understanding the complexity of the users' perceptions and experiences at the virtual art spaces is crucial, as it influences their perception about art, the present and future museum identity.

The in-depth investigation of the user's opinions, feelings and beliefs about the GAP reveals the expanded utility of the GAP from an educational and active learning lens, to creating sensational experiences for the users, and ultimately promoting an innovative culture. The three areas researched, from which are derived the proposals after the in depth analysis are: the Accessibility to the Content by the Users via this virtual art space. The data of this research highlight that the accessibility, the virtual spaces offer, is the key for the museums to expand their utility from places of heritage attraction, to places that facilitate a range of experiences including emotional experiences and simultaneously promoting learning.

The evolution of the digital content, with the creation of knowledge via self-navigation and the multiplatform distribution available in the GAP, creates a new audience of active cultural participants in this leisure-oriented online environment. The individual browsing in the GAP can create a personalized and enhanced (pre or after) experience of the art content, while he/she is encouraged into a deeper and longer lasting relationship with the museums. In this case, the accessibility provided to the users via "virtual" art spaces like the GAP, to high art objects, is important for two reasons: links tightly the "virtual" and the traditional museum space and this strong link could foster the user's motivation to visit the physical space.

The data of the analysis indicate an important point, the potential the museums have to become popular and democratic via the virtual spaces. However, with the rise of the middle class in the emerging market and its more edutainment / popularistic function, it is worth contemplating how museum can use such platforms to shift away from its elitist status; hence, while conventional museums are saddled with a history of elitism, digital museums have a chance of reinventing the notion and the practice of museum-going as a more popular mass leisure activity open to a wider public. Overall, the accessibility to the "virtual" art content may have implications for the physical space, but it is a key opportunity of reinventing the meaning of the museum itself to the masses through the digital realm.

Regarding the users' profiles of this "virtual" art spaces, there are indications that the use of cyber-art spaces like the GAP will be a novel space to engage, attract and entertain more users; fostering the practice of museum going, promoting an innovative culture and globalizing/popularizing the experience and knowledge about art. All in all, "virtual" spaces are the chance of the museums to strategically reinvent their identity and democratize accessibility to the museum space; become enjoyable,

interesting and accessible.

Additionally, the GAP offers the chance to the users to experience the art content from an edutainment standpoint. It is therefore argued that the GAP is an extension of the physical space of the traditional museum, enabling accessibility to the online art content, educating and communicating high art to a diverse public. The evolution of the digital content, the creation of knowledge via self-navigation and the multiplatform distribution available in this "virtual" art space, are the key contributors in building the relationship between the "virtual museum", the traditional and the "virtual" visitor, as is described at this section. Museums have the chance via their "virtual" counterparts, to create a new audience of active cultural participants in this leisure-oriented online environment, giving new life to the practice of museum-going.

It should be pointed out that the data emerging from both the survey and the personal interviews of the users of the GAP illustrate this. Most of them perceive its learning and educational role as the main role; enhancing the learning process and knowledge about art. More precisely, it is a tool used by students, teachers, or researchers at work, and they characterize it as a, "great project for learning," underlining that, "[it] would be a wonderful teaching tool," (Case 4, Q8), as, "it can make the lesson more interesting, more attractive, and more enjoyable," (Case 3, Q8). The development and maintenance of the GAP, featuring "virtual" learning museums, seems at first glance, and for some users, as an ideal way to provide a student-centered, constructivist, learning environment.

The incredible potential that the GAP, and by extension the "virtual" museum, has in playing a significant role in education, enhancing and boosting, again, the educational and communication role of the museum, by playing the role of the mediator in the communication process (of knowledge, experience and values) between the user and the traditional museum is therefore highlighted. The GAP combines entertaining and educating elements in a unique hybrid way, potentially enhancing the value of the "virtual" experience of art. Its edutainment nature suggests a different venue in learning and enjoying the art content via the interactive features that provides.

Although education is the primary goal of the museum, the strategic synergy of it with entertainment, that the GAP offers, could be utilized as an venue that enhances the value of the visitor's learning experience in the "virtual" museum through the provision of an exciting entertaining process (Hooper-Greenhill, 2000); thus

reinforcing the educational role of the museum. The GAP enables multiple ways of interaction and positions the user at the centre of attention, contesting the authoritative 'voice' of the traditional museum as a communicator of culture and knowledge that is why the last section is devoted to the users. The primary contribution of this study to the area lies in the attempt to understand the complexity of the "virtual" visitors perceptions and experiences at the GAP.

The last variable explored in this relation is the User .The personalized enhanced (pre or after) experience of the art encourages a deeper and longer lasting relationship with the museums. The users tend to relate their "real" experience with the "virtual" experiences and this complementary interconnection of the experiences can possibly lead to a strong branding of the museums. However, it would be interesting to further research the loyalty that virtual art spaces are building with their users. To what extent does the virtual art space influence the positioning and the branding of the museums, considering that they are possibly reinforcing the memories that the visitor already possessed?

Regarding the sensational stimulus, augmented reality is probably the next step in the 3D era of museums. Blending the digital content with actual space, the "virtual" and the "real" in real time, the experience and the sense of the real world and the virtual one is what will follow in the field. This should be further explored in order to exploit how it can influence a user's evaluation of art, and by extension, the impact on the economy of the art market. Possible questions that could be researched in more depth are: does the augmented reality add something to a museum experience or does it become the experience itself? What do the users gain from looking at the real world through the virtual world of mobile devices, and what do they lose?

Overall, museums should evolve to meet these changing audience expectations. Most of the art museums are attempting to be a reflection of our lives, "visitor-centered", full of 'life' and with interactive features. At the same time our lives are a constant reflection of the ICTs; in other words, fast paced and online (this refers mainly to the Western countries, considering the 'digital divide' (Lievrouw & Livingstone, 2006). The GAP is a space that gives the general sense of the museum physical space and does not merely display art work, and this, "Increases an appetite to engage with the physical artwork", as Case 2 underlines (Case 2, Q4). It, "can alter the people's perception about the museum as being a boring and authoritative environment," (Case 9, Q1). This virtual representation of the traditional museum

works as a stimulation to re-shape or alter the traditional museum's identity, described as a "dead, boring", dull and obsolete place by the users (Case 6, Q1), and, therefore, alter and enhance people's perception about the art and the museums in general.

One can argue that it is easier for a museum to collect and curate objects, than to collect and curate visitors' brains and memories, which is precisely the key to making visitors feel attached to the museum space and collections. We live in a leisure-oriented era, where we thrive on sharing our best memories online on social networks, such as Facebook, Twitter, Flicker, etc and 3D will be the next best experience of sharing in the future. Therefore, understanding the complexity of the "virtual" users perceptions and experiences is key –and central in that study- for the museums to grasp the chance they have in the online realm and strategically reinvent their identity, by making the visitors feel attached to the spaces and the content. The online blends with the offline; people will forget what you tell them, they will forget what you did, but they will not forget how you made them feel.

Bibliography

Adams, T. (2011, February 6). Google takes art lovers on a virtual grand tour. But can a digitized masterpiece possibly match being face to face with the original? *The Guardian.* Retrieved (10.02.2011) from: http://www.guardian.co.uk/technology/2011/feb/06/google-art-project-virtual-masterpieces

Alsford, S. (1991) Museums as Hypermedia: Interactivity on a museum-wide scale. *Hypermedia & interactivity in museums: proceedings of an international conference.* Ed. David Bearman. Pittsburgh, PA: Archives and Museums Informatics. 7-16

Anderson, M.L. (1997) Introduction. *The Wired Museum- Emerging Technology and Changing Paradigms.* Ed. Katherine Jones-Garmil. Washington, D.C.: American Association of Museums. 11-34

Andrews, J. & Schweibenz, W. (1998). *A New Media for Old Masters: The Kress Study Collection Virtual Museum Project*. Art Documentation 17(1), 1998. 19-27 Internet, URL = http://is.uni-sb.de/projekte/sonstige/museum/virtual_museum_isi98. Last visited: 21/05/11

Argoski, J. (1995) Virtual Museums: The Web Experience. The Virtual Mirror. Internet, URL =http://www.vmirror.com/rov-int/museums.html. Version: 17/12/1995. Last visited: 22/05/2011

Baym, K. N. (2006). Interpersonal life online. In: L. Lievrouw & S. Livingstone(eds.).*Handbook of new media. Social shaping and social consequences of ICTs. Updated Student* Edition. London: Sage Publications, 35 – 54

Bearman, D.(1995) Information Strategies and Structures For Electronic Museums. Ed. *Museum Documentation Association (Great Britain): Information: The Hidden Resource, Museums and the Internet*. 7th Conference 1995 Edinburgh, Scotland. Cambridge, England: Museum Documentation Association, 1995. 5-22

Bearman, D. (1992) *Museum Strategies for Success on the Internet. Ed*. Giskin Day: Museum Collections and the Information Highway. Proceedings of a Conference on Museums and the Internet 10 May 1995. London: Science Museum, 1995. 15-27

Bearman, D.(1992) Interactive Multimedia in Museums. Eds. Susan Stone and Michael Buckland, Michael: *Studies in Multimedia: State-of-the-Art Solutions in Multimedia and Hypermedia.* Proceedings of the 1991 Mid-Year Meeting of the American Society for Information Science San Jose, California, April 1991. Medford, NJ: Learned Information. 121-137

Bennett, T. (1995). The formation of the museum. In: (Eds.*). The birth of the museum: history, theory, politics*. New York: Routledge, 17-58

Benjamin, W.(1985), The Work of Art in the Age of Mechanical Reproduction. Illuminations. Walter Benjamin - Essays and Reflections. Ed. Hannah Arendt. New York, NY: Schocken Books. 217-51

Besser, H. (1987), *The Changing Museum. Information: The Transformation of Society.* ASIS'87 Proceedings of the 50th Annual Meeting of the American Society for Information Science, Boston, MA, October 4-8, 1987. Ed. Chen, Ching-chih. Vol. 24. 1987. Medford, NJ: Learned Information, 14-19

Bowen, G. A. (2006). Grounded Theory and Sensitizing Concepts. *International Journal of Qualitative Methods,* 5(3), 1-9

Bowen, J.(1995), The Virtual Library of Museums. Ed. Giskin Day: *Museum Collections and the Information Highway.* Proceedings of a Conference on Museums and the Internet 10 May 1995. London: Science Museum, 37-39.

Bowen, J.P.,Bennett, J.,Johnson,J.(1998). Virtual Visits to Virtual Museums. Internet, URL =http://www.museums.reading.ac.uk/mw98/paper/. Version: April 1998. Last visited: 25/05/2011

Britannica Online (1998), Articles of the Year, 1996. Internet, URL = http://www.eb.co.uk:195. Version: undated. Last visited: 10/05/2011

Burcaw, E. (1997). Museum Defined. In: (Eds.). *Introduction to Museum Work*. Walnut Creek: Altamira Press, 13- 23

Cannon-Brookes, P.(1992) The Nature of Museum Collections. Manual of Ccuratorship, 2nd. ed. Ed. J. Thompson. London: Butterworth, 500-512

Chapman, L.(1982) The Future and Museum Education. Museum News, July/August 1982. 48-56

Charmaz, K. (2007). Grounded Theory. Objectivist and Constructivist Methods. In: Denzin, N. K. Lincoln, Y. S. (Eds). *Strategies of Qualitative Inquiry*. Third Edition. Thousand Oaks: Sage Publications. 249-291

Cohen, T. (1993). High and low thinking about high and low art. *The Journal of Aesthetics and Art Criticism,* 51(2), 151-156.

Davis, B. (1994), Digital Museums. Aperture. No. 136 Summer, 68-70

Davis, D.(1995),The Work of Art in the Age of Digital Reproduction. Leonardo (USA), 28(5), 381-386

Davis, D. (2011, February 9), *Hype and Hyperreality: Zooming in on Google Art Project*, ARTINFO, Retrived 25.02.11 from: http://www.artinfo.com/news/story/36950/hype-and-hyperreality-zooming-in-on-google-art-project/?page=2

Dick, B. (2005). *Grounded theory: a thumbnail sketch*. Available at http://www.scu.edu.au/schools/gcm/ar/arp/grounded.html

DiNicola, M. Travis (1995). The Work of Walter Benjamin in the Age of Digital Reproduction. Internet, URL =http://cac.psu.edu/~mtd120/palmer/thesis/benjamin.html. Version: 11/04/1995. Last visited: 20/05/2011

Donovan, K.(1997), The Best of Intentions: Public Access, the Web and the Evolution of Museum Automation. Ed. David Bearman and Jennifer Trant: Museums and the Web 1997: Selected Papers. Proceedings of the First International Conference Los Angeles, California, March 16-19.Pittsburgh, PA: Archives & Museum Informatics, 127-133

Falk, J. H. & Dierking, L. D. (1992), The Museum Experience. Washington: Whalesback Books.

Falk, J. H. & Dierking, L. D. (1998) Understanding Free-Choice Learning: A Review of the Research and its Application to Museum Web Sites. Ed. David Bearman and Jennifer Trant: Museums and the Web 1998: Selected Papers published on CD-ROM. Proceedings of the Second International Conference 1998 Toronto, Canada, April 22-25, 1998. Pittsburgh, PA: Archives & Museum Informatics, 1998. Pages counted as printed.

Freudenheim S. (2011, February). Googly Eyes For Google? [Weblog]. Retrieved 17.07.2011 from: http://www.sascha.com/2011/02/01/googly-eyes-for-google/

Futers K (1998). Tell Me What You Want, What You Really, Really Want: A Look at Internet User Needs. Proceedings of EVA'97 Paris, France. Internet, URL = http://www.open.gov.uk/mdocassn/eva_kf.htm. Version: 1997. Last visited: 08/05/2011

Getty Center for Education and the Arts (1991). Insights, Museums, Visitors, Attitudes, Expectations, A Focus Group Experiment. Los Angeles, CA: The Paul Getty Trust

Ha, L. & James, E.L. (1998). Interactivity reexamined: A Baseline analysis for Early Business Websites. Journal of Broadcasting and Electronic Media. 42(4), 457 – 474

Hannigan, J. 1998. Fantasy city: Pleasure and profit in the post-modern metropolis. London:Routledge

Hine, C. (2000). Virtual ethnography. SAGE.

Hein, G. (1998) Learning in the Museum, Routledge.

Hertzman, E., Anderson, D. & Rowley S. (2008), Edutainment heritage tourist attractions:a portait of visitors experiences of Storyeum, *Museum Management and Curatorship, 23 (2), pp. 155-175*

Hewson, C., Yule, P., Laurent, D., & Vogel, C. (2003). *Internet research methods: A practical guide for the social and behaviourial sciences.* London: Sage Publications.

Hoffman, R. R., Shadbolt, N. R., Burton, A. M., Klein, G. (1995). Eliciting Knowledge from Experts: A Methodological Analysis. *Organizational Behavior and Human Decision Processes.* 62(2), 129-158

Hooper-Greenhill, E. (1990), The Space of the Museum, *Continuum: The Australian Journal of Media & Culture, Space * Meaning* Politics, Edited by the Institute for Cultural Policy Studies Griffith University, 3 (1),* Retrieved 25.05.11 from: http://wwwmcc.murdoch.edu.au/ReadingRoom/3.1/Hooper.html

Hooper-Greenhill, E. (1992). (Eds.). *Museums and the Shaping of knowledge*. London, New

York: Routledge

Hooper- Greenhill, E. (1994). *Communication in theory and practice. In: (Eds.). The educational role of the museum.* (2nd edition). London, New York: Routledge, 28 –43

Hooper-Greenhill, E. (1994). *Museum education: past, present and future*. Towards the Museum of the Future. New European Perspectives. Ed. Roger Miles and Lauro Zavala. London/New York: Routledge, 133-146

Hooper-Greenhill, E. (1995). *Museums and communication: an introduction essay*. In: (Eds.). Museum, Media, Message. London, New York: Routledge, 1–14

Hooper-Greenhill, E. (1995). (Eds.). *Museum, Media, message.* London, New York: Routledge

Hooper-Greenhill, E. (2000). (Eds.). *Museums and their visitors*. London, New York: Routledge (1st edition 1994)

Hooper- Greenhill, E. (2000). *Changing Values in the Art Museum: rethinking communication and learning*. International Journal of Heritage Studies. 6(1), 9 – 31

Hooper-Greenhill, E. (2001). *Museums and the interpretation of visual culture*. New York: Routledge.

Hooper-Greenhill, E. (2001). Changing Values in the Art Museum: rethinking communication and learning , *International Journal of Heritage Studies, 6: 1, 9 — 31*

Hooper-Greenhill, E. (2004). (Eds.) *The educational role of the museum*. London, New York: Routledge (2nd edition, first edition 1994)

Hoptman, G. H. (1992), The Virtual Museum and Related Epistemological Concerns. Ed. Edward Barrett: *Sociomedia. Multimedia, Hypermedia and the Social Construction of Knowledge.* Cambridge, Mass.: MIT-Press,141-159

Hughes, P. (2007). Text and textual analysis. In: E. Devereux (ed). Media Studies. London: Sage, 249-282.

Jackson et al. (1998), Using the Web to Change the Relation Between a Museum and its Users. Ed. David Bearman and Jennifer Trant: Museums and the Web 1998: Selected Papers published on CD-ROM. Proceedings of the Second International Conference Toronto, Canada, April 22-25, 1998. Pittsburgh, PA: Archives & Museum Informatics, 1998. Pages counted as printed.

James (1997), Museum Web Page Survey Results. Internet, URL =http://www.chass.utoronto.ca/~sjames/museum/survey.htm. Version: 03/05/1997. Last visited: 08/05/2011

Jenkins, H. (2004). The Cultural Logic of Media Convergence. International Journal of Cultural Studies 7(1), 33 – 43

Jenkins, H. (2006). Convergence cultures. New York: New York University Press.

Jones, J.G. & Christal, M. (2002). The Future of Virtual Museums: On-Line, Immersive, 3D

Environments. 1-12. Available at: http://created-realities.com/pdf/Virtual_Museums.pdf

Kaplan, F.E.S. (1995). In: (Eds.). Hooper-Greenhill, E. (1994). (Eds.). *Museum, Media, message*. London, New York: Routledge. 37 – 58

Krippendorff, K. (2004). *Content analysis: an introduction to its methodology*. Thousand Oaks CA, London: Sage

Lewis (1996), The Response of Museums to the Web. Archives of MUSEUM-L@HOME.EASE.LSOFT.COM Museum discussion list. Internet, URL = http://home.dc.lsoft.com/archives/museum-l.html. Posted: 10/17/1996. Last visited: 07/05/2011

Lievrouw, L., & Livingstone, S. (2006). Introduction to the Updated Student Edition. In: L. Lievrouw & S. Livingstone (eds.). Handbook of new media. Social shaping and social consequences of ICTs. Updated Student Edition. London: Sage Publications, 1-14

Lincoln Y. & Guba E. (1985) *Naturalistic Inquiry*. Sage, Beverly Hills, CA.

Liu, Y. & Shrum, L.J. (2002). What is interactivity and Is it Always Such a Good Thing? Implications of Definition, Person, and Situation for the Influence of Interactivity on Advertising Effectiveness. Journal of Advertising. 31(4). 53-64

Livingstone, S. (2004). The challenge of changing audiences: or, what is the audience researcher to do in the age of the Internet? European Journal of Communication, 19(1), 75 -86.

MacDonald, G. (1992), *Change and Challenge: Museums in the Information Society*. Ed. I. Karp: Museums and Communications - The Politics of Public Culture. Washington, D.C.: Smithsonian Institution Press, 158-181

MacDonald, S.(1996).*Theorizing Museums*: An Introduction. Ed. Sharon MacDonald, Sharon and Gordon Fyfe: Theorizing Museums. Oxford: Blackwell. 1-18

Mcdonald, S. (2004). Introduction. In: (Eds.). Mcdonald & Fyfe, G. *Theorizing museums: representing identity and diversity in a changing world.* Oxford, Cambridge: Blackwell Publishers (2nd edition, first edition 1996)

MacDonald, G. & Alsford, S. (1997) Conclusion: Toward the Meta-Museum. Ed. Katherine Jones-Garmil: *The Wired Museum - Emerging Technology and Changing Paradigms.* Washington, D.C.: American Association of Museums, 267-278

MacDonald, G. & Alsford S. (1995). *Museums and Theme Parks: Worlds in Collision?* International Journal on Museum Management and Curatorship, Vol. 14 No. 2. 129-147

MacDonald, G. & Alsford, S. (1991) *The Museum as Information Utility*. Museum Management and Curatorship, 10/1991. 305-311

MacDonald, G. & Alsford, S. (1989). *A Museum For The Global Village. The Canadian Museum of Civilization.* Hull: Canadian Museum of Civilization. See Chapters 6 The Museum as Communicator, 10 The Museum as Resource.

McDermott, M. (1988) Through Their Eyes: What Novices Value in Art Experiences. *Annual*

Meeting Sourcebook. Washington, DC: American Association of Museums, 135-162

McKenzie, J. (1997) *Building a Virtual Museums Community*. Paper presented at the Museums & The Web Conference March 16-19, 1997 Los Angeles, California. Internet, URL = http://fromnowon.org/museum/museweb.html. Version: March 1997. Last visited: 08/05/2011

McMillan, S.J. (2000). The microscope and the moving target: The challenge of applying content analysis to the World Wide Web. *Journalism and Mass Communication Quarterly*.77(1), 80 – 98

McMillan, S. J. (2006). Exploring Models of Interactivity from Multiple Research Traditions: Users, Documents and Systems. In: L. Lievrouw & S. Livingstone (eds.)*Handbook of new media. Social shaping and social consequences of ICTs. Updated Student Edition.* London: Sage Publications, 205 – 229

Mcnamara, J. (2006). Media Content Analysis. Uses, Benefits & Best Practices. Carma. A Media Monitors Company: Asia Pacific

McTavish, L. (2006). Visiting the Virtual Museum: Art and Experience Online. In: J. Marstine (eds.). *New Museum theory and practice: an introduction*. Oxford, Carlton: Blackwell Publishing, 226 – 243

Marstine, J.(2006). Introduction 1. In: (Eds.). *New Museum theory and practice: anintroduction*. Oxford, Carlton: Blackwell Publishing, 1-36

Marty, P.F. (2007). Museum Websites and Museum Visitors: Before and After the Museum Visit. Museum Management and Curatorship, 22(4), 337-360

Miles, M.B., and Huberman, A.M. (1984). *Qualitative Data Analysis*, 16. Newbury Park, CA: Sage.

Miles M. B. & Huberman A. M., *Qualitative Data Analysis: An Expanded Sourcebook*, (2nd Edition) Sage Publications Ltd., London (1994).

Mitchell, W. J. & Strimpel, O. B. R.(1997), *To Be There Or Not To Be There: Presence, Telepresence and the Future of Museums*. Museum News. Mar/Apr. 1997. 31-32 and 58-59

OECD . (2007). Participative web: User created content. Paris: OECD

O'Reilly,T.(2005). What is Web 2.0? Design patterns and business models for the next generation of software. Available at:

http://www.oreilly.com/pub/a/oreilly/tim/news/2005/09/30/what -is-web-20.html.

Patton, M. Q. (1990), Qualitative evaluation and research methods (2nd ed.) Thousand Oaks, CA, US: Sage Publications, Inc. 532 pp.

Pauwels, C. & Van Oost, O. (2005). Hip and Hype, bits and bytes: the art museum, trends in cultural events and participation in a digital era. In: Digital Utopia in the Media: From 24 Discources to Facts. A Balance. Barcelona, Facultat de Ciences de la Communicacio Blanquerna, 185 – 198

Perl, J. (2011, February 16). Googled.What the Google Art Project does –and does not- mean

for art. *The New Republic.* Retrieved 20.02.2011 from: http://www.tnr.com/article/the-picture/83557/google-art-project-museum

Prensky, M. (2001). Digital Natives. Digital Immigrants. On the Horizon, 9(5). Available at: http://www.marcprensky.com/writing/

Rice E. R., & Haythornthwaite C.(2006). Perspectives on Internet Use: Access, Involvement and Interaction. *In: L. Lievrouw & S. Livingstone (eds.). Handbook of new media. Social shaping and social consequences of ICTs. Updated Student Edition*. London: Sage Publications, 92-113

Russo, A. & Peacock, D. (2009). Great Expectations: Sustaining Participation in Social Media Spaces. Museums and the Web 2009. Proceedings. Available at: http://www.archimuse.com/mw2009/papers/russo/russo.html. Retrieved 20 January 2011

Sandell, R. (1998). Museums as Agents of Social Inclusion. Museum Management and Curatorship.17(4), 401 – 418

Selm, M. & Jankowski, N. W. 2006. Conducting Online Surveys. *Quality & Quantity* 40(3), 435-456.

Serrell, B. (1997), Paying Attention: The Duration and Allocation of Visitors' Time in Museum Exhibitions. Curator: The Museum Journal, 40: 108–113. doi: 10.1111/j.2151-6952.1997.tb01292.x

Selwyn N., (2009) "The digital native – myth and reality", *Aslib Proceedings, Vol. 61 Iss: 4,* pp.364 - 379

Schäfer, H. (1995), Use and Embedding of Interactive Media in a Museum of Contemporary History. Ed. David Bearman: Hands On Hypermedia and Interactivity in Museums. Selected Papers form the Third International Conference on Hypermedia and Interactivity in Museums (ICHIM '95 - MCN '95) San Diego, California October 9-13, 1995. Pittsburgh, PA.: Archives & Museum Informatics, 1995. 70-85

Schweibenz, W. (1998). The "Virtual Museum": New Perspectives For Museums to present Objects and Information Using the Internet as a knowledge Base and Communication System. *Workflow Management, Multimedia, Knowledge Transfer*. Proceedings, 185 – 200

Schweibenz, W. (2000). Intellectual Property vs. The Right to knowledge. *8th International BOBCATSSS Symposium, Jagiellomian University, Krakov, Poland*, 255 – 264.

Schweibenz, W. (2004). The development of Virtual Museums. *International Council of Museums.* http://cool.conservation-us.org/icom/pdf/E_news2004/p3_2004-3.pdf

Silverstone, R. (1994) *The Medium is the Museum. Ed. Roger Miles and Lauro Zavala: Towards the Museum of the Future*. New European Perspectives. London/New York: Routledge, 1994. 161-176

Silverstone, R. (1988). *Museums and the Media: A Theoretical and Methodological Exploration.* International Journal of Museum Management and Curatorship, Vol. 7, No.

3, 1988. 231-241

Simek P. (2011, February 9). Is The Google Art Project The Best Thing Since Real Eyes? Criics Respond. *FrontRow, A Daily Review of Dallas art*. Retrieved (10.02.2011) from: http://frontrow.dmagazine.com/2011/02/is-the-google-art-project-the-best-thing-since-real-eyes-critics-respond/

Simon, N. (2007). Discourse in the Blogosphere. What Museums Can Learn from Web 2.0. Museums & Social Issues, 2(2), 257- 274

Smith R. (2011, February 6). The Work of Art in the Age of Google. *The New York Times. Retrieved 10.02.2011 from:* http://www.nytimes.com/2011/02/07/arts/design/07google.html

Sood, A. (2011, February 2). Explore museums and great works of art in the Google ArtProject. Retrieved 02.02.2011 from: http://googleblog.blogspot.com/2011/02/exploremuseums-and-great-works-of art.html#links

Surowiecki, J. (2004). The wisdom of crowds: Why the many are smarter than the few and how collective wisdom shapes business, economies, societies, and nations. New York: Doubleday.

The Economist, Prospero blog (2011, February 3). Google Art Project. Getting in close and impersonal. *The Economist*. Retrieved (10.02.2011) from: http://www.economist.com/blogs/prospero/2011/02/google_art_project

Tonkiss, F (1998). Analysing discourse. In C. Seale (Ed.) Researching society and culture, 245-260.

Treinen, H. (1993) What Does The Visitor Want Form A Museum? Mass-media Aspects Of Museology. Ed. Bicknell, Sandra/Farmelo, Graham: Museum Visitor Studies in the 90s. London: Science Museum. 86-93

Washburn, W. E. (1984) Collecting Information, Not Objects. Museum News, 62 February, 1984. 5-15

Van Oost, O. (2003). Museum participation in a network society: A reflection. Working Paper. *Steunpunt re-creatief Vlaanderen.*

Vehovar, V. & Manfreda, K. L. 2008. Overview: Online Surveys. In: N. Fielding, R. M. Lee & G. Blank. *The SAGE Handbook of Online Research Methods.* London: SAGE Publications, 177-194.

Warburton, S. (2009), Second Life in higher education: Assessing the potential for and the barriers to deploying virtual worlds in learning and teaching. *British Journal of Educational Technology, 40:* 414–426. doi: 10.1111/j.1467-8535.2009.00952.x

Witzel, A. (2000). The Problem Centered Interview. *Qualitative Social Research*. 1(1). Available at http://www.qualitative-research.net/index.php/fqs/article/viewArticle/1132/2521#g2

Yin, R. (1984/1989), *Case Study Research design and Methods,* Beverly Hills, CA, Sage.

http://www.alexa.com. Retrieved 27 January 2011

http://www.youtube.com/user/GoogleArtProject Retrieved 02.02.2011

http://www.googleartproject.com/