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The Contemporary Digital Museum
in Theory and Practice

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Year of Presentation: 2013
Abstract

This dissertation investigates the interplay between a selected set of museum practices, such as online strategies, digitisation of artwork reproductions, and crowdsourcing, through a theoretically grounded perspective. Existing discourse and debate on the museum's movement from an exclusively physical, to a digital or hybrid presence display an excessive interest in advocacy, usually focusing on small examples of successful practices which are then argued as somehow empowering or resolutive, usually from a 'social justice' point of view. Conversely, in those same discourses little attention is paid to the macro-context within which these cases take place: current debates lack an articulation of how museum practices reflect ongoing trends and paradigms on a culture-wide level, and also eschew non-advocative, neutral discussion of the politics, discourses and power relations that such practice entail.

I suggest that the contemporary constructivist, digital museum can be better contextualised if we frame emergent digital museum praxis within a framework that resorts to well-established, and well-described theoretical paradigms that can be observed in other cultural and social contexts as well. The advantage of such an approach is that museum practice, and the museum as an institution, can then be seen in continuity with current macro-trends, rather than as isolates whose usefulness and sustainability begins and ends within the museum's precinct. This dissertation begins this proposed shift in point of view by addressing emergent museum practices such as the drafting of digital strategies; the creation of digital reproductions of artworks for online display; and crowdsourcing in the context of theoretical frameworks such as the utopian imagination; ontology of digital-beings; and contemporary labour practices. While not comprehensive, and exploratory in nature, this dissertation contributes to the discipline by providing a new, more in-depth point of view on 'hot' practices, encouraging a contextualisation of the museum that goes beyond the museum itself, into a theoretical and interdisciplinary field that takes advantage of ideas developed within digital humanities, labour critique, informatics and cultural studies.
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Introduction

In recent years there has been, within the museum field, call for a reassessment of the role of museums, not only as heritage preservation agents but, more widely, with regard to their scope and limits as cultural and social agents. There seems to be a dual perception at play. On one hand, the museum is called to task with increased frequency to justify its currency and relevance, given the pace at which larger culture shifts happen, spurred by the emergence of new social contexts such as the World Wide Web; as well as a widespread reduction of funds available in the context of a global economic downturn.¹ On the other hand the museum itself has seen, in the past few decades, a recentering of its cultural mission, from one of preservation and archiving to one of education and outreach – in a way, outgrowing its own tradition. It should come as no surprise, then, that museum professionals should call for a reassessment of what the necessary, or the acceptable functions of a museum are; such reassessments ranging from a call for discover of 'what aspects of museums' core mission will be of greatest social value in a time of crisis', to milder and less politicised investigation on the evolution of the museum as a cultural agents, offline and, in recent years, online.²

It seems to me that both lines of investigation – one more advocative, politicised and proactive; the other more exploratory and investigative – do not stand at odd with each other. Rather, they can be integrated with each other, encouraging a re-contextualisation of the museum as a cultural agent that adopts the investigative instruments of discourse and theory, in order to explore and assess the cultural, social and political value of the contemporary museum, in particular as this institution “colonises” that new social context that is the Web. As the museum discovers itself to be, more and more, a site of cultural struggle (both within and without, and sometimes against its visitors' desires) we need to work toward a more holistic, theoretically grounded understanding of the way in which larger cultural trends shape the expected societal role of museums; and the

¹ Gurian (2009).
² Simon (2009).
possible responses that the museum institution adopts, as well as those it rejects.³

**Research Question**

In the following dissertation I set out to explore different aspects of one main research question: can our understanding of the contemporary museum's approach to the digital, in all its expressions and specificities, be further understood by integrating professional and informal discourses with highly relevant, yet seldom evoked theoretical paradigms, borrowed from disciplines other than museum studies? This question will be explored from a variety of angles, taking into consideration an array of primary sources and theoretical paradigms, each one carrying its own set of secondary research questions. Sub-topics coincide roughly with chapter divisions, and could be summarised as such:

- is there a rhetorical element to the contemporary museum's embracing of the Web 2.0 paradigm when it comes to its online presence, and can such rhetoric be read within the lines of certain typologies of museum documentation, such as media strategies? As both Web 2.0 and the constructivist museum seem to be philosophically predicated on values such as collaboration, grassroots engagement and creative involvement of once passive consumers, are there consequences when the museum goes online? Furthermore, could the Web 2.0-inspired online museum be considered (much like the Web itself) an experiment of utopian interaction between the museum and its public?

- Are interfaces for displaying online museum artworks implicated in the museum's own acceptance of new regimens of sensorial apprehending, in part due to the philosophy of interaction and mediation brought forward by the Web, in particular Web 2.0? Can there be said to be an 'iconic turn' of which digital interfaces are a part of? And if so, how does the museum potentially negotiate such interfaces according to its public mandate and

³ The museum as a site of struggle, which could be said to have begun with Institutional Critique practices, now involve not only artists, but museum practitioners and professionals as well.
duty to educate?

- Are the new channels and platforms for collaboration between museum and public that Web 2.0 affords, such as crowdsourcing and 'games with a purpose', a completely new and revolutionary step forward in institution-user interaction, or merely a rehearsing of global trends in labour, and its colonisation of free time? Does an assessment in either direction have an impact on the ethical implications of the museum's deployment of crowdsourcing and serious games, and other practices and platforms as well?^{4}

**Contribution to Scholarship and Limits to Scope**

My work here presented employs a series of academically well-established yet, in the museum field, overlooked perspectives and theories, in order to discuss an array of museum products and phenomena that, so far, have been addressed mostly through advocacy, journalistic commentary and circumscribed single-case studies. The dissertation’s contribution to on-going scholarship in the field of contemporary museum studies is, therefore, a theoretical and contextual one: novelty of interpretation is integrated by the analysis of material that, before, has not been positioned within a larger critical / theoretical context.

I will argue that there have been a number of studies on the utopian legacy of the contemporary museum, yet there has been no analysis of how this ideology can be found as manifest in key primary sources, such as online strategies; and, furthermore, the endurance of the 'utopian museum' in the digital context has been, usually, downplayed and not thoroughly discussed. Similarly, the presentation online of digital art work reproductions has been discussed so far nearly exclusively through advocacy (non-neutral, consciously rhetorically inflected presentation) of the success or failure of single digitisation instances; the same objects have, to my knowledge, never

been investigated in their epistemological and ontological claims, and how such claims impact museum production and deployment of digital content. Crowdsourcing is also an up-and-coming topic in the field of museum studies, yet (to my knowledge) it has never been located within a wider framework of immaterial production and exploitation, as developed for example within new media, sociology, or game studies: if we limit discussions of such an all-encompassing, emergent practice to narrative accounts of success, exchanged between museum professionals, we miss a chance to expand the scope of museum studies, to locate a key trend within a larger and more nuanced discourse of social, cultural, and even political conditions.⁵

The dissertation far from exhausts possible topics, as well as the structural value of its approach. Due to length constrains, many kinds of primary sources, of ‘artefacts’ are not addressed, or are mentioned only in passing; similarly, the array of perspectives that could be successfully applied for the contextualisation of contemporary digital museum trends (the ‘issues’ the contemporary digital museum faces) are nearly limitless.⁶ Overall, the very pace at which the Web, the digital, and even the museum evolve makes any kind of discussion highly provisional and exploratory in nature – which is an inherent challenge, as much as it is a necessary internal condition and a spur toward further exploration and discussion.⁷

**Context: The Museum and the Web**

My research takes place at the juncture of two discursive sites of great relevance in our contemporary cultural landscape: the museum, and the Web. Due to their cultural importance, these two sites have come to embody in scholarship and professional discourse a number of different, competing and sometimes incompatible identities according to who is doing the describing or the

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⁵ See, for example, Wexler (2011) and Kucklich (2005).
⁶ I will provide possible pointers, with regard to this, in the dissertation’s conclusion.
critiquing.\textsuperscript{8} In this section I will seek to provide functional definitions of what I mean, throughout the thesis, when I refer to 'museum' and 'Web'.\textsuperscript{9} These definitions are 'functional' in the sense that they do not aim to be all-encompassing, or to include every possible aspect of what the 'museum' and 'Web' are: rather, they will explicitly highlight aspects that I deem particularly relevant to the specific topics of my dissertation. They are also succinct: further refinements (specific, for example, to a chapter's themes) will be provided in specific instances.

\textit{The Museum}

Throughout the dissertation, by the generic term 'museum' I will refer to cultural institutions characterised by the following traits. They are 'public', in the specific sense that they are non-profit, in the service of society, and open to the public: their public nature being, therefore, not merely juridical but, more widely, cultural and social.\textsuperscript{10} I will mostly address what could be considered 'global museums': institutions that, with regard to visitor numbers and composition, as well as practice and outreach, have relevance on a global scale both within and without the museum professional community. Finally, by museum I will refer, unless noted, to public art museums: while some of my insights, and many issues discussed, can be translated to science and history museums, I am mostly concerned with institutions that display and preserve artworks. There will be, of course, some overlap – for example, between historical and art collections – therefore I will try to keep boundaries between typologies as fluid as possible, as well as functional to the argument.

The museum has accompanied Western culture for at least the past two hundred years, more if one accepts as possible the museum's genealogy from the late Renaissance's 'Cabinet of

\textsuperscript{8} While this might be self-evident in the case of the Web, which has become not only the topic, but also the method for its own relentless coverage; my assertion might be less obvious as far as museums are concerned. Outside the museum studies sector proper, one should consider the current debate, in the UK and elsewhere, regarding the funding of museums in a time of global financial crisis (Jafari et al (2013)).

\textsuperscript{9} Unless noted.

\textsuperscript{10} ICOM (2007).
Curiosities' and *Wunderkammern*. The history of the museum as a chartered, public institution officially begins, however, with the opening of the Louvre Palace's Grand Gallery in 1793. The transformation of the museum from a semi-accessible private property to an open, public agent with a public mandate (a set of functions and duties it is expected to fulfil in order to legitimise its position and endowment) is a key turning point, as it sets the stage for what will then become the main field of struggle for the museum, all the way into our present times – its relationship to its visitors. By entering the public arena, the museum comes to assume the powers and duties, of a public cultural institution: it is expected not only to collect and preserve (activities which have been in its DNA since the very beginning), but also to educate, enrich and shape the same public that justifies its existence. It is, in other words, expected to produce wealth, tangible but also immaterial – in the form of a better citizen. In a trend that has been lamented by some professionals as going against an established tradition of the museum as a heritage institution, museums have found themselves more and more donning the cape of educators, in need to continuously justify their relevance by generating a measurable impact on their visitor's well-being. Therefore, arguably sometime in last few decades of the twentieth century, the 'museum as educator' (and communicator) was born: a museum that aimed to construct knowledge and understanding in collaboration with its visitors, and according to those visitors' needs and parameters, instead of resorting to indoctrination and inculcation from above.

The museum-as-educator has strongly engaged new forms of communication, contrary to the common wisdom that puts the museum in the rear guard with regard to new technologies, slowly catching up and only when strictly necessary; it seems to me that the museum has been

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12 See J. Abt, 2006, which also functions as an overview of the museum and the proto-museum from Alexandrine times, through the Renaissance.
13 Proof enough of this is the comment section of virtually any news piece on the Museum Association's web site, or any other professional-oriented museum publication. One will find two factions polarised around virtually any issue: a 'progressivist' side, which advocates a (mild) reduction of the museum as collector, in favour of education and outreach; and a 'conservative' camp, lamenting the lessened airtime (and funds) conservation gets. See, for example, responses to Maurice Davies' 'What Next?' blog for the MA (2012).
14 This aspect will be explored in some depth in chapter 3. For some literature pointers, see the work of Hooper-Greenhill (1999) and Hein (1999).
relatively swift in understanding and taking advantage of the possibilities offered by at least one
new realm of communication: the digital. This will be a recurring topic throughout the dissertation,
and could be considered one of the discourses that unifies the chapters into a cohesive story: the
story of how the contemporary digital museum picked up digital instruments to further its
educational mandate.

The Web

We are at the point, in the process of convergence between the digital and the human, where
it has become all but impossible to offer a comprehensive description – let alone definition – of the
World Wide Web that fully accounts for all its nuances, functions and roles within contemporary
culture. In this dissertation I prefer, therefore, to mostly forego all-encompassing definitions and
histories, and more narrowly focus on a recent discourse that has, for better or worse, informed
most discussions of the Web in the past decade: the shift from Web 1.0 to Web 2.0.

Claimed by some to be a revolutionary way of building, up-keeping and articulating the
Web; lamented by other as a mere market ploy; the structural and social model that goes under the
name of Web 2.0 constitutes, according to its pundits, what the Internet was supposed to be all
along: a democratic space, built and up kept by its users, in which information moves fluidly, in real
time, and with as little restrictive gate-keeping as possible. It is an innovation of platforms (blogs;
RSS feeds; dynamic content updates); an innovation of content (user generated content that is
nimbly shared and remixed across multiple platforms); and a social innovation, in which the
consumer becomes a ‘prosumer’, an individual that horizontally both produces and consumes
content through an ever-increasing number of platforms (YouTube, Flickr, Foursquare, Reddit,

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15 Even relatively straightforward definitions, such as O'reilly's (2005) only describe certain aspects of what the Web
is, and remain generally highly controversial, as we will see.
16 I reconstruct more fully the genealogy and discussion around Web 2.0, with references, in the course of chapter 1.
A large part of my dissertation’s analysis hinges on one critical observation: the contemporary museum, as it seeks to ‘go digital’, has heavily bought into the Web 2.0 paradigm, making it de facto the theoretical standard for assessing its own success or failure in the digital arena with regard to education, visitor interaction, and outreach. The interactions that are made possible by Web 2.0 empower the museum to reach a variety of new audiences, who can then be included as participants in the museum’s cultural, educational and even informational activities regardless of traditional barriers such as location or hierarchies (at least in theory); they allow the museum to expand its educational mandate by initiating innovative projects, tailored to the needs of specific subsets of the visiting public, that encourage nimble interaction and responsiveness; and they open up for the museum the visitor’s time and expertise, which can be channelled and exploited through participation and crowdsourcing. The ‘Web 2.0 museum’, however, also requires a radical reassessment of assumptions that accompanied the museum as institution since its inception: its inherent hierarchical structuring, the stiff placement of authority and expertise, the preservation and dissemination of its collections as trumping over education and outreach.

A few notes on terms: I will use the shorthand ‘Web’ in order to refer to the World Wide Web, the interactive link of hypertexts that constitutes the content and context of the average user’s interaction online; the term is not meant to include the infrastructure and technological architecture, which constitutes a different layer, and is addressed as ‘Internet’ proper. I will also routinely employ the term ‘digital’: unless otherwise noted, the term will not refer to the technical aspect (the digital as data that uses discrete values), but rather to the meaning it has come to employ by extension – the larger cultural context that is allowed and empowered by digital technologies.19

17 For sources on Web 2.0's support and criticism, see the relevant section in Chapter One.
18 The 'prosumer' as a potential concept, however, long predates Web 2.0: it was coined by Alvin Toffler, in his book The Third Wave, in 1980.
19 In other words, with the same declination that expressions such as ‘digital divide’ or ‘digital native’ deploy.
Disciplinary Field and Methodology

When it comes to the disciplinary field this dissertation belongs to, I would argue that it mainly sits at the intersection of cultural studies, mostly due to my focus on museum activities and documents as cultural artefacts; and Internet studies, since nearly all of the topic addressed relate, to a large extent, to the Web as a context. Occasionally ideas found in informatics, as well as art historical methodologies are evoked, but not consistently enough to qualify the dissertation as belonging to either fields. Similarly, the up and coming field of digital humanities is largely tangential to my work: I did not use information technologies as tools in the course of my research, and mostly relied upon the more traditional tools of archival research and close analysis of textual and visual materials (albeit often these archives and materials were digital).\(^\text{20}\) My research could also be contextualised within museology, although I only occasionally analyse actual museum artefacts and practises, and have limited personal experience in working as museum staff.

As a chief exploratory methodology throughout the dissertation, I have selected to support each chapter's theoretical discussion with detailed analysis of a few select illustrative examples. Ideally, the two 'parts' of each chapter should stand in a relation of reciprocity: the theory is explicated through its emergence in a specific real-world example; and, in turn, analysis of these examples show that practice is, indeed, shaped and influenced by theory even where that might not be immediately evident. My approach is eminently qualitative, and owes some of its methodology to case studies, although it does not aim for the comprehensiveness and seriality of analysis associated with the latter: I usually chose, instead, to apply the close reading associated with the methodology to a small array of examples (one for Chapter One and Chapter Two; three for Chapter Three) selected for their relevance to my discussion. It could be said that I selected my examples by 'purposeful sampling'.\(^\text{21}\)

In establishing methodological bases for my research, in spite of my analyses not being 'case

\(^\text{20}\) For a definition of 'digital humanities' see Kirschenbaum (2010).
\(^\text{21}\) Patton (1990).
studies' proper, I mostly referred to a range of write-ups on the deployment of case studies, spanning nearly the whole spectrum of the humanities and social sciences - allowing of course for specificities of each discipline.\textsuperscript{22} Among those I referred to most frequently are Robert Yin’s \textit{Case Study Research; Design and Methods} (2009: now in its fourth edition); Robert Stake’s \textit{The Art of Case Study Research} (1995), which provides theoretical grounding and examples for case study research in education, giving pointers that could (accounting for the difference in the subject material’s nature and properties) be translated to my own research; and a vast array of discussions and studies in article form.\textsuperscript{23}

Beside manuals, I also resorted to existing methodological examples within museology. Museum researcher Suzanne Keene’s \textit{Digital Collections: Museum and the Information Age} (1998) is largely a technical book that deals with the technological specifics of deploying information systems in the contemporary museum: yet, in structure and internal organisation, it typifies a significant use of the case study methodology in order to explore a range of possibilities and experiences within the multifarious and rapidly shifting world of the digital museum.\textsuperscript{24} Macro-organised in two distinct sections of roughly equal length, the book provides a solid theoretical discussion, homing in from the general to the specific, that is functional to the abundant and varied selection of case studies; which in turn reinforce, clarify and buttress the theoretical stance itself. Another, equally important example of how some elements from case study methodology could be employed in the context of my research on the digital museum, has been offered by the many examples of case study presentation offered at specialist conferences such as \textit{Museum and the Web} or \textit{ICHIM}: while this format, arguably due to practical constrains as much as to habit, tends to over-emphasise the specificity of the single case over its belonging to a wider array of experiences (as well as fitting within established theoretical trends), it points the way for the kind of close

\textsuperscript{22} My previous two quotes, for example, come from papers respectively on legal class actions; and health services research. For an opinion on the relevance of the case study for the social sciences, see among others Soy, S. (1997) \textit{The Case Study as a Research Method} (unpublished).

\textsuperscript{23} Among others, for a wide-ranging list of material specifically geared toward methodology classification and selection, see \url{http://onlineqda.hud.ac.uk/methodologies.php}.

\textsuperscript{24} Therefore a topic related, yet tangential to my focus on the cultural aspect of museum in the information age.
investigation, and descriptive density, that each case requires in order to overcome the dangers of unreliability, bias and provisionality that have been moved against the methodology in general.\textsuperscript{25,26}

One of my chief concerns was to avoid a preponderance of either theoretical and literature discussion, or primary analysis: rather I envisioned, for each chapter and relative topics, the coexistence of a more traditional discussion of existing, as well as novel thinking and theories (supported by literature), along with a meaningful selection of illustrative cases. The relationship between the two is intended to be one of mutual support: the theory explains the existence and dynamics that lead to the production of certain materials; in turn, the illustrative examples reinforce, support and justify the new, personal ‘angle’ that I routinely applied to existing, but previously unlinked discourses in order to lead toward a new understanding.

For the selection of illustrative cases, I employed an array of criteria culled both from literature and common sense, in order to round up a display of cases that would possess general relevance, internal coherence and would make for a compelling argument: I aim to create, for each case and for each chapter, ‘a story about how something exists within a real world context that is created by carefully examining an instance’.\textsuperscript{27} Specific parameters considered were:

- Relevance: the case is relevant to the theoretical system built in the first part of the chapter, and can be understood (but not necessarily in its entirety, or easily) in the context of the chapter’s overarching idea.

- Timeliness: I tried, where possible, to choose relatively recent cases, establishing 2000 as a cut-off date. Reason for the cut-off is the emergence, by around 2002, of Web 2.0: an element that, as we will see, is key in all three chapters.

- Availability: this refers both to the case itself, and the secondary materials about it. Here as well, I tried to strike a balance: while many cases are novel to close reading and analytical

\textsuperscript{25} See again Soy, 1997. The issue of the case study methodology’s perceived limits, and possible ways of overcoming such limits, has also been explored in detail by Stake, 1995.

\textsuperscript{26} Another possible model for the ‘theoretically-enhanced’ case study model comes from the Routledge series on museological practice, \textit{The Heritage: Care – Preservation – Management}, which often employs the case study as an underpinning model. The series, however, still privileges empirical analysis over theoretical underpinning.

\textsuperscript{27} CAPAM (2010) ‘Overview of Case Study Models and Methodology’ \textit{Commonwealth Secretariat Project}.  

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discussion (for example, museums’ online strategy documents: or Google Art Project), I always attempted to integrate existing related discussions as both enrichment, and a control factor. Another key concern was to avoid cases that had been already exhaustively discussed through the same theoretical framework I intended to apply (due to the novelty of some of my theses, and the underexposed nature of many materials I was interested in, this was almost never the case).

Once an illustrative case was selected, I undertook a first-hand 'exploration' of it, taking it apart not only with regard to content, but also on a formal level: I explored and described the interface, and its tools and affordances, as if I were myself a casual user of that website or platform; emphasising therefore my 'encounter' with the interface and the software before delving into the assumptions, ideologies and paradigms ingrained in it. This process has the tangible advantage of making the theoretical discourse functional to the praxis that takes place in the context of the platform, grounding it into everyday experience over abstract and detached textual analysis. I also often resort to comparative discussion of affordances and possible actions in different platforms, highlighting the difference that even small software variations can make on the overall sensorial, and therefore intellectual experience of a platform.

Overall, I would say that my methodology has been largely shaped by my desire to present, throughout the dissertation, a discourse that largely eschews the heavy advocacy slant that, as noted, permeates much of the existing writing on the contemporary museum and the Web. It also reflects my intention not to argue for certain practices as qualitatively 'good' or 'bad' for museums, but rather articulate them as reflecting (with varying degrees of self - acknowledgement and rhetorical disguising) wider theoretical dynamics that involve different aspects of culture; instead of merely existing as 'museum practices' whose rationale and success begins and ends within a museum discourse.

Keeping, therefore, in line with the paradigm that I will illustrate in Chapter Two: the transition from text as carrier of meaning to interface as informed sensorial experience.

See, to this regard, Jafari et al (2013)'s call for positioning of museum consumption within a context of sociability above and beyond, and not limited to, the museum as a physical or online place.
It seems to me that, at this point, the complexity that the contemporary digital museum has reached requires an expansion of the discursive instruments at our disposal – even if that means resorting to more abstract theory and speculation at the expenses of advocacy. Excessive claims for the immediate solution of museum's pressing issues (including but not limited to its relevance in the contemporary cultural context; sustainability of the museum's competing roles as collector, archivist, educator, social agent; the translatability of the museum's core functions and roles in digital and hybrid contexts) by way of enthusiastic calls to action and celebration of small, isolated success stories decontextualises the museum itself from the remainder of 21st century human culture, encouraging us to see the museum as a social isolate, either a dinosaur leftover from days past, or as a cultural haven that stands apart and above what culture at large represents. We must understand that the museum, like any other cultural agent, lives through and has to deal with the same wide-ranging paradigms that shape the whole of human culture – paradigms that can be explored and addressed through exploration of their theoretical and systemic aspects. In this sense, single instances of museum activity (such as, for example, the deployment of a crowdsourcing platform) become meaningful, replicable and sustainable only if we also position them within a more abstract and theoretical context, reading and assessing the larger politics and agencies that stand behind them and that make them possible or acceptable.

In the end, the issue at stake (at this stage) is not a judgemental call on whether the constructivist, digital museum is a positive or negative social force; before such an assessment can be made, we need to investigate how the museum fits within those same paradigms that shape and form culture in its macro aspects.
Ethical Considerations

Throughout the dissertation I quote, sometimes at length, from discussions that, while taking
place between professionals and academics in a field, are situated in the relatively public arena of
online blog comments, fora and discussion boards, outside what could be considered traditional loci
of online academic publishing (such as, for example, online issues of an academic journal). This
raises, of course, the issue of how 'public', and therefore quotable, these discussions actually are:
should they be considered 'off the record', as they were not formally introduced through scholarly
publication channels, or should they be considered fair game for quoting, since they have indeed
been published in public access online sites?

Lacking specific guidelines regarding the matter, my common-sense decision was to include
this material as quotable, due to the following considerations: all discussions included in the
dissertation were posted on public online fora, which did not require privileged access and could be
reached with a simple Google search; quotes are always inserted in a discursive contest that does
not underhandedly uses them for slander or ad hominem attacks; and all discussions and quotes, no
matter how ephemeral the platform, have been thoroughly attributed and documented in the
bibliography section of the dissertation. Cumulatively, these considerations ensured, in my opinion,
that inclusion of non traditionally published material remains ethical and respectful of all parties
involved.

Structure: Chapter Outline

This section details the overall structure of the dissertation, outlining the main questions and
materials that each chapter deals with, as well as the on-going discursive threads that connect each
chapter to the others. In developing the overall structure of the dissertation, I strove to balance the
general cogency of the project as a whole with a conscious choice to shape each chapter as a self-contained unit, thematically entwined yet formally independent from the dissertation as a singular piece of writing. This choice is a response to a series of necessities, and observations that I encountered in the more than three years that the project occupied. The write-up of the material tended toward long-form chapters, each of them spanning well over the length of a masters' thesis: in order to preserve structure and formal coherence, each chapter had to be designed as a largely self-contained unity, bracketed by its own introduction and conclusion; I felt that the 'cores'-based structure of the dissertation well reflected, for better or worse, the tendency for the scholarships it addresses to proceed through independent yet related themes. The possibility of writing essentially 'three theses in the space of one' also allowed for what I would consider a broader than average, yet still acceptable, range of key issues, which in turn favoured in no small measure my participation, throughout the time of my PhD, to an array of conferences, presentation and other scholarly opportunities sometimes well beyond the confines of history of art, or cultural studies. Overall, the dissertation structure aims at being functional to the material, as well as making the dissertation more modular and therefore more easily disseminated.

Overall, the common thematic thread of the dissertation could be summarised as 'a multi-pronged exploration of the interaction between the contemporary, digital museum and its public, as exemplified by digital platforms for conceptualisation, visualisation and interaction / collaboration'. In spite of the varied topics and illustrative cases provided in each chapter, each element can be reconnected to the overarching theme above, which constitutes the sometimes implicit, yet undeniable thread that runs throughout the dissertation: the utopian drive that underlies the museum's adoption of the Web 2.0 ideology; the emergence of interfaces that encourage affectivity and sensorial engagement or presence; the involvement of the digital visitor in the information economy of the museum, all these constitute expressions of the 'under reassessment' nature of the

In the time of my PhD I introduced material that came to constitute my dissertation in contexts as disparate as virtual worlds design conferences, museum studies symposiums, and architecture fora.
relationship between the contemporary museum and its, now, far from passive visitors.

Chapter One has a double aim: it seeks to introduce a relatively new theoretical discourse within contemporary digital museum studies, as well as offer pointers for scrutiny of an overlooked typology of primary materials produced by those museums which are involved in the shaping of online identities (be it their visitors', or their own). In order to achieve this double aim, the chapter itself is subdivided roughly in two sections. The first section of the chapter is devoted to a re-reading of the origin, genealogy and development of the museum in light of a key, yet often overlooked, paradigm all the more relevant as the museum enters the digital realm: the utopian vision, and its numerous material forms – 'traditional' grand, social and public utopias; contemporary art's microtopias; and, finally, techno-utopias. This last 'variety' of utopian thinking in particular is becoming, in spite of very little attention paid to it from within museum studies and museum literature in general, all the more relevant, as the late twentieth century educational museum seeks to expand its cultural mandate in the digital realm with the backing of new technologies. While my application of this slant of utopian thinking as an angle is novel, the literature and discursive precedents I base my analysis on are well known: among the more extensively used, Carol Duncan; Ruth Levitas; Nicholas Bourriaud.

My stand is that the contemporary museum, since its very inception heavily geared toward a social and cultural amelioration that implicitly tends toward a possible utopia, today continues to routinely deploy utopian thinking as it translates its own identity to the digital: its mandate remains one of ameliorative cultural engineering, for which the Web constitutes prime unincorporated estate; and the audiences it seeks to engage are at least as imaginary (and constructed according to an utopian logic) as they are real. The reasons for this dynamic are varied and mutually sustaining: the history itself of the museum as a public cultural institution; the movement from the museum as a collector and preserver to educator; the speed at which the Web, its platforms and its users evolve, often outstripping the pace of not digitally-native institutions; the institutional necessity of
designing an audience that fits the institution's possibilities, mandate and desires.

Of particular interest to me is the rhetoric that underpins this on-going dynamic of digital utopia designing. As a strategy for bringing to the fore this 'digital museum rhetoric', I analyse in detail the textual typology of the media strategy, with particular attention paid to the Smithsonian's "Web and New Media Strategy". This overlooked typology of primary sources exists at an interesting rhetorical juncture, between the kind of internal guidelines institutions generate for strategic planning, and the outward-facing PR and advertising material that museums also produce. Conjugating these two modalities, media strategies often seem to act as manifestos, or statements of intent, and are therefore ripe for rhetorical analysis and deep reading: the language deployed, the hierarchies used in organising ideas and priorities, the language register point at the museums' interpretation of what it means to exist and operate in a digital context; and therefore, at the typology of digital presence that the institution seeks to make its own. Through this interpretative exercise, I hope to display how the contemporary digital museum finds not only desirable, but necessary to engage its (real and imaginary) digital audiences in a collaborative, massive process of digital utopia-building.

The second chapter brings us back to the realm of the visual. An essential element of the contemporary digital museum's offering, and an integral part of its utopian mandate to bring art to the masses, is the availability of visual material, of artworks, in a digital online format: more and more, museums digitise their collections for display in more or less well-thought 'digital galleries'. This process is, however, neither simple nor effortless, as the rise of the 'virtual museums' destabilises an implicit, long-established understanding of what an artwork's image is from an ontological point of view – its very identity as an artefact. What happens to the artwork, and its place within the logical assemblage we call a collection, when it becomes a digital artefact? How are its ontology, identity and materiality impacted? Conversely, does the user need to develop a new

31 http://smithsonian-webstrategy.wikispaces.com/Strategy+-+-+Table+of+Contents
32 A project that, in turn, is bound to also modify the internet structure, information flow and outlook of the institution itself.
set of perceptual and intellectual tools in order to 'penetrate' the surfaces and the interfaces that the digital object inherently possesses? Finally, what role does the museum play in fostering, or discouraging these and other negotiations of interaction?

Typically, the museum's stance has been one of hierarchical subdivision: the digitally reproduced artwork, while perfectly useful as a tool for education and publicity, must always be subordinated to the 'real thing', even when the real thing itself might be unreachable, unapproachable, or a reproduction itself: essentially the museum enacts, under a more articulated and ambiguous guise, a reversed rehashing of Benjamin's auratic art work. Beyond the obvious interest of the museum in maintaining the relevance and draw of its physical collections, a deeper issue runs through: the degree of mediation and interaction that the digital accords to the visitor, when the digital has to be experienced (at least for now) in a more or less mediated manner. Key in understanding this dynamic is the concept of the 'interface': the term, in the chapter's context, refers not only to the software interface (the programs used to view an image), nor exclusively to the hardware deployed (screens, peripherals), but rather to the many visual, tactile and generally bodily gatekeepers that stand between the subject and the digital reproduction.

The negotiation of this 'space between' is shifting and evolving. According to theorist W.J.T. Mitchell and others, the emergence of the digital has fostered the speeding up of what has been termed a 'visual turn' (or iconic /pictorial turn): the possibility of approaching the digital in a form that is not mediated through language, but rather somehow directly experienced through the senses. I think the idea of a (albeit incomplete and surely not hegemonic) 'visual turn' might be a useful anchor in articulating the perception, sensorial and intellectual, of the digital reproduction as something 'different', related yet not necessarily subordinate to the 'real', physical work; especially since the very nature of the digital, as well as that of the artwork as a subject, greatly complicates

33 Benjamin (2008 ed.). What I mean is that, under this museum regimen, the proliferation of reproductions does not diminish, but instead enhances the auratic potential of the original.
34 W.J.T. Mitchell speaks more narrowly of a 'pictorial turn'; however, Srinivas Rao and others (discussed and referenced in ch2) have introduced the more general term 'visual turn', which I find describes better, albeit somewhat still incompletely, the switch from a mediation of language to a mediation of senses.
the overall picture. Not only the physical artwork has always been subjected to a number of perceptual gatekeepers, de facto weakening the stance held my most museum staff that experience with the real work as being less mediated and more visceral; but the digital reproduction, by the same token, is also subject to an array of interfaces and layers that make the artefact perceptually different from its physical counterpart, yet no less mediated or immediate with regard to the avenues for perception and interfacing it offers. Exploration of this 'mediation' is what Chapter Two is about.

Two types of primary materials will be examined in this chapter. In order to buttress and clarify issues of perception, interfacing and approach of artworks that are at least partially digital, I will look at several art projects that exists between real and digital: among them, Julian Oliver's LevelHead and Jeffrey Shaw's The Golden Calf. This material will be a springboard for supporting my discussion and ideas around the non-indexical, yet not altogether unrelated experience that the digital offers in relation to the physical. Then I will home into a more strictly museum perspective, and look at instances of museums digitising their contents for access and education: I have intended 'contents' in the widest of senses, as cases range from the multi-institutional, digitally-sponsored Google Art Project; to the recreation of Leonardo da Vinci's studio, famous paintings included, for the National Gallery of London. The common denominator that makes these instances ripe for analysis is the rhetorical and factual degree / interplay of immediacy and mediation that they pose between the digital reproduction and the visitor: all of these cases predicate their novelty on the possibility of radically reducing the distance between the art work and the viewer, of providing near-literal 'immersion' into the image – a radical form of 'pictorial turn'. Yet, they all rely on layers of interfaces and gate-keeping in order to define the digital artwork as 'other' than its physical counterpart, as well as to rationalise the user's experience within museum modalities of education.

The third chapter will then turn to another typology of museum digital product, one that is key to the success of the museum as a heritage, educational and social institution on the Web:
games. More specifically, games on the Web by the museum often take the shape of 'crowdsourcing' activities: in a mutual exchange of favours, the museum offers to its users a game-like context that, while it entertains and educates, gathers metadata that the museum can then use to construct and improve both physical and digital archives. So far, however, within museum studies there has been no effort to locate this kind of crowdsourcing within larger cultural trends – unlike in other disciplines. I will borrow from game studies the idea of 'playbour', as formulated by Julian Kucklich and then subsequently built upon by scholars in digital humanities and game studies: the concept that, if during a ludic activity some kind of product is generated by unpaid consumers rather than paid developers, a game (which most crowdsourcing activities implicitly present themselves as) constitutes effectively a form of unwaged labour. The potential framework is one of friendly, somewhat consensual exploitation: institutions (including museums) utilise catchy, playful, user-friendly activities in order to get their public to do a mass of work that would be impossible, or at least quite costly, for the museum to do on its own.

On the other hand, one could say that users are indeed rewarded, if not in currency: from the activity they gain a sense of participation, ownership and subjectification. Therefore, it might be more appropriate (and will constitute the bulk of the chapter) to locate museum crowdsourcing within a framework of immaterial and affective labour, as described by Autonomists such as Hardt, Lazzarato and Terranova. This framework will then be tested on a variety of crowdsourcing games gathered from different museum web sites: for each, I will identify game-like and labour-like elements, focusing then on their interplay and the possibilities each activity offers from entertainment, subjectification and possible exploitation. The analysis will reveal that museums have adopted a variety of strategies in designing crowdsourcing games, from repetitive and labour-like conveyor belts of information, to veritable games that include scores, ladders and even prizes.

36 This point also constitutes one of the main findings of my research: the link between museum activities, crowdsourcing and exploitation / labour has, to my knowledge, not been explored before.
37 This is the case, more generally, with most social media: see, for example, Pinterest and Instagram.
While it is too early to say if any approach is more or less successful than others, all the considered examples underline the importance of initiating an exchange with the user, rather than a exploitative relationship, through crowdsourcing; especially in the context of the digital museum's demographically varied, and not necessarily specialist audiences.
Chapter One: The Constructivist Digital Museum and Utopia

At a first glance it would be difficult to argue for a lack of contemporary discourse around the intersection between museums and technology, and digital Web technology in particular. A well-established circuit of digital museum publications and conferences, attracting professionals from all museum fields (from science museums, through art institutions, to local history museums) exists in parallel to an ever-increasing number of museums pushing forward an online presence: while any statistic is bound to be unreliable, perusal of web directories suggests they likely number in the few thousands. Some museum institutions have come to be recognised as pioneers specifically for their use of digital technologies for information and education, becoming recognised innovators in the digital before the physical (I am thinking, for example, of Brooklyn Museum's celebrated work in crowdsourcing and social media).38

Yet, often time museum practitioners seem to forget that professional discussions, and even discussions that limit themselves to the museum context, hardly exhaust the complexities of the Twenty-first Century museum, and its interactions with other cultural contexts and agents: in the words of digital museum pundit Jennifer Trant, 'there is a world beyond our museums, from which our collections come, and in our collections participate freely'.39 My research in the field of the digital museum and Web 2.0 suggests that existing discussions almost universally display two problematic characteristics: first of all, they are almost exclusively professional in provenance and nature, with very little material produced in an academic context; and also, they are often (probably because of their nature 'by professionals, for professionals') characterised by narrow scope, and somewhat excessive focus on the values of applicability and deployment, with an added strong advocative slant. This does not, of course, automatically erode the validity of such discourses; yet, I

38 This case will be looked at specifically in Chapter Three. The Brooklyn Museum, through its crowdsourcing projects (Tag! You're It and Freeze! Tag) as well as frequent digital interaction with the public, has been on the forefront in engaging its visitors through online platforms (crowdsourcing and otherwise), as well as proselytising among other professionals in the museum conferences circuit.

39 Trant (2010).
believe that a more theoretically grounded take on the issues of digital museum and contemporary Web discourses (that is to say, one that locates current trends within established, culture-wide theoretical paradigms) would increase our appreciation of how the museum, in final analysis, reflects the contemporary cultural *Zeitgeist*; and is, in turn, an essential constituent of the same. As Ross Parry suggests, 'Being proximate to these events might make it difficult to see these events as worth of study... but perhaps our history of museum computing has now a beginning that is suitably distant from us... that we can be more comfortable and able to offer it more serious historical treatment'.\(^{40}\) As Web 2.0 and the social Web enter and blaze past their first decade, the time is ripe for academically-inclined theoretical investigation and appraisal.

The first chapter of my dissertation will address the broad topic of the complex, sometimes ambiguous relationship that exists between the Web 2.0 and the digital museum, as framed by one overarching paradigm: utopia, and all its possible major declinations. In spite of an established, sizeable body of literature suggesting that both the Web and the museum have been, in their own right, long inspired and actively shaped by the utopian imagination and praxis, there has been so far (at least to my knowledge) no attempt to critically frame the theoretical interplay between the two, as they pursue their own brands of utopia. Thinkers such as Duncan, Fehr and Bourriaud have long identified the ways in which the museum has been both an instrument and an outcome of the desire for engineered social amelioration that is, in final instance, utopia.\(^{41}\) At the same time, a well developed discourse around the (both positive and negative) utopian features of the Web, since its very early days, finds rationale in a body of literature that is too vast to survey fully. Nonetheless, little effort has been done to connect the two parallel strands of 'applied utopia', or to investigate how the very existence of such strands might help us better contextualise both the Web and the museum as part of our current, pervasively digitised cultural *milieu*.

\(^{40}\) Parry (2007) p. 11.

\(^{41}\) Bourriaud (2002), Fehr (2005), Duncan (2004). As we will further explore, they did so in their own way, and with marked differences in attitude and expected outcome. Keeping to the three mentioned thinkers, we move from generally pessimist assessments of utopia as engineered social control; through possibilist assessment of utopia as a neutral-value option; to a specific type of utopia as not only desirable, but necessary.
This lack is, upon further analysis, counter-intuitive: since the early Nineties, when it completed its transition from an Early Modern collecting and heritage institution toward embracing an active role as an educator and social agent, the museum (of art, and otherwise) has found in the Web, and the digital in general, both a powerful catalysing agent for discourses of democracy, access, inclusion and participation; as well as the very context in which such aspirations could be fulfilled. The Web has become in the last ten years an essential part of the museum's agency and rhetoric, as the institution bids for relevance in a context that increasingly requires solid numbers to back up claims of cultural and social relevance: conferences such as ICHIM (International Cultural Heritage Informatics Meeting) and Museum and the Web have become some of the most popular stops of the professional museum conference circuit; trade journals have dedicated special issues to aspects of the interaction between museums and the Web, as well as routinely feature articles on that same subject; institutions increasingly feature Digital Media experts that, as stand-alone or as parts of larger departments, operate as digital liaisons between institution and public. There remain, in spite of such a well developed knowledge sharing network, many relatively unexplored areas.

The necessity to construct a theory by conjoining different discourses, rather than referring to established bodies of literature that simply do not exist, dictates the cumulative, progressive structure of the chapter. A first, necessary step is to define utopia – or, rather, utopias. One of the most frequent critiques that has been moved against utopia as a theoretically useful paradigm is its increasingly all-encompassing character: what Ruth Levitas has dubbed 'the problem of definition that surrounds the idea of utopia and that besets those working in utopia studies'. This critique

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43 ICHIM was discontinued in 2007, yet other similar conferences are still active, including ICOFOM and the UK Museum and the Web meetings.
44 On the same subject, for example, the special issue of Museum Management and Curatorship dedicated to ICHIM 2007, and now its dedicated Digital Heritage section; the 'Digital' column in Curator; the dedicated blogs hosted on the Museum Association portal. Nonetheless, it should be considered that the full body that each museum journal dedicates to articles centred on Web themes would, collectively, amount to various special issues per journal. Personal observation suggests that, in recent years, articles on 'museums and Web' topics tend to be more often included as regulars, rather than in special interest sections – perhaps as a symptom that scholarship on the interplay between the topic has been to a measure de-insularised.
45 Levitas, (1990) p. xii.
could, however, be easily turned around and become one of the very strengths of utopia as a working concept: Levitas again remarks, yet nearly seventeen years later, that the apparently wide scope of utopia is simply 'because it occurs as an embedded element in a vast range of human practice and culture'. The idea of utopia endures by virtue of its flexibility.

Beyond non-issues of relevance, however, a successful application of utopia as a concept surely requires a focused working definition of what utopia is. In the contexts that I will be referring to throughout the chapter (museums and Web), it seems appropriate to talk about 'utopias' in the plural: complementary, coexisting and competing definitions of the idea, highlighting different aspects of the paradigm without forcing a subsumption of differences and contradictions. In the first section of the chapter I will articulate, with references to appropriate literature, a series of 'utopias' that I see as applicable to the circumstance: including, but not limited to, 'traditional' utopia and its mirror, dystopia; the middle-ground 'control' position, as argued by Hetland; microtopias; and the secondary 'degenerate utopia'. As I describe these array of possible utopias, I will pay particular attention to the way in which they articulate what I see as the 'heart' of utopia, that which makes utopia still relevant as a concept today: its potential 'amelioration' and 'remediation'.

Then, I will move on toward describing how the utopian imagination resides in the museum; and in the Web. In the first case, I will refer to both historical and contemporary critical perspectives, in order to stress a fundamental point. Utopia is not a minor facet, or a by-product of the evolution through time of the museum; rather, it sits at the very core of the concerns that gave rise, momentum and cultural relevance to the museum as an enduring, iconically public institution. As I will argue, with support from relevant literature, the museum is first and foremost an utopian enterprise, with engineered social improvement as its core mandate – a mandate that continues well into our present day, and into the digital domain. I will then similarly diagnose the utopian impulse as the very root of what started as a military enterprise, yet would become in our present time a key

47 Hetland (2012).
locus of social interaction: the World Wide Web. In this endeavour, I will be assisted by the abundant literature that exists with regard to the digital, the Web, and utopia. Particular attention will be paid to recent developments in the architecture, both technological and social, of the Web that come collectively under the banner of 'Web 2.0'.

Once these preliminary tasks have been fulfilled, I will move my attention toward the central topic of my analysis, in which most of my original contribution lies: the analogies, divergences and interplay between utopian imagination on the Web (Web 2.0 in particular), and utopian imagination in the contemporary museum. There is rationale suggesting that the convergence between museum and the Web is extant and appropriate for analysis, including but not limited to: the increasing impact that the Web has on a variety of museum practices, from storing data, through attendance analysis, to education; the frequency with which such practices have become routine discourse in the academic and professional museum field; and the many examples of projects that could potentially constitute case studies.48 More difficult is, however, making a case for the same convergence when it comes to utopian thinking: as mentioned previously, there has been so far little to no effort to specifically and explicitly address this possibility. I will therefore construct my argument by pooling, in a cumulative fashion, a variety of resources, referring chiefly to discourse and theory on utopia, as reconstructed in the previous section; and analysis of primary sources, as produced by professionals that work on projects with an utopian slant, between the museum and the Web. My overarching aim will be to suggest that the contemporary museum, which has become (like most other facets of contemporary culture) inextricably entangled with the Web as a location / medium / rhetoric, continues its utopian mandate for amelioration and remediation of audiences by heavily relying on discourses mutuated from an ideology of the Web as a platform for utopian

48 Again, the most comprehensive repository of material on these subjects is the Museum and the Web Bibliography, retrievable at [http://www.museumsandtheweb.com/researchForum](http://www.museumsandtheweb.com/researchForum). One could also look at some of the many edited volumes on the topic, such as *Theorizing Digital Cultural Heritage: an Introduction* (2007) or *Digital Technologies and the Museum Experience* (2008); single-author works, such as Ross Parry's *Recoding the Museum: Digital Heritage and the Technologies of Change* (2007) and *Museums in a Digital Age* (2010); or topical blogs, such as *MuseumNext* or *Museum3* to name a few. If one includes material on museum informatics, or the museum and the non-online digital, the literature in the last fifteen years or so becomes vast (For an account, see Parry (2007) p. 7-10).
thought and action.

In order to strengthen my line of thought so far, and to further elucidate (beyond theoretical discussion) what has been suggested in the previous sections of the chapter, I will directly engage a typology of primary sources as the very site in which the utopian *imaginaire* of the Web museum can be located.\(^49\) This concluding section of the chapter will examine museums' 'online strategies' (documents that, purportedly, explain a museum's stance, vision and plans for online Web presence and action) as key text for understanding the rhetoric, mythology and paradigms that underlie the contemporary Web museum's utopian tendencies. Due to the little attention that has been paid to this typology of documents so far, the section will not jump directly into textual analysis. As a first step, I will look at existing discourse on online strategies: what they are, what is their role within the museum economy, what forms they assume (programmatic text? Manifesto? Vague directives? Implicit in praxis?) and what their expected outcome is. In this process, I will be assisted by a body of informal literature, mostly by professionals and for professionals, that sets parameters and gives pointers to interested parties in regard to how an online strategy might be developed. While this literature is often *ad hoc* and aims at rapid deployment rather than scope and self-reflexivity, it provides a starting point from which we might reconstruct how the museums themselves see online strategies as integral, relevant, optional or not necessary.\(^50\)

Once the existence and rationale behind online strategies has been laid out, I will focus on arguably the most important example of such a document published so far: The 'Smithsonian Institution's Web and New Media Strategy'.\(^51\) This document constitutes in size, scope and explicit agenda the paragon for other institution's online strategies; at the same time, it can be read as a

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\(^49\) The term *imaginaire*, deployed by P. Flichy in his seminal text *The Internet Imaginaire* (2007) is integral to my discussion of the many competing interpretations of utopia that can be successfully applied to the museum, and to the Web: its full definition and implications will be therefore explored in the body of the chapter. For now, suffice to say that an *imaginaire* includes not only utopia as a future possibility or a current tendency, but also the mythology (i.e. The Web as a space, in the Sixties and Seventies, of pioneering exploration and homesteading) that underpins and powers the utopian imagination. It is, essentially, utopia expanded in genealogy and scale.

\(^50\) Analysis of this kind of discourses and literature, while not a tradition in the context of history of art and museum studies, has long been practised in other academic areas, such as anthropology (with the due difference that anthropologists typically also interview, something I chose not to do for my research): to this regard, and some of the issues the study of professional discourses raises, see Mosse (2006).

\(^51\) Available as a Wiki at [http://smithsonian-webstrategy.wikispaces.com/](http://smithsonian-webstrategy.wikispaces.com/)
manifesto, embodying and displaying the lexicon of the utopian vision that the contemporary museum has with regard to the digital and, more narrowly, the Web. I will be paying the most attention to the rhetoric that 'Smithsonian Institution's Web and New Media Strategy' deploys in order to make its point: such rhetoric will find justification in close analysis of the text itself. This analysis is to be intended as functional to the themes of the chapter, and should not be taken as a framework that can be perfectly applied to other online strategies. Nonetheless, one of the most important, but under-researched markers of the utopian imagination is the jargon and rhetoric that it deploys in order to persuade; conjugated with the stereotypical 'vocabulary' that Web 2.0 rhetoric has come to adopt, textual analysis might, in the end, reveal aspects that mere theoretical discussion and literature review cannot bring to the fore.

One point that we should take note of is the overall intent of the chapter's analysis, which is not to reach a judgement of the usefulness, or otherwise perniciousness, of the utopian imagination in the museum, the Web, or the contemporary online museum. Rather, it is my desire to provide pointers and frameworks for the exploration of themes that have been rhetorically internalised to the point of invisibility: the contemporary online museum is so entangled in the utopian imagination, that it does not recognises it as such. I wish to complicate this assumption, showing that the utopia imaginaire is indeed there, has a part to play, and cannot be ignored if we are to truly understand why museums (and, one could say, contemporary culture in general) have put such high stakes in the Web as 'the next big thing'.

The Utopian Imaginaire: Contemporary and Competing Definitions

As mentioned in the introduction, I intend to take 'utopia' as the overarching paradigm that will, eventually, allow us to contextualise within a solid theoretical framework the contemporary,
digital museum in relationship with Web 2.0. We are, however, confronted right away by a significant hurdle: what is 'utopia'? The question is not rhetorical: as Ruth Levitas rightly points out, 'many of the problems which beset utopian scholars arise from the absence of a clear definition of utopia which separates its specialist academic use from the meanings current in everyday language'.\(^{52}\) Furthermore, one could add that even within specialist academic uses, there has been a flourishing of 'utopias' in recent decades, due partly to the variety of scholarly spheres that have taken advantage of the term; and, as I will explore in this section, the significant paradigm shift that has occurred within utopian discourse: from a (mainly) literary utopia of places, attainment, and teleology; to a social utopia of open-ended process, provisionality and possibility.\(^{53}\)

The section will be structured as follows. I will dedicate little attention to literary utopias, which will be covered to the extent that a markedly non-historical, non-survey chapter dictates, and due to them being a point of origin for utopia itself: this category of utopias remains somewhat relevant as a literary genre, but has in my opinion little to add with regard to the subjects I hope to ultimately address – museums, and the contemporary Web.\(^{54}\) I will, instead, dive relatively quickly into theorisations of utopia in recent times, from the late Eighties onward. By taking cues from a variety of academic sources, and from disparate disciplines (the realm of 'utopian studies' proper; sociology; history of art and art criticism; informatics and Internet studies), I aim to reconstruct what could be taken as a 'family' or, in more scholarly terms, a (admittedly partial) genealogy of recent utopian thinking: taking to heart Levitas' suggestion that utopia has to be typologically articulated in order to be effectively deployed, I will explore the most important coexisting, sometimes competing, forms that utopian thinking has taken in recent culture. The utopias I will explore will be: 'utopia' as it is defined by its specular opposite, 'dystopia'; positions that articulate utopian possibilities alternative to such dichotomies, such as Howcroft and Fitzgerald's collating of

\(^{52}\) Levitas (1990) p. 2.

\(^{53}\) For some preliminary background on this, one can refer to Levitas (1990) p. 8; and, for background theorisation of 'fulfilment' in utopian thinking (Fehr, 2005). The shift will be returned to, and explored more fully in its implications, later in the chapter.

\(^{54}\) There is, in particular, a growing body of scholarship that examines the influence of utopia (and dystopia) in contemporary science fiction. For some references, see Jameson (2005).
the utopia/dystopia positions, or Hetland's 'control position', 'microtopia', which finds its genesis in the realm of contemporary art practices, and has become a vital utopian paradigm in recent decades; and, to an extent, notions of a 'degenerate utopia'. These 'utopias' are, of course, far from exhaustive of the multiple guises the paradigm assumes in our contemporary cultural milieu: however, in the spirit of working functionally toward articulation of my overarching topic (rather than embarking on a survey-like overview), given due caveat I feel legitimised in highlighting specific aspects that, in my opinion, are more relevant than other with regard to the chapter's aims and methods – even at the exclusion of others.

As mentioned, utopia is generally assumed to find its genesis as a late Renaissance literary form, the first example being philosopher Thomas More's *Utopia* (1516), a fanciful description of an imaginary island of perfect harmony, set aside from time and history. Spurred by the pamphlet's success, utopia was to become then a vital strand within speculative literature, well beyond Renaissance and well into modernity (one can think of Bellamy's *Looking Backward* (1888) or William Morris' *News From Nowhere* (1892)), yet perhaps coming to full fruition in the course of the twentieth century – in large part within the genre of science fiction. Without descending deeply into issues of literary provenance and criticism, these texts (and More's in particular) are relevant to us in force not of what of their concept of utopia survived to our day (mostly the nomenclature): rather, it is more fruitful to point out what, of the traditional literary utopian *imaginaire*, no longer applies to our contemporary understanding.

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55 See Howcroft and Fitzgerald (1998); and Hetland (2012).
56 The seminal 'origin text' is Bourriaud (1998).
57 Marin, 1977 for the origin of the term; Harvey (2000), for background on the term in general; English (2007) for a more recent, art historical application.
58 Such as the already cited literary utopia. Definitions aside from the mentioned ones might, of course, be sparingly employed, and not all included definitions will be employed in the same measure (dystopia, for example, holds far less relevance than utopian vision when it comes to the museum specifically).
60 The web site *Utopian Fiction* ([http://www.utopianfiction.com/](http://www.utopianfiction.com/)) has a convenient list, by author and by title, of well over a hundred of the most famous utopian novels, conveniently scored by 'utopian relevance', as well as 'utopia vs. dystopia' variable.
61 The relationship between science fiction and utopia is too vast and tangential to my topics to be explored in detail here. For standard reference texts published in recent years, see Jameson (2005), Moylan (2003), or Pintér (2010).
First of all, 'utopia' in its literary sense is very much 'spatially constructed': it usually identifies a distant, fabulous yet geographically well-defined locale (in More's case, an island) that floats in a more or less timeless context – or rather, in a context outside of time. This 'early utopia' is, therefore, not a wish for the future as much as a fantastic place outside of time, and therefore future itself.\textsuperscript{62} As we will see this characteristic, and more specifically a break away from it, contributes to define contemporary deployments of utopia. Another feature of literary utopias a la More is their definition of utopian condition as largely dependent upon exclusion, regulation and, general immobility of social structures, rather than fluidity and change: More's island is an utopia thanks to the marginalisation of outliers and variables away from society's immutable state of concord.\textsuperscript{63} We could even argue that it is in these early, literary utopias that one can find the seed of what will eventually come to be identified as 'dystopia', or the utopia gone wrong. Finally, it could be broadly said that, as literary and early utopias put emphasis on place rather than time, their utopian project was presented to the reader as, more or less, complete in itself: the whole praxis of building utopia through progressive effort was discounted in favour of the discovery of places in which utopia could already be found, fully formed and functional – in other words, utopia as a product rather than a process, or poiesis rather than praxis.\textsuperscript{64}

To summarise, early utopia of literary derivation could be said to be characterised by:

- emphasis on space rather than time;
- fully-formed discovery, rather than process – and therefore, finality rather than provisionality;
- and ossified stability rather than ongoing fluidity.\textsuperscript{65} Utopia today is, however in a theoretically far different place. Levitas, in a preface to the 2010 edition of her landmark study \textit{The Concept of Utopia} (1990) suggests that the move from structure to process (which is to say, from utopia as discovered, to utopia as actively made) is integral to contemporary

\textsuperscript{62} See, to this regard, Cross's notes on Ernst Bloch (2011).
\textsuperscript{63} See, to this regard, notes by Greene (2011).
\textsuperscript{64} Ibid. 22.
\textsuperscript{65} It is interesting to note that, by conjecture and observation, one could surmise that the features of these early utopias have come to be associate, in contemporary times, with dystopian visions. See, for example, Greene (2011) as she states: 'Thomas More, in his \textit{Utopia} (1516) conjures an isolated island to describe a better world but one that in hindsight sounds fascist, prescient now that the twentieth century is over [...] '(p.2).
texts and theorisations;\textsuperscript{66} and she is not the first one to comment on this trend, as already in 1964 Bloch commented that 'at some point utopia migrated in the popular imagination from an elsewhere existing in another place to one situated in another time, specifically the future'.\textsuperscript{67} Furthermore, there are hints that already in the few centuries following More's book, utopia had come to signify something that didn't as much exist already somewhere, but had to instead be progressively constructed in our time: in this light we could read many 'alternative' social projects from the Eighteenth century onward, such as New World religious dissidents; the English Arts and Crafts movement; and even art colonies as multifarious expressions of the shift in utopian vision from an utopia of imagined places of discovery, toward an utopia that potentially exists in our own future (that is to say, in imagined time rather than in space) and that therefore can be reached by conceptualisation and activity – usually of the collective kind.\textsuperscript{68} It is this 'version' of utopia that has, in our time, overtaken the literary fantasy.

While we can, therefore, see at a glance that utopia was from the start a mutable and fluid concept that evolved as times and historical conditions changed, it is more difficult to come to an agreement of what we could identify as, if it exists at all, as a 'bare' utopia – which is to say, the basic definition of the term that other, further paradigms hone further and elaborate upon. While it is my opinion that such a 'bare utopia' cannot be neatly identified and attributed, some preliminary remarks on the essential features of an abstract 'contemporary utopia' can be made in the form of key concepts and terminologies that underlie more specific experiences. I wish therefore to introduce, at this stage, three concepts: dystopia, as the necessary and logical indexical opposite of utopia; and what I would point out as the two key 'motors' that give utopia its mandate and rationale – the logic of 'amelioration' and 'remediation'.\textsuperscript{69} While dystopia (for which I prefer the

\textsuperscript{66} Levitas (2010). p. xii. In the same book Levitas terms this new typology as 'emancipatory utopia', which she ascribes as usually Marxist informed, and '[stipulating] goals for which to universally strive.'

\textsuperscript{67} Cross (2011).

\textsuperscript{68} See, for these and more examples, Greene (2011) p. 3-4.

\textsuperscript{69} The two terms will be briefly introduced and described: further contextualisation will be given later, as I move to utopia in the museum, and utopia in the Web. I wish to introduce them at this point, since I would say they constitute the underlying logics of all contemporary utopian thinking, within but also beyond the specific cases of the chapter.
more precise and less popularised term 'degenerate utopia') will be touched upon briefly and for the sake of completeness, as it is not a leading paradigm within contemporary utopian thinking, 'amelioration' and 'remediation' will be discussed more more at length; not only for their greater relevance, but also because I will be using them as operative terms slightly differently than their literature of origin does.

I have mentioned, in the previous section, how earlier utopias, usually but not only of the literary kind, have come in more recent times to be regarded with suspicion: the factor that reverses appreciation seems to be that these experiments, once reaching fulfilment of their utopia vision, tend to sustain their ongoing viability through the sclerosis of their social and cultural structures, as a mean of self-preservation. Once utopia has been attained, the means by which it is up-kept come to resemble those very social and cultural faults that the utopian desire revolted against in the first place. This suspicion could be considered to be what, ultimately, is loosely identified by the rather ambiguous term 'dystopia' – ambiguous, since the widespread use of the term in common parlance and in popular culture of all kinds has made 'dystopia', as much as utopia, a catch-all word with little specificity attached. I would suggest therefore to use, rather than dystopia, the expression 'degenerate utopia'. Deployed originally by Luis Marin in his seminal discussion of the spatial semiotics of Disneyland, it was defined by him as 'ideology changed into the form of a myth': that is to say, the contradictions and interplays inherent in the first stage are blanked over, much as Disneyland emulates a mythical America, while glossing on the disparities and inequalities upon which its history is built. In other words, an utopia becomes degenerate when it ceases to be operative, fluid, and provisional. While it did not attract as much attention or acceptance as other

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70 For an example of an utopian experiment that Greene (2011) would most likely appreciate, yet could also be read as a 'utopia gone wrong', see Delano's (2009) account of the rise and fall of the Brook Farm social experiment in the mid 1800s.

71 I am particularly worried of the associations that the term has assumed in contemporary popular literature and film: 'dystopian fiction' has become a well established genre, of which examples abound.


73 For a discussion of Marin's theories of utopia above and beyond the 'degenerate' kind, see Maclaran et al. (1999). While the degrading that Marin implies in the notion of a 'degenerate utopia' makes sense, the choice of 'ideology' as the term for the stage of creative fluidity and provisionality (in spite of the convincing arguments Marin brings for its adoption) seems a rather poor choice in retrospective, especially given the multifarious meanings of 'ideology' in and for itself.
aspects of utopia discussed first by Marin, 'degenerate utopia' as an operative term was then appropriated by other scholars of utopia: most notably David Harvey, in his critique of the 'revitalisation efforts' in downtown Baltimore, in *Spaces of Hope*; but also, in an art historical context, by Travis English in his analysis of Hans Haacke's Institutional Critique works. In this second case, English states that 'while utopia is ideology... it becomes degenerate when there is at its ideological basis the desire to exclude, conceal, sublimate some sort of contradiction or difference that would serve to compromise the hegemony of the given dominant ideology': the degenerate utopia is, therefore, a throwback to the 'old days' in which utopia was, essentially, a state rather than a process. As we will see shortly, many manifestations of contemporary utopia (such as microtopias) define and constitute themselves as reacting against, or eschewing the dangers that the degeneration of utopia threatens – as resistances to dystopia.

Contemporary utopia can also be further defined by the dynamics it embraces and invests in, as much as those that it rejects and reacts against. Levitas has pointed out that, at the root of the 'emancipatory utopia' that has been delineated so far, lies the driving force of desire: according to the discourse presented so far, the word 'desire' is arguably a shorthand for the provisional, praxis-oriented, future-expecting qualities of the contemporary utopia that Levitas herself evokes. Is it possible, however, to further define the terminology of this 'desire'? I would argue that we can dive deeper in the discussion of what this utopia desire actually is, by resorting to 'amelioration' and 'remediation' as operative terms. In doing so, careful selection of sources (picked for relevance over width of spectrum) is essential, as both terms will be employed by me in ways that are related, yet slightly different than those acknowledged by the scholarship in which they were generated.

The term 'amelioration' has been sparingly used in the context of scholarly discourses around utopia – almost always as parlance, with little motivation behind such a specific choice of term. In the title of his 1980 paper, 'The Time Horizon of Planned Social Change: Why Utopian

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74 Harvey (2000); English (2007).
76 The term has, however, a distinct meaning and history of deployment in the medical sciences. Perhaps there can be
Movements Always Promise Amelioration in the Future', sociologist Richard Noyes takes to task the emancipatory utopia for what he sees as one of its structural shortcomings: the temporal distance that it interposes between the formulation of the social change it proposes, and the actual deployment of the means for such change. This distance is a practical one but, also, a rhetorical one: the emancipatory utopia puts not only the moment of change, but the *means* and *conditions* for producing such change in a future just slightly out of reach. I would argue that this rhetorical indefinite postponing of utopia's fulfilment, rather than a critique-able by-product of the shortcomings of utopian thinking, is instead one of its structural qualities, and one of the hallmarks that draws the line between these 'new' utopias and the old, literary kind. We have already discussed how contemporary utopia owes much of its identity (and novelty) to the attention it pays to the temporal quality of the utopia project, rather than the spatial one; in parallel and along the same path, it emphasises the necessity of process and movement toward utopia, rather than the appreciation of the 'discovered' one. In this sense, the contemporary utopian project is invariably, and necessarily, provisional, as it always calls out for further refinement and filing; due to utopia's positioning in time, such refinement is also conditioned and limited by the available technology, since more precise and widely available instruments allow for better realisation of the desired state that utopia aims for. The drive toward constant 'amelioration' is therefore ingrained in contemporary utopian thinking, and is accompanied by what could be termed 'ever-expectancy': utopian thinking and praxis further their mandate by always posing into the near future a further fulfilment of what has been achieved so far. This underlying dynamic is at play in all kinds and varieties of utopia: it will be particularly relevant, however, to the discussion of technological (and Web) utopia in the next section.

Another dynamic upon which contemporary utopia builds, and one which is thematically closely related to the topic explored in the previous paragraph, is what could be termed

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said to be a metaphorical indexicality at play here: the way in which the emancipatory utopia tends to think in organic terms about society, rather than mechanicist ones.

Noyes, 1980.
'remediation'. The term deserves in-depth exploration since, in my opinion, 'remediation' is a pervasive and vital dynamic within contemporary utopia, when such utopia is investigated in the context of cultural and social dynamics, art and art institutions included. 'Remediation' as a term finds its genesis in the field of media studies. One of the first, and by far most cited discussion of 'remediation' is found in an article (then a book) by media researchers J. Bolter and R. Grusin (1996). In this relatively long piece they set out the basic trajectory of what they see as a key dynamic of technological developments throughout recent history, and then contemporaneity: each technology seeks to define itself as a literal 're-mediation' and a metaphorical 'remediation' of previous ones. In other words, each technological advancement presents itself as absorbing previous advances and advantages, while purging itself of its limitations, becoming what the previous technology was, 'only better'. The leap forward is not only a technological one, but also a culturally quantitative one: the contradictions, inequalities and injustices that could not be resolved by previous media can (at least according to new media) be finally overcome. This dynamic is all-encompassing and happens in all media contexts – even the digital one, as we will see when I will discuss the supposed remediative power of Web 2.0 with regards to previous forms of Web interaction and life.

While such theorisation intuitively sits well with the traits of provisionality, amelioration and ever-expectancy as we ascribed them to contemporary utopia, Bolter and Grusin's text not only does not directly reference utopia, but it also does not complete the translation of these 'dynamics of remediation' from the merely technological, to the social and the cultural. Nonetheless, 'remediation' is a plastic framework for understanding the evolution of multiple cultural phenomena: digital media and education researchers A. Russo and J. Watkins, for example, include the term as a useful paradigm for discussion of museum – audience communication, an application

80 They do so only partially at the end of the paper (pp. 355-357). Their concern is however, in spite of their claim of the contrary, firmly on the formal aspects of remediation as it relates to technology (see p. 355).
that I will return to at a later stage. At this stage, however, I would like to focus on the centrality of 'remediation' to contemporary utopia: as a descriptor for the continuous back-referencing, and yet implicit expectancy for the 'next best thing' that will resolve current contradictions, 'remediation' sits at the heart of contemporary utopia's ameliorative project. Such relevance is compounded by the notion that the 'not so far off' resolution that contemporary utopias strive for is often very much informed (in fact, empowered) by the expected capabilities of new media, new communication forms, and new ways of relating contents to others. 'Emancipatory utopias' constantly seek to, literally, emancipate themselves from both external and internal contradictions and limits: they seek the means, social and technological, by which to ameliorate reality by constantly putting off the moment of complete catharsis into the close, 'graspable' future.

One 'emancipatory utopia' that surely displays these traits, and the others previously discussed, is the so called 'microtopia'. The idea of microtopia is tightly bound to the body of work that curator and theorist Nicolas Bourriaud developed, in the late Nineties – early Twenty-first Century, around the concept of Relational Aesthetics – although the term 'microtopia' itself seems to have been borrowed from philosopher Felix Guattari. Bourriaud takes contemporary art practices as a departure point for the exploration of what he sees as a new 'type', so to speak, of utopia that has taken hold in recent years: 'a utopia without teleology, without grand speeches, one that refers to everyday life'.

In spite of the passionate and poetic vocabulary that Bourriaud deploys, there is indeed a well-defined political concern behind microtopia. Quoting from a short opinion piece the same author wrote in 2002, 'The discourse of the market is totaling, not to say totalitarian. And there is no...
alternative, either imagined or actual to this idea of the market. I am not persuaded that we should respond to this sort of 'all or nothing' by another globalising system. As the contemporary market, which is to say contemporary politics as well, leaves no room for a 'remediation' of a volume and presence analogous to that of the market itself, the project of the emancipatory utopia comes to an impasse: simply put, it is not possible to achieve wholesale emancipation from a global system that is, as Bourriaud said, 'totaling'.

The alternative that Bourriaud offers to this stalemate is one that fundamentally salvages utopia as a privileged paradigm for social and cultural change, yet nearly rewrites in full its scope, instruments and ends. Differences are multiple. First of all, the 'microtopia' rewrites (at least in intentions) the geographical and temporal parameters by which emancipatory utopia works. The 'change' that the utopian desire promotes, and the utopian imagination promises takes place on a smaller scale, and with an eye to the present rather than the future: Bourriaud says that 'instead of looking forward to a future utopia, (this art) sets up functioning microtopias in the present'. Furthermore, 'it seems more pressing to invent possible relations with our neighbours in the present than to bet on happier tomorrows'. The microtopia operates therefore on a different, smaller scale: spatially, temporally, and socially. As we will see later in the chapter, the microtopian position has found wide deployment not only within the Web museum as a model for engagement and outreach; but more generally in the context of the contemporary constructivist museum overall.

For now, citing examples from the art world – and, more specifically, from artists that

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85 Bourriaud (2002).
86 While Bourriaud operates within discourses of artistic practice, I would say that his assessment can be expanded to include non-art markets, and – given the inextricability of market forces from political forces – politics as well. In the opinion piece itself Bourriaud does not explicitly qualifies further which 'markets' he is referring to, leaving room for abstraction.
87 Bourriaud (1998) p. 13. Again, Bourriaud's focus and provenance of examples is the artistic world; nonetheless, given the aesthetic and social characteristics of most of the art that Bourriaud takes as example, it seems legitimate that his concepts might be read as more or less viable outside the artistic realm.
89 It seems to me, however, that the clear-cut distinction between an utopia that looks at the future (implying, at the expenses of the present) and a microtopia that looks at the present times as temporal loci of operation runs the danger of flattening not only utopia, but microtopia itself: any project that has at its heart remediation (and microtopia very much so) necessarily exists not as an isolate, but as an experiment that, no matter how circumscribed, others can build upon. Therefore, microtopia might not work operatively in the future, but certainly gazes at it ideologically.
Bourriaud discusses as integral to Relational Aesthetics, which seems to be essentially microtopia in art form – might help us elucidate what kind of projects would count as microtopia. A canonical microtopian work is the performance / event *Untitled (Free)* by Rirkrit Tiravanija, an artist with strong ties both to Relational Aesthetics, and Bourriaud as a curator.\(^{90}\)

*Fig. 1 – Rirkrit Tiravanija, *Untitled (Free)*, 1992. (Gavin Brown's Enterprise, NY)*

In these performances Tiravanija commandeers a space in the hosting cultural institution, usually a back office, and refurbishes it as a stripped-down, no-frills curry kitchen. For the duration of the show, artist and institutional staff work and inhabit the space, but also cook vegetable curry for visitors and patrons. Once the kitchen closes, the accumulating pans and utensils become testament to the 'artwork'. In spite of claims that the performance and relative installation is actually only 'deceptively simple', the rhetoric by which it operates is quite transparent: the artist ameliorates and remediates, for the time of the exhibition, the space of the gallery and the audience that attends,\(^{90}\)

\(^{90}\) Tiravanija was featured in Bourriaud's *Traffic* group exhibition (1996).
a whole set of contradictions engendered by art institutions, unequal economical and social relationships within and without the public, and so on. The provisionality of the event itself, which is literally dismantled once the exhibition is over, does not prevent the intentions of this 'microtopia' to be, in the end, even more impactful than other, (according to Bourriaud) more declamatory forms of utopia: for that space, that time, and that audience, the utopian vision has been realised. Temporary practical means produce, at least philosophically, permanent social change.

The microtopia has not been without its critics. This should not be surprising: experiments in microtopia, such as Tiravanija's (but also other Relational Aesthetics artists; and, of course, a host of other, not art related situations), leave themselves wide open for analysis of what they take for granted, and what they ignore, about relationships, mutuality and exchange of value. One of such attacks has been carried out by Claire Bishop in her essay 'Antagonism and Relational Aesthetics' (2004): while she is, although not only, mainly concerned with a critique of the work of Relational Aesthetics artists and curators as presented within an artistic context, most of her points can easily be abstracted as critiques of the microtopian vision that such art proposes – this because, in the case of at least some Relational Aesthetic artists, art works are in themselves utopian projects. First of all, she retraces the brief history of Relational Aesthetics's formulation and development in an European context, and reworks and refines some of the most obscure points of the tendency's underlying politics: for example, she insists on how, from the point of view of a Relational Aesthetic artist, the performative emphasis 'insists upon use rather than contemplation'. I think it would be appropriate to make a parallelism between this ideological shift, and the already variously described move from the contemplation of completeness in older, literary utopias to the operative

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91 MoMA (2012). [http://www.moma.org/explore/inside_out/2012/02/03/rirkrit-tiravanija-cooking-up-an-art-experience](http://www.moma.org/explore/inside_out/2012/02/03/rirkrit-tiravanija-cooking-up-an-art-experience)

92 It should be noted that these, according to Bourriaud (2002), 'small islands that are apart from the system' (not the islands, one would guess, that More wrote about) bear – with due differences – a similarity of intent and situation with Hakim Bey's 'Temporary Autonomous Zones', which are, essentially, historically based examples of microtopias.

93 Aided, in this, by their emphasis on process and performance of function over the production of objects: Tiravanija's pad thai, or vegetable curry, is not an utopia object per se, yet becomes part of an utopian project once it is produced, served and consumed as free food.

provisionality of more recent ones. In the end, in spite of the resistance to the 'utopia' terminology that Bishop diagnoses in Bourriaud, it is clear from the quotes in text that the curator does not dismiss utopia *per se*; but, rather, the more retrograde and ossified aspects of it that I have ascribed under the 'older' and 'literary' rubric. 95 'Learning to inhabit the world in a better way' is still, in the end, an eminently utopian project from which no context – including the Web and the contemporary museum – is dispensed.96

One of the reasons for which Bishop's criticism of Relational Aesthetics artwork can easily be translated as a critique of microtopia, is that the biggest objection she puts forward against what seems the necessarily remedial and ameliorative aspects of these kinds of work is also that which can be asked of microtopia: in privileging the temporary, the performative, and the geographically circumscribed, what enduring social relations can actually be developed? And are they necessarily as democratic, remedial, and 'good' as Bourriaud seems to imply?97 Bishop calls to task Relational Aesthetics, and therefore the microtopian imagination it embodies, for ignoring the great potential for democracy, improvement and dialogue that might derive from antagonistic relationships: 'a democratic society is one in which relations of conflict are *sustained*, not erased'.98 The very nature of the microtopian project does not allow true antagonism to play out, and the microtopia is all the worse off because of it: 'There is debate and dialogue in a Tiravanija cooking piece, to be sure, but there is no inherent friction since the situation is what Bourriaud calls 'microtopian': it produces a community whose members identify with each other, because they have something in common.'99 The implication we can abstract is that, albeit through different means (limited inclusion rather than forcible exclusion) and with a different conscience, the 'microtopia' achieves the same closure to the fluid, the shifting and the antagonistic 'other' that the 'utopian islands' of More and others did: like in the days of old, the microtopia's balance of democracy, equality and concord is kept by excluding

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97 See Bishop (2004) p. 65. For another take on the same issue (antagonism as integral to democracy) see also Cammaerts (2008).
98 Bishop (2994). p.66.
that which threatens its homoeostasis, and is therefore reserved to the connivent. Overall, it seems that Bishop has in mind, as the model for a more truly 'democratic' utopian vision, what Michel Foucault dubbed the 'heterotopia': a space 'in between', that functions democratically because of its state of fluidity, non-hegemony, crisis and antagonism – a space that Tiravanija's art evokes, but fails to realise.¹⁰⁰¹⁰¹

Other Positions – Dystopia and Control Positions

I have insisted upon microtopia, and the qualities and shortcomings that have been ascribed to it, due to its paramount importance to our current cultural context, and in particular to the two realms that this chapter is concerned with: the Web, as the locus for social relationships, and the museum institution. Furthermore, the museum especially often operates, digitally and online, as a microtopia of sorts – with all its qualities, and possible faults. There are as well some interesting voices that seek to re-articulate theoretically the contemporary utopian imagination, by reflecting on the interplay between more 'traditional' positions – in particular, utopia versus dystopia.¹⁰² These discourses often possess a new media or technological slant and are therefore applicable to the digital, and the Web; and also to the museum, if we correctly conceptualise it as a technology, or as a medium. For the sake of logical progression, these positions are briefly described and contextualised, in this section, with regard to their specifically utopian, and broadly technological content; and will then be evoked and further discussed or contextualised in the relevant later sections with more of an emphasis on their digital / Web specificity.¹⁰³ In this sense, these brief

¹⁰⁰ See Foucault (1986).
¹⁰¹ For example, Tiravanija's Untitled (1999), a reconstruction of the artist's apartment within the gallery, fully functional and accessible 24/7 to the visitors, creates a physical temporary 'in between' place, yet – according to Bishop – fails short of doing the same politically.
¹⁰² Although I have mentioned previously the somewhat marginalised position of dystopian discourses in the contemporary, and some scholars that we will examine articulate utopia as conspicuously absent from certain discourses, it still plays a part by acting as a marginalised, 'invisible' other side to ever-present utopian discourses.
¹⁰³ There is also rationale for this double illustration (even at the risk of repetition) because, as I have briefly indicated above, 'technology' is an integral part of any utopian vision, when one adopts an expanded definition of technology as a modification of an aspect of human behaviour and production in order to achieve a goal. In a way, it could be said that even Tiravanija's free food is, in this sense, a technology channelled to utopian ends.
overviews also begin to bridge the gap between theoretical discussion of utopia, and its applications to the subject areas of the paper.

I have mentioned previously that, in the chapter's analysis, dystopia occupies a place of relative lesser importance: this is because of two reasons. First of all, the discussion that the chapter will eventually engage is that of the digital museum: and it is my empirical observation that, while discourses on the dystopian museum have played out in the past (for example, in the writings of Carol Duncan and Alan Wallach), in more recent years the dystopian vision with regard to museums seems to have exhausted its vitality, receding in favour of optimist, utopian positions. More generally it could be argued that, in discourses with a technological slant, positive and 'properly' utopian positions hold a greater degree of relevance and engagement than dystopian positions. While this might seem at first counter-intuitive, given the abundance of dystopian prophecies with regards to the risks of new, unbridled technologies, the dynamic at play is one of subtle evolution through time: as the discourses, and the technology itself, become routine, dystopian doomsday scenarios abate in favour of utopian positions through which the new technology is accepted, elaborated and 'domesticated'. This dynamic is definitely, and quite clearly at play with regard to the Web; but it also has a part in the early encounter with the digital by the museum.

Some have suggested, with varying degrees of persuasiveness, that there are also other positions from which these discourses can be approached – ones that integrate utopia and dystopia; rather than subsuming one to the other, or constructing them as competing paradigms. Per Hetland, in a 2012 article, suggests what he calls a 'narrative of control'. According to him, there are three possible positions when it comes to articulations of the imaginaire of a technological or cultural discourse: a pro-innovation position, which is clearly and unabashedly utopian in scope and

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104 See, for example, Civilizing Rituals (1995); 'Art Museums and the Ritual of Citizenship' (1994); 'The Universal Survey Museum' (2004); 'The Museum of Modern Art as Late Capitalist Ritual: an Iconographic Analysis' (1978). This, in spite of the term 'dystopia' being actually not used.


106 See, for example, the many hurdles and resistances that Parry chronicles as she narrates the early days of museum computing and information technology application (2007).

107 Hetland (2012).
attitude, and is usually dominant in frequency and representation; an anti-diffusion position, which roughly corresponds with dystopia and, in spite of its influence on discourse, is usually 'invisible'; and a possible middle-ground, the control position, which is identified and described yet, according to Hetland himself, is usually absent from explicit discourse. The control position, however, is essential to the economy of how society (or, in the specific, any group with a cohesive agenda) domesticates and, eventually accepts a new technology or paradigm: it mediates and tempers utopian and dystopian extremes, acting as 'an important counterpart to the utopian narratives'. The acknowledgement of a possible 'third way' through utopia is also relevant to my argument since, as we will see, both the Web and the museum rhetorically (but not evenly, or without hiccups) adopt it along with more 'traditional' utopian and dystopian positions. In particular, the latter is engaged in an ongoing process of domestication of the Web that explicitly invokes a 'control' position.

Another, much earlier account that seeks to mediate utopia and dystopia, without however naming a discrete alternative option, is given by Howcroft and Fitzgerald. More polemically than Hetland, according to them 'undeniably, both the utopian and dystopian vision are simplistic and monochromatic': while they 'offer a useful means of identifying a variety of social possibilities', they hamper the articulation of a new factor's impact and implications by trapping discourse into a 'either-or' scenario. More useful, according to the authors, is to think of utopia and dystopia as the extremes of a sliding scale, since not only 'manifestations of these visions vacillate according to the rich interaction of many complex factors', and are therefore fluid and interactive with each other; but, also, adopting a 'either-or' vision runs into the risk of reading teleology and determinism into the evolution of a given paradigm. While a multitude of 'third positions', unlike in Hetland's case, is acknowledged by Howcroft and Fitzgerald – rather than a single, new one – the ideological result

108 Hetland seems to imply that the anti-diffusion position is not absent, but rather subsumed by the more progressive, utopian pro-innovation position.
is roughly the same: utopia and dystopia, as opposing positions, can function only as steps toward a more nuanced and contextual understanding, which invariably tempers both positive expectancy and desires and dystopian rejection, into a third narrative of dangers accompanied by possibilities and scope for development.

To briefly summarise this section, I have retraced some of the main manifestations that the utopian imagination, or imaginaire, has taken relative to its own internal structure, evolution through time, and theoretical boundaries: even when I resorted to (few) artistic examples, the accent has consistently been on articulating a history of utopia, in the context of utopia itself.\textsuperscript{114} This exercise, in spite of its usefulness and validity, is only a preamble and still leaves unsaid one of the 'innovations', so to speak, that the 'emancipatory utopia', but more generally all contemporary utopias, bring to the table: an understanding that the utopian project, being a work in progress, cannot be divorced from other ongoing cultural projects.\textsuperscript{115} It is, moving away from More, not an island in itself – but always part of 'something else', better read as a motivator ingrained within a multiplicity of cultural agents and arenas, such as the museum.

\textbf{The Museum as an Utopian Agent}

The next two sections of the chapter will look at two 'utopian projects', the museum and the Web. First, I will describe the origins, evolution and current state of the museum, but with a purpose.\textsuperscript{116} My aim will not be to provide a complete, historical survey of the museum as a cultural

\textsuperscript{114} Again, the use of this term is motivated by my desire to suggest that the contemporary utopia does not limits its exploratory scope to its own boundaries but, more spatially, to the wider cultural milieu of which it is part -some of which are explored in this chapter. In this sense, I use the term with the same intent of Flichy (2007).

\textsuperscript{115} Levitas (2008) would most likely say that it is an exercise that cannot not be done, if one seeks to see utopia in context.

\textsuperscript{116} I should remind that, as laid out in the introduction to the dissertation, I define the museum as a not-for-profit institution, in order to distinguish it from commercial galleries. This distinction is particularly significant, as we will see, when we consider the intersection between museums and utopia, mostly because public institutions are often involved in an array of ameliorative and remedial projects that commercial outlets ignore. Also, I will not make particular distinction between art museums and other kinds (such as science or historical museums).
institution: while more general historical elements cannot be overlooked at any level of analysis, there is already an abundance of research on the general history of the museum, both book-length, and as part of other discussions.\textsuperscript{117} My exploration will concern itself with those aspects of museum's birth, history and development that best display how the institution has been shaped through time by the utopian imagination – and, also, how the museum fits into a larger, cultural and social utopian \textit{imaginaire}. Among the aspects that I will particularly focus on: the Renaissance and Enlightenment proto-museum as an expression of the desire to encyclopedically order, shape and 'control' a multifarious reality; the Eighteenth and Nineteenth century public museum as a social agent of public amelioration, and social engineering; in more contemporary times, the move from a museum of collecting to a museum of service, continuing with the utopian mandates of social improvement and democratic inclusion, but adopting an explicit rhetoric of remediation. The discussion will tend to focus more on the contemporary, as it is then that the museum's utopian imagination meets the Web, and one of its many utopian declinations – Web 2.0.

Then I will look at the other, deeply utopian system that is the subject of this chapter: the Web.\textsuperscript{118} It can be said that, in a way, the Web (before it was even named as such) was born \textit{as} a place, instrument, and product of utopian thinking: shortly after its near-mythological inception within a handful of technology labs across the United States, the early version of what would only in the Nineties be identified as the Web was already employed by a variety of social groups, some of them well within what was considered Counterculture, in order to create spaces that were in intentions free, democratic, and encouraging of 'glocal' community building.\textsuperscript{119} Rather than decline, in recent years this paradigm has been expanded well beyond circumscribed communities of

\textsuperscript{117} See, for example, the already cited essays and books by Duncan and Wallach (\textit{Civilizing Rituals} in particular), as well as Bennett's \textit{The Birth of the Museum} (1995), Abt's \textit{The Origins of the Public Museum} (2006), Alexander's \textit{Museums in Motion} (rev. 2008), or the many series on museums history and practice published by Routledge and Blackwell.

\textsuperscript{118} Again, we should pay attention to shorthand terminology. I take 'Web' to signify the social, cultural and political context that is given presence (and a sort of geography) by the hypertext known as the World Wide Web. This is distinct from the Internet, which is the infrastructure that hosts the World Wide Web hypertext.

\textsuperscript{119} See, for example, to this regard, Flichy's (2007) description of early bulletin boards and newsletters, such as The Well.
interests: it has come to veritably involve the whole of the Web. Hailed by some (and ridiculed by
others) as a whole new way of understanding the Web, Web 2.0 seems to herald an age in which the
Web will finally fulfil the utopia that was implicit in it all along: free flow of information; justice
and democracy through direct participation and involvement; a better way to relate to others,
pooling energies and intelligence for the common good\textsuperscript{120}. While not without shortcoming, and a
healthy dose of controversy, we will see that Web 2.0 offers a powerful remedial paradigm for
interested parties; and, in the end, it is to Web 2.0 that the museum has turned, in order to establish a
foothold in the virtual.

There are strong indicators suggesting that, since its very early days, the museum was a
cultural institution that based its own identity, mandate, and possible range of forms on a series of
utopian propositions. Note that I have not added the 'public' prefix to the museum: this is because,
while the utopian element truly comes to the fore with the birth of the public museum proper, which
is usually positioned sometimes as early as 1683, usually at the much later date of 1793, utopian
themes can be also diagnosed in what could be called the 'proto-museum': various forms of private
or semi-private collecting and display, which would sometimes end up as the basis for public
institutions.\textsuperscript{121,122} While I do not want to over-emphasise the utopian payload of these early
experiments, since I consider the utopian agenda to enter in full only once the museum goes public,
a short illustration of the utopia vision in early museum practices is still necessary.

Most definitely older than the 1800s' public art museum is the use of collections of objects
in order to display public power, and justify public mandates - in this sense presenting, if not utopia
proper, the instruments and ideology that would inform the museum as a tool for social amelioration
and engineering. Among others, Carol Duncan has pointed out how, in Roman antiquity, the display

\textsuperscript{120} See, for example, O'Reilly (2005). Opinions to this regard will be addressed in the relevant section.
\textsuperscript{121} 1683 being the date of the opening of the Ashmolean Museum, and 1793 of the Louvre Palace's Grand Gallery (Abt
(2006)). Due to the relative irrelevance of the specific date to my topic, and that the Louvre position seems to appear
more often in literature, I would adopt 1793 as the birth of the museum as a public, state-sponsored institution.
\textsuperscript{122} The history of these 'proto-museums' is well illustrated by Abt (2006): according to him, the issue of the collection,
and collecting as an object and activity positioned between public and private was already present in antiquity, when
rich patrons would collect artefacts and specimen, and then open the collection for degrees of viewing, according to
the relationship with the visitor (p. 117).
of looted items within grandiose state architecture functioned as a tool for social control and consensus-building: in this case it would be out of context to talk of utopia, yet we could point at the ways in which this practice performed the social engineering that, for example, More-style literary utopias embrace.\textsuperscript{123}

In spite of these early precedents, however, the very first embodiments of the collecting and cataloguing impetus that, eventually, would morph into the museum proper, should be considered to be the many \textit{Wunderkammern} and cabinets of curiosities that rich private patrons assembled all over Europe over the course of the Renaissance.\textsuperscript{124} These extensive collections of specimens possess, upon close analysis, many traits that could be considered as laying the groundwork for the museum as utopia: not as much with regard to the collections themselves but, rather, in the motivations, rationales, and underlying ideology that underpins these enterprises in the first place. Paula Findlen addresses the relationship that the renaissance Humanist had with his surrounding spaces – the natural one in particular. She argues that the conceptualisation that moved from nature to the museum operated mostly by metaphor: the Muses, which were 'rediscovered' by the renaissance intellectual, were seen as inhabiting the natural world, their 'haunt'; a natural world that, by metonymy, included also the ruins and remains of classical Antiquity.\textsuperscript{125} The creation of the museum (which is to say, the Renaissance cabinet) could be seen as an attempt to reconstruct reality, to build an intellectual microcosm that indexically represented that which existed outside the mind: 'thus museum was a locating principle, circumscribing the space in which learned activities could occur'.\textsuperscript{126} These learned activities, and the paraphernalia that they produced, were also encyclopaedic in nature. Findlen states that this encyclopaedic tendency 'delighted in discontinuities': what this indicates, is that the renaissance intellectual addressed indeed the whole

\textsuperscript{123} Duncan (2004; original 1980) p. 449.
\textsuperscript{124} Findlen (1989) summarises both this, and the previous paragraph's points: 'While the practice of collecting emerged primarily in the sixteenth and seventeenth century, we need to understand its background to appreciate the role of Medieval and early Renaissance learning in setting the stage for the widespread appearance of museums...' p. 60. Since she deals specifically in the Renaissance museum, she goes more in depth than I desire to in her analysis of precedents, and her text constitutes an excellent source in this sense.
\textsuperscript{125} Findlen (1989) p. 61-63.
\textsuperscript{126} Findlen (1989) p. 62.
of human knowledge, but did so by compartmentalizing the whole of knowledge in a myriad of categories, or (in retrospective) taxonomies — 'Musaeum was a classificatory structure for a wide variety of texts, whose sorting and organizing processes fulfilled the taxonomic principle of collection'. Also this encyclopaedic tendency can be read as an ideology that, as expressed in the proto-museum, aimed to 'reconstruct' reality, so to speak, in an orderly, intellectual, and humanist fashion. The very existence of this need to re-order and, consequently, re-read reality carries within itself the germ of amelioration and, even, remediation. Through the efforts of the scholar, a more orderly reality is recreated; one that more closely represents the 'ideal nature' as the learned human mind conceives it. A circumscribed utopia is re-created in the proto-museum: one that, in its compartmentalizing of the human experience, and drive toward rationalisation, could be said to echo the orderly and catalogue-like descriptions in More's *Utopia*.

These 'proto-museums', however, lacked what we would consider one, if not the defining trait of the museum as a cultural institution: they were, for the most part, not accessible to the public. This lack was a substantial obstacle to the proto-museum's development of a truly conscious utopian vision: as we have seen in the previous section, one of the chief features of utopia, from the early literary model to the microtopia, is that it always addresses, and seeks to mould, a community or a 'public' of some kind — be it the thousands that inhabit a island, or the few that eat Tiravanija's vegetable curry in an art museum. In order, therefore, to become an institution that could truly put forward an ameliorative and remedial utopian agenda, the museum necessarily had to go public. I will not turn my attention to that moment in time, between the seventeenth and early nineteenth century, in which collections all over Europe were made public, in order to push political agendas of

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128 Again Findlen (1989) mentions, for example, the renaissance garden and the grotto as examples of reconstructed nature (p.61).
129 Which is, having been written in 1516, a late Renaissance text in itself. As of now I have not been able to locate academic discussions that put into relation the topics I just illustrated, and More's pamphlet.
130 When I ascribe a 'remedial agenda' to the public museum, one should remember the caveat I have given in the chapter's previous section. 'Remedial' can be used, as Grusin somewhat suggested, to refer to technological shifts of media, as well as communicative channels, and social contexts in general. The museum 'remediates' as a remedy, and also re-remediates previous social forms of communication, education and intellectual nurturing.
education, control, and social engineering – the moment in which the museum can, in my opinion, be truly said to have become an agent steeped in utopian imagination, acting within an utopian imaginaire.

We can buttress such a proposition with the fundamental synthesis operated by David Carrier in his book *Museum Skepticism* (2006). Referring back to a variety of sociological positions, especially historian Susan Pierce's, Carrier argues that the birth of the modern, public museum is 'bound up with [...] the development of democracy' and, furthermore, dependant upon the rise of a bourgeoisie middle-class that it could operate on: 'Once high art moved from churches, temples and princely collections into the public space of the museum, visitors needed to be educated'.\(^{131}\) The process was, of course, gradual: at first access to these 'public' collections was still limited by social status, acquaintances and exclusivity; only with the opening of the Louvre, in itself a product of the ideals that moved the French Revolution, the circle of those who could be admitted to the collection widened enough to, at least in theory, coincide with the whole of the nation.\(^{132}\) Yet these middle-class, bourgeois 'museum visitors' had, in spite of virtually complete access to formerly private collections, little way of approaching those very collections (and the new institution that housed them) intellectually: first, these publics had to be educated, indoctrinated and, in final analysis, engineered in order to be able to respond to the new idea of nationally-owned, public culture that the museum embodied.

From this departure point, Carrier seems to diagnose the early stages of what would be a chronic malady of the museum: its inability to keep up with the times, and its consequent lapse into overgrowth and obsolescence.\(^{133}\) I would argue, however, that the crucial outcome of the stage that has been set so far is different and, in a certain measure incompatible with Carrier's: I would emphasise that is exactly when the museum goes public in earnest, that it truly becomes an utopian

\(^{133}\) Carrier (2006) p. 19. The book is highly polemical in tone, and mostly chronicles a perceived decline of the museum as a space for democracy and intellectual development.
enterprise – as Fehr quoting Nipperdey, 'a literary-theoretical design for a possible world that consciously transgresses the limits and possibilities of the actuality at issue, and aims towards a fundamentally different world characterized by a high degree of completion'.

Once it can truly reach the whole of a nation, the museum can assume the mandate, and fulfil its aim, of an institution that can collaborate toward the creation of the 'perfect society' through display, education, indoctrination and symbolic power. In this sense, those very aspects of the modern public museum that Duncan and Wallach polemise against are the tools and outcome of the museum's mandate as an agent of utopian amelioration and remediation (in the case, for example, of the early Louvre, the creation of a rich, productive middle class that could recognise itself in the nation's collections and architecture, therefore partaking in the ritual of society-building; and, at the same time, a vivid representation of the outcomes of the utopian project that laid at the basis of the French Revolution).

As Duncan and Wallach's writings on the Museum of Modern Art in New York demonstrate, the paradigm of the big, public museum as a tool for state-sponsored social and cultural engineering survived well into the twentieth century. This kind of hegemonic enterprise has however become, rather than the exclusive norm, one among many of the paradigms that the contemporary museum can adopt in dealing with the issues that stand at its institutional foundation – such as the scope, authority and endurance of its social and cultural mandate; the intentionality, tangibility and measurability of the museum's impact (positive and negative) on its public; and the ethical questions that arise from the museum's capability for social engineering, alternative world-making, and utopian prefiguring of a better reality. Different paradigms with regard to the typologies of social and cultural utopia that the museum can work toward, have emerged – without eroding on the underlying fact that the museum is invariably, due to its very own underlying philosophy and

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134 Nipperdey in Fehr (2005).
135 Even more, when the collections were for a large part the outcome of an explicitly political project – Napoleon's lootings.
136 Duncan and Wallach (1978). For example: "the work MoMA acquired express with extraordinary fullness and imagination a system of values" (p.30), the same way that the collections of the Louvre expressed the system(s) of value that overtook France following the revolution.
history described so far, tending toward a programmatic amelioration or remediation of reality; even when the activity of collecting and displaying might naively seem politically neutral.\footnote{And this is certainly the case, for example, in Duncan's analysis of the MoMA's hanging, and its enforcing of 'the artist' as paradigmatically Western, male and white (Duncan (1989)).}

One of the most vital paradigms for the museum as a proactive social and cultural agent is the 'constructivist museum', in itself an offspring of the wider theory of 'constructivist education'.\footnote{Hein (1995).} The theory is exemplified, both in its expanded and its museum-specific form, by the work of sociologist and educator George Hein – in particular his essays 'The Constructivist Museum' (1995), and 'Museum Education' (2006). Due to the ways in which his discussion widens the scope from the museum to the larger theoretical context of education and learning, analysis of Hein's relevant arguments has the added benefit of contextualising what happens in the museum in relation to contextually wider dynamics, something that often lacks in the theoretically light professional discussions of museum education practices.\footnote{For my thoughts and anecdotal analysis on the problem, refer back to the dissertation's introduction.}

According to Hein, 'the educational role of the museum is as old as the modern museum, but only since World War II it has grown into an acknowledged profession... as had been recognised since at least the early nineteenth century, museums, by their very nature, are educational institutions (Hooper-Greenhill 1991a). Only later did museum education come to be one (usually major) specialized function within the museum'.\footnote{Hein (2006) p. 340.} That is to say, the remedial and pedagogical character that was implicit in the museum as, essentially, state-sponsored indoctrination pre-dates the explicit acknowledgement of the museum as having a well-defined, purposeful social mandate in that sense – a duty to educate that stemmed not solely from above, but also from below, grass-root. Discussing the origins of the museum institution, Hein does not explicitly deploy the language and terminology of utopia, but captures its essence as embodied in this early institutions. As he quotes Wittlin, 'the creation of the Public Museum was an expression of the eighteenth-century spirit of enlightenment which generated enthusiasm for equality of opportunity in learning'.\footnote{Wittlin (1949) in Hein (2006) p. 341.}
Hein individuates as major concerns of the pre WWII museum the illustration of national strength; advances in science and the arts; display of politically themed programs.  

Abstracting these elements, one could easily say that the pre WWII modern museum was already concerned with issues of social improvement, future-thinking and ever-expectancy that are, in essence, utopia.

In spite of the continuity of mandate between these kinds of modern museums, and the post-WWII one, according to Hein a sort of paradigm shift occurred in museum thinking since the late Fifties, one that would have a profound impact on the means by which the museum would pursue its educational agenda. This new paradigm, that he terms the 'constructivist museum', has its origin in novel theories of public education and pedagogy that were developed in the late Eighties – early Nineties, 'constructivist learning' in particular. In its most synthetic form, the constructivist museum has at its basis the 'constructivist conception that learning in the museum represents meaning-making by museum visitors - that these meanings are mediated not only by museum objects and the way in which they are presented (exhibited) but also powerfully by the visitors' culture, previous personal experience, and conditions of their visit...'. The locus of meaning-making in the museum has not been completely overturned, but the number and quality of agents implicated has been greatly increased: meaning and education constructed 'from above', found 'as is' by the visitor is still present, but now also integrated with knowledge and progressive learning that is produced 'on the fly' by the visitor through the course of the museum experience. According to the schema developed by Hein, the 'constructivist museum', as one of four possible typologies of contemporary museums, is therefore characterised by assuming the constructed nature of any knowledge, be it the visitor's or the museum institution's; and by the active engagement through which such knowledge is constructed.

The question is, does this new conceptualisation of the museum as educator (or, one could

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142 Hein (2006).
143 See, to this regard, Hein (1999), which is also particularly relevant as brief illustration of the theory that underlies constructivist learning – and that I, for lack of space, have only very briefly summarised.
say, co-educator, as the public is implicated in knowledge making) remove, marginalise, or develop further the museum institution as, essentially, an enterprise implicated in utopia-making discourses? I would argue that the modern museum's move from education from above through state sponsorship, toward the museum as a location where education is constructed performatively by a variety of active agents, can be read (if we accept the museum's educational mandate as utopian in scope and aims) as thematically, if not precisely chronologically, mirroring the move from older utopia as a 'truth', a state of being that is 'discovered' and given to the public; toward contemporary, 'emancipatory utopia' understood as a future, yet always perfectible achievement which must be performatively, and collectively, constructed through time and negotiated with evolving means and technologies. One hint, I would suggest, is given by the fact that the museum institution felt the need, in recent times, to professionalise and, more generally, better discern its educational mandate, project and staff from other departments within: the emergence of the 'professional educator' within the museum could be read as an acknowledgement that the educational (and therefore, ameliorative and remedial) payload of a collection is not communicated to the visitor by mere osmosis, requiring instead a process of mediation, a praxis that extends through time (also before and after the visit); as well as the realisation, on the museum's part, that the ameliorative process the museum fosters is inherently in progress, and always provisional (the museum educator's work is, when all is said and done, endlessly perfectible just as the visitor's perceptions and knowledge is). Consequently, attention should be paid to the great importance that the 'active learner' has in the context of the constructivist museum, as mutated from constructivist learning. Considering, for example, the quote: 'the combined research of the past century has resulted in almost universal agreement that learning is an active process that requires engagement, and that this process is significantly modulated by the learner's previous experience, culture, and the learning environment'. I would argue that the learning as an 'active process' that Hein and Bransford address bears striking

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146 See 101, as well as p. 344-345.
similarities to the active construction of utopia through praxis that, for example, characterised emancipatory utopian experiments such as those described by Greene, and that I have previously discussed: a better state of things has to be reached through a proactive process of fine tuning, aiming for that 'high degree of completion' that Nipperdey configured.148

Finally, indicative of the convergence between the constructivist museum and contemporary forms of utopia is the renewed emphasis on social justice, responsibility and improvement that is shared by the two: by adopting the constructivist paradigm, the museum has expanded the scope and depth of its educational mandate, which now includes underprivileged and marginalised communities. Again, Hein succinctly puts: 'museum education converges with social responsibility: the social service that museums, as public institutions, provide is education. A constructivist or progressive educational mission necessarily puts an emphasis on social change'.149 This attitude has been picked up by many museum practitioners, and especially those that work with objects or contexts relevant to minorities, marginalised or disadvantaged groups.150

The contemporary constructivist museum therefore seeks to construct the utopian citizen as a variously democratic, responsible, intellectually vital agent through a progressive work of education, inculcation of social values, and sensitisation to relevant issues: in this, we can detect more than an echo of that 'emancipatory utopia' that seeks to construct an alternative, ideal space that is inhabited by a variable in features, yet always socially described citizen. Social concerns also constitute a possible point of contact between the contemporary museum and the microtopia ideology. Looking at discussions of engagement, outreach and education in professional museum fora, it is easy to note a tendency toward case-study type presentations of single, often one-off projects; in addition, such projects are often articulated as 'prototypes' of sort, circumscribed cases that have shown potential, and could therefore be adopted by other institutions.151 Each educational

150 For example, the work of Mann and Russell with Maori communities (2010).
151 The Museum and the Web bibliography, as well as the many monograph series dedicated to museum studies by Blackwell and Routledge fall under this typology (Routledge Research in Museum Studies series; Blackwell's A Companion to Museum Studies (2010)).
experiment that the museum undertakes (and the technological tools it employs) is thought up, deployed, and presented to professional colleagues as a microtopian project not unlike Tiravanija's happenings: limited in time and geography, yet furthering to a certain extent agendas of amelioration, remediation and justice.¹⁵²

At this point in the discussion we have arrived, chronologically, quite close to our own time: looking at the dates in which relevant literature has been published (mostly between 1995 and 2005), the constructivist museum could be said to be the current museum paradigm.¹⁵³ Nonetheless, while the ideological lines that the contemporary museum follows are, up to a certain point, well established; the means (technological and otherwise) the museum has at its disposal for realising such ideology are still evolving and, inevitably, a work in progress. In recent years, the World Wide Web, and the “Web” which is the cultural, social and political activity that the hypertext infrastructure allows for, has become prime ground of exploration and exploitation for numberless cultural agents – not least of them, the museum. This very generic assessment can be, however, fine tuned by stating that, in my opinion, museums have generally embraced a particular understanding of the Web, its features, and possibilities – a paradigm of what the Web is, or should be, that has come to be identified by the name 'Web 2.0'. In the past few years, a substantial body of literature has developed around the relationship between Web 2.0 and the museum, in the form of traditional publications but also as museum blogs: the relationship between the two is well documented, and increasingly museums now have Online Media staff whose job, ultimately, boils down to negotiating use of Web 2.0 tools.¹⁵⁴ This literature is, in nature, professional or illustrative: very little of it seeks to assess the culture-wide theoretical paradigms and ideologies by which museums would embrace specifically Web 2.0, preferring instead to discuss means of deployment, isolate case studies, and narratives of 'best attempts' as implicitly rewarding regardless of outcome.

¹⁵² One could read, for example, the crowdsourcing projects that I discuss in Chapter Three as examples of 'Information Microtopias': circumscribed experiments that, collectively, prefigure a break-through toward a better realisation of museum information systems' true potential.

¹⁵³ Dates are indicative, and extracted by discussions within texts, and observations of the dates in which the texts themselves were published originally (through Google Scholar, Jstor and other reference sites).

¹⁵⁴ The most famous blogs are probably Nina Simon's 'Museum 2.0'; and the site of non-profit organisation 'Museum 3'.

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There is, however, something to be gained by venturing into assessing how the convergence of museum and Web 2.0 might be an expression of, or encouraged by, larger sociological and cultural dynamics – and I would propose the utopian imagination as being one of such underlying key dynamics. In order to develop this line of thinking, I will explore the contemporary utopian imagination as integral to Web 2.0, and the Web in general, much in the same way I have done with regard to museums in the previous section. Once the 'emancipatory utopian' underpinnings of both the museum, and Web 2.0 have come to the fore, we might be able to see that their deep interaction has solid ideological bases, and a fundamental identity of vision.

Web 2.0 and the Rhetoric of Digital Utopia-making

It is fundamental to recognise that, long before the terminology of Web 2.0 even existed, early experiments into what was to become the Web were already underscored by a familiar drive toward amelioration / remediation of current reality; and, more generally, the dynamics that characterise the utopian imagination. A brief excursus of the early history of the Web (and its technological frame, the Internet) should be enough to convincingly prove this point. Accounts of the early days of the Internet's design are abundant, and therefore I have selected two, of different natures: one on hand, 'A History of the Internet' (1997), an article written by some of the very people who worked, in the late Fifties – early Sixties, on the development of the Web, especially Barry Leiner; on the other hand, the previously cited The Internet Imaginaire, an academic text that explicitly connects the early days of the Web with utopian desires, and locates the whole endeavour within the context of a culture-wide 'utopian imaginaire'.

While the terminology did not exist, some (such as Tim-Berners Lee (2006)) would argue that the ideological bases of Web 2.0 were already implicit in the Web since the very beginning. It is important to recognise that, while many have seen the turn to Web 2.0 as a rupture from established paradigms, others have (with good reason) emphasised the continuity between supposed iterations of the Web.
The first glimpse of 'the social interactions that could be enabled through networking' was provided by computer scientist J.R. Licklider in 1962, as he described his concept of a 'galactic network', a global network for data collecting and access.\footnote{Leiner et al (1999). Note how Leiner's quoted words emphasize how, even in the creators' mind, the Internet was intended as a locus for the creation of social interactions, an idea that has generally been depicted as an innovation brought on by the Web 2.0 paradigm.} In parallel, the technology necessary for the realisation of this vision was being developed by MIT researchers Lawrence Roberts and Leonard Kleinrock, who worked on the concept of 'packet switching', a system of subdividing information into small, manageable packets, enabling communication between machines in real time, and the TCP/IP protocol for network communication.\footnote{Although similar research had been undertaken at several institutes around the world, such as the NPL (\url{http://www.npl.co.uk/news/packets-of-data}) and the RAND \url{http://www.rand.org/multimedia/video/2009/10/06/distributed_communications_and_packet_switching.html}.} These concerted efforts led to the first 'prototype' of the Internet, ARPANET, in 1972. The philosophical vision that guided these early efforts, Licklider's in particular, deserves a few more words – if nothing else, in virtue of these early pioneers' quasi-mythological status among Internet historians and technology fans. In a 1960 article titled 'Human-Computer Symbiosis', Licklider describes what he sees as the, back then, future paradigm of man – machine interaction: a 'symbiosis' of sort, in which the two entities would enter a dialogical relationship, through which humans could better achieve the goals they built the machines with; and these, in turn, could become a central part of human culture and society, rather than an unruly, sometimes useless or deleterious mechanical tool.\footnote{For an in-depth analysis of the interesting story of TCP/IP, see Clark, 1988.} What is particularly interesting for us, however, is the underlying paradigm of technological advance and evolution that Licklider's thinking entails; and the vocabulary and rhetoric by which such paradigm is explained and argued for: these aspects will carry on in Licklider's and other's discourses around the early Internet.

One immediately notes how most of Licklider's discussion deals not with the current (1960s) technological state-of-the-art; and, when it does so, it is only as a bridge toward what seems to be Licklider's true intention, the prefiguring of new forms of technology – and subsequently, interactions: Licklider's attention is directed toward what technological developments might the
future bring us, and the new forms of efficiency and harmony such advances entail. This dynamic is expressed both through the arguments brought forward, and the language deployed. Licklider, for example, describes a present state in which both men and machines find themselves struggling to fulfil their respective capabilities for peak efficiency, hindering each other by limited communication: Licklider notes when commenting on his own situation, 'it soon became apparent that the main thing I did was to keep records, and the project would have become an infinite regress... around 85 percent of my “thinking time” was spent getting into a position to think'; while at the same time, for machines 'the course of the computation may be conditional upon results obtained during the computation, but all alternatives must be foreseen in advance (if an unseen alternative arises, the whole process comes to a halt)... however, many problems that can be thought through in advance are very difficult to think through in advance'.

Both on the machine and the human side, Licklider poses a current, less than ideal situation that, according to him, needs to be resolved: in other words, he sets up a present that can be ameliorated, and a situation that needs re-mediation (in this case, both technological and social).

The re-mediation strategy that Licklider proposes is human-computer symbiosis: a system in which the machine and the human actively collaborate by covering for each other's weaknesses – with an eye on quick decision-making, and real-time operation. What seems to me interesting is not as much the specific technological improvements prophesised by Licklider, but the paradigm within which such advances are framed. The critical advances that, according to Licklider, are necessary in order to move toward the next paradigm of computing (and computer-aided communication) are, almost in their entirety, firmly positioned in the future. He states that "Man-computer symbiosis is a subclass of “man-machine systems”. There are many man-machine systems. At present, however, there are no man-computer symbioses', setting out the current

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161 Since, as Licklider himself prefigures, the symbiosis of man and machine would have tangible impacts not only with regard to technologies, but also the kinds of relationships that can be empowered through the technological shift – see, for example, another article by Licklider and Taylor from 1968, in which they discuss the possibility of tele-mediated romance (Manovich (2006) p. 75).
situation that needs to be re-mediated; however, rather than moving into, for example, discussion of facilitators of man-computer symbiosis to be found in the present context, he dives almost immediately into an hypothetical future in which the fault has been remediated, and more: 'Man-computer symbiosis is probably not the ultimate paradigm for complex technological systems. It seems entirely possible that, in due course, electronic or chemical machines might undo the human brain... the 15 [years to develop man-computer symbiosis] may be 10 or 500, but those years should be intellectually the most creative and exciting in the history of mankind'.\textsuperscript{163} Even accounting for some enthusiasm due to dealing with then new, upcoming technologies, encapsulated in Lickider's words we still find the full ideological package of utopia in a technological context: current less-than-ideal conditions versus a future in which such conditions have been resolved through advances in technology and relationships. Furthermore, such ideal state is located into a variably remote future, which we can speculate about, delineate theoretically, and fervently expect. In short, we have what we called the 'emancipatory utopia', in the context of a new, not yet fully 'domesticated' technology's early stages of development – a condition and attitude similar to what Richard Coyne dubbed 'technoromanticism'.\textsuperscript{164,165}

The Internet and, consequently, the Web as a place for emancipatory utopias were soon to be no longer the exclusive domain of techies and developers: between the Sixties and the Seventies, after the Internet reached university campuses across the US, even laymen (or, at least, those who could afford access to and upkeep of the required infrastructure) would begin to tap into the social, and utopian potential that this new communication system afforded.\textsuperscript{166} According to the in-depth analysis set out by Flichy in \textit{The Internet Imaginaire}, some key early experiments in Web

\begin{itemize}
  \item \textsuperscript{163} Licklider (1960) p. 4-5.
  \item \textsuperscript{164} For domestication of technology, see Hetland (2012).
  \item \textsuperscript{165} Coyne (2001). Consider, for example, the following quote: 'many digital narratives are utopian... they give credence to information technology as a means of realizing the Enlightenment project of a world where reason holds sway over unreason... people are free, equal and in harmony.' (p.26).
  \item \textsuperscript{166} In fact, most of the early Internet nodes, from which all other originated, were set up in order to connect tech labs in different university campuses: for example, the first application of packet-switching technology was between UCLA Santa Barbara and the University of Utah; the World Wide Web as a set of protocols for communication was mostly the work of the MIT's Laboratory for Computer Science (Leiner (1997)).
\end{itemize}

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communities were explicitly the work of individuals who, disgruntled by the growing institutionalisation and technocratism of ongoing research, 'dropped out' and sought to explore the Web's possibilities for sociality and community-building; often with a local, countercultural, and explicitly utopian bend – '[the] computer can change your life for the better'. An early example is Lee Felsenstein's Community Memory project, a sort of two-machine timeshare system, located in a public place and used by Berkely locals as a digital message board / trading post / gathering spot. The project ended after just about a year, yet the underlying concept, that computers could foster amicability and ameliorate communities, proved enduring. Flichy suggests that this early experiment was markedly utopian in nature: 'Yet Community Memory and Felsenstein's projects should be seen not as the matrix of community network computing, but rather as the sign of a utopia embodied in fledgling techniques in the mid-1970s on the fringes of the university world'. Community Memory and similar projects are not the places in which the Internet as an infrastructure was born, as the investments and manpower required ensured that technological development of the global network sat fair and square within university labs: yet the alternative, counterculture-fuelled, emancipatory utopian ideology that underpinned these projects would prove enduring on a philosophical basis, perhaps even more than Flichy gives it credit for.

Other attempts at 're-mediating the community' through the Web were even more unabashedly utopian than Community Memory: the Well, a 1985 online community board (similar to Usenet) designed by counterculture dropouts Stewart Brand and Larry Brilliant, and sponsored by key technology pundits such as Licklider and Rheingold, presented itself explicitly as better than traditional communities, as it allowed for instant communication between people with shared interests, in a 'living, breathing collaboration'; all this with the aim of building a 'new public sphere' where information could be shared freely and unedited. These, and other early experiments in

170 Flichy more than emphasises the shortcoming that necessarily plagued these homegrown projects: see, for example, his assessment of another short-lived experiment, CommuniTree (p.70).
utopian online community building set out a very powerful ideology for the Web to come: that it could be a place where the social and communicative injustices, inequalities, limitations and contradictions of the 'real world' (in all its typologies and sub-categories) could be remediated, and the global 'information utopia' of freedom, uncensored communication and relations within shared interest communities could be realised – in Flichy's analysis, 'the idea of a virtual group in which everyone expresses themselves equally still dominates... the utopia has thus become and ideology partly masking the reality but also mobilizing actors'. Recognising the early birth of this ideology also reinforces Berners-Lee's claim that the Web as a cultural space was meant to be social, interactive and 'grassroots' since its very beginning, long before the much-flaunted, currently dominant paradigm that is Web 2.0 emerged. One of the main difficulties in addressing Web 2.0 is the inherent difficulty of providing an univocal definition of what it actually is: even in 2013, as we are moving toward articulation of Web 3.0 and the Semantic Web, debate still rages about what constitutes Web 2.0 and what is accessory, irrelevant, or relegated to the now obsolete Web 1.0. If one thing can be said with some certainty, however, it is that – much like any early iteration of the Web – Web 2.0 is not only about a technological leap, or a formal change in hardware or software; rather, a meaningful definition has to take into account the (supposedly) new forms of sociality, community – making, production and consumption that, according to its proponents, the Web 2.0 finally affords us.

The 'Web 2.0' term itself originated, to some measure, as a marketing tool: it was coined as the catch-term for the 2004 Web 2.0 Summit conference, an invitation-only event sponsored by digital pundits Tim O'Reilly and John Battelle for members of the Internet industry. In 2005 O'Reilly presented what is generally considered the document that, according to its enthusiasts, defines the key traits of Web 2.0 – the aptly titled article 'What is Web 2.0?' (2005). A few years

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174 For background on the emerging Semantic Web, see the W3C Consortium Web page: http://www.w3.org/standards/semanticweb/
175 Conference Website is at http://www.web2summit.com/web2011/public/content/about. Currently, the latest conference was held in 2011.
later, a follow-up was published, ‘Web Squared: Web 2.0 Five Years On’ (2009). These two texts set out not only the technologies, but also the social paradigm that, in theory, Web 2.0 both encourages and is a product of. Following description of this paradigm's characteristics, I will specifically draw relationships between elements of O'Reilly's vision of Web 2.0, and elements of contemporary emancipatory utopia as we discussed them in the previous sections of the chapter.

O'Reilly immediately frames both the identity of Web 1.0, and the subsequent transition into Web 2.0, as a matter of remediation - by way of an analysis of technological shifts, in which certain software and platforms are pitted against each other as representative either of Web 1.0, or Web 2.0. Here is a summary, with some of O'Reilly's at times excessively PR-like language preserved where necessary for the unpacking of implicit rhetoric:

- From the Web as a product to the Web as a service. By comparing Web browser Netscape's production model, heavily based on delivery of an in-house designed product to customers at a high cost; and Google as a Web-native application that, rather than offering a marketable product, offers a continuously improving 'middle-man' service, we can see that Web 2.0 brings to the table a wholly new production and marketing model: delivery of a continuously improving, 'perpetual beta' platform that increases in power the more it is used and distributed; versus top-down, industry-like commercialisation of a packaged product. Web 2.0 delivery of expandable platforms re-mediates Web 1.0's focus on 'old-style' manufacture-like software cycles.

- Centralisation versus decentralised diffusion. Unlike Web 1.0 content delivery platforms such as Akamai, that largely deal with centralised trading from and toward big sites, Web 2.0 delivery systems such as BitTorrent decentralise delivery by making every user a node in the delivery system: the more a file is requested, the more nodes will be able to share it, and in turn 'the service automatically gets better the more people use it'.

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176 O'Reilly (2005) p. 3-4, 10.
177 O'Reilly (2005) p. 5.
this sense, Web 2.0 platforms can be said to remediate inequalities in services provision.

- Big websites versus 'the long tail'. Web 2.0 brought an awareness that, beyond the standards set out by big-business, advertisement-driven web sites (i.e. DoubleClick's sponsors), a sizeable portion of the Web's collective database and agency is made up by a numerically vast conglomerate of small, sometime personal sites: the 'long tail', 'the collective power of the small sites that make up the bulk of the web's content'. Web 2.0's remediation of previous forms of Web dynamics extends, therefore, to a sort of metaphorical 'social justice', in which the grassroots of the Web is acknowledged as the true foundation of digital space as a whole.

At the basis of the Web 2.0 paradigm is the basic realisation that the Web is, overall, a much more dynamic and, in some ways, organically-structured entity than Web 1.0's paradigm accounted for: it possesses a 'collective intelligence' that (to some measure) grows inordinately and organically, is in continuous expansion, and can be harnessed for the most disparate means – from data gathering to small-scale funding of personal projects (as in the case, for example, of Kickstarter). Some technologies have been key in empowering this new understanding: Peer-to-peer networking, in which hierarchical top-down structures make way for a cloud-like architecture, where nodes for content production and delivery are on the same hierarchical level, and ever-expanding; RSS feeds, which allow for immediate collation and delivery of information, realising Licklider's dream of an information technology not limited by the constraints of asynchronous communication – a 'live web'; and, most of all, the blog as the ubiquitous Web 2.0 platform. Structured in time-organised and retrievable permalinks, porous to comments and compatible with RSS feeds, the collectivity of blogs known as the 'blogosphere' has become (according to its enthusiasts) the kind of 'electronic equivalent to the French salons during the Enlightenment period'

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178 O'Reilly (2005) p. 4.
179 It should be noted that O'Reilly does not dig into the most radical consequences of Web 2.0 as a paradigm for political empowerment, social justice and democracy – while implicit in the picture he paints of Web 2.0's underlying dynamics, his focus is firmly on business and technology.
180 See Licklider (1960) p.1; O'Reilly, p. 6.
that The Well's founders looked forward to.$^{181}$

O'Reilly's updated take on Web 2.0, 'Web Squared', further introduces the element, latent yet not dominant into the 2005 article, of ever-expectancy for the future. According to his 2009 article, the widespread acceptance of the 2.0 paradigm has unveiled the Web's hidden power as an agent of amelioration, since 'with more users and sensors feeding more applications and platforms, developers are able to tackle serious real-world problems' – citing, among many, the role that social media played in the Arab Spring, along with more routine issues such as identification of wine bottles.$^{182}$ In the same rhetorical vein that we have seen in Licklider, however, the best is yet to come: 'if we are going to solve the world's most pressing problems, we must put the power of the web to work – its technologies, its business models, and perhaps most importantly, its philosophies of openness, collective intelligence, and transparency. And to do that, we must take the Web to another level. We can't afford incremental evolution anymore'.$^{183}$ The utopian project set out for the future of the Web is clear and urgent: it is the remediation of social, cultural and economical disparities through embracing of an unprecedented technological breakthrough, having as a setting the most creative and exciting times in the history of mankind.$^{184}$

The notion of Web 2.0 has not been immune to criticism, usually along two vectors: those who deny that Web 2.0 is in itself a new paradigm; and those who see as exaggerated, inconsistent or plain dangerous the promises of social justice through technological utopias that it affords. Both lines of criticism share a perception that the hype around Web 2.0, rather than the constituting elements of the paradigm itself, is to be challenged. Sometimes positions overlap: the already mentioned Tim Berners-Lee, for example, has criticised Web 2.0 both as being a rhetorical exercise, another name for what the Web has been (or has tried to be) all along, while also downplaying the usefulness of Web 2.0's attention toward tagging – preferring instead the ontology driven structures

$^{181}$ Flichy (2007) p. 73.
$^{183}$ O'Reilly (2009) p. 10.
$^{184}$ See note 125.
that are characteristic of the Semantic Web. In an article written for Wired just months after O'Reilly Media unveiled Web 2.0 to the whole world, web blogger and commentator Xeni Jardin points out how even this new iteration of the Web has not evaded risks of unreliability, amateurishness and encouragement of antisocial behaviour: 'every Internet movement popular enough to generate buzz also generates a backlash', and so the very user-centred philosophy that shapes Web 2.0 as a new participatory paradigm also allows for poor quality content, amateurish design and dubious practice to become exploitable, and sometimes even remunerative (as in the case of exploiting Google's PageRank), rather than conductive to collective improvement.

Criticism of Web 2.0 as a sort of 'cult of the amateur' has been taken up my many commentators: author and digital pundit Corey Doctorow, long before Web 2.0 was even articulated as such, harshly criticises one of the basic empowering technologies underlying Web 2.0 – metadata – as, essentially, little more than wishful thinking: 'if everyone would... create good metadata for the purposes of describing their goods, services and information it would be a trivial matter to search the Internet for highly qualified, context-sensitive results... a world of exhaustive, reliable metadata would be a utopia. It's also a pipe-dream, founded on self-delusion, nerd hubris and hysterically inflated market opportunities.' While O'Reilly's 'harnessing of collective intelligence' seems to imply a sort of evolutionary 'weeding of the weakest', in which only consistently good material and information is allowed to persist or survive, Doctorow argues that such an assumption runs counter all we know about human beings themselves: they are liars, lazy, stupid, and easily won over by the easiest route – so that the 'ideal user' the collective intellect requires becomes, essentially, an impossibility.

Somewhat paradoxically, the very renewed attention toward information produced and

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185 For the first item, see Berners-Lee (2006); for the second item, see Shadbolt, Hall and Berners-Lee (2006), page 100 in particular.
187 Metadata is 'data about data': like the tags of a blog post, it allows for identification, grouping and retrieval of specific information, in relation to similar items. It is, essentially, the collective 'produce' of O'Reilly's 'collective intelligence'.
consumed by 'the common people', as implied by Web 2.0, ends up as a possible obstacle to the emergence of a truly intelligent collective. One of the most well-know, and critical takes on 'the cult of the amateur' in Web 2.0 and social media comes from media pundit Andrew Keen: in his aptly titled 2007 book The Cult of the Amateur, Keen states polemically that the Web 2.0's vivid celebration of user-generated content, mashups, pirated goods and grass-root Web culture is displacing established, professionally authoritative figures and business models (from music labels, through journalism, to education), but at the same time failing to provide the same level of quality, consistency and enduring legacy older models guaranteed: the social Web is a 'cult of the amateur' in the worst of possible ways, a fostering of all the failings and flaws of non-professional content production, combined with a progressive erosion of established cultural gatekeepers that have guaranteed, so far, that what we got was in line with widely accepted cultural standards of quality.\textsuperscript{190} Keen's vocal criticism has been challenged by some, but is also not isolated.\textsuperscript{191} Another noted challenger of Web 2.0, Nicholas Carr, pushes criticism of the digital paradigm even further, contending that 'all the things that Web 2.0 represents – participation, collectivism, virtual community, amateurism – become unarguably good things, things to be nurtured and applauded, emblems of progress toward a more enlightened state. But is it really so?'.\textsuperscript{192} Carr specifically challenges what he sees as the morally-inflected, pseudo-spiritual, quasi- New Age 'millenialist rhetoric' that plagues positive appraisal of Web 2.0 technology, contending instead that (like all technology) the social Web is inherently amoral, and not teleologically tending toward further human enlightenment, like pundits would want us to believe: 'The Internet had transformed many things, but it had not transformed us. We were the same as ever'.\textsuperscript{193}

Overall, I think it could be assessed that, while proponents of Web 2.0 pose this iteration of the Web as inherently utopian (since it technologically and morally empowers humanity in a

\begin{itemize}
\item \textsuperscript{190} Keen (2007).
\item \textsuperscript{191} See, for example, Hoechsmann (2008).
\item \textsuperscript{192} Carr (2005).
\item \textsuperscript{193} Carr (2005).
\end{itemize}
progressive, cumulative quest toward a 'better life' in which various contradictions and flaws of our current state are potentially ameliorated and remediated) critics tend to underscore the inherent amorality of technology, its functional rather than ontological properties, and to emphasise that Web 2.0, like any other technological paradigm, is vulnerable to exploitation and hegemonic control. While both sides do bring forward valid points that, in addition, can be read as broadly articulating utopian and anti-utopian positions (or, to rehearse Hetland's terminology, 'control' positions), it is important to resist reading specific adoptions of Web 2.0 as unequivocal expression of either positions. Rather than assessing if Web 2.0 is, in fact, wholly utopian or dystopian, it is more important to acknowledge that, in spite of the paradigm's contentious identity, it still has been *de facto* adopted as the new standard not only for Web communication, but for cultural communication in general by a variety of cultural agents: the rhetoric of participation, collectivism, community and grass-root production has become, to a sizeable extent, the rhetoric of Western public culture in the 21st century. The next section of the chapter will further elaborate on this statement, arguing that the contemporary 'constructivist museum' described in the previous section has, with some ambiguity and contradiction, overall adopted the rhetoric of Web 2.0 as its guiding paradigm in the 'colonisation', so to speak, of the Web as an unrenounceable 21st century cultural arena.

**Web 2.0 and the Online Museum as Digital Emancipatory Utopia**

As mentioned in a previous section of the chapter, the defining characteristic of the contemporary museum as a different agent than its historical predecessors is the great emphasis that it puts on the construction, dissemination and archiving of teachable knowledge and information over objects. The contemporary, or 'constructivist' museum envisions a very specific, layered and quickly evolving audience as a target and collaborator in its educational efforts, dismissing an

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194 Hetland (2012).
abstract 'nation' or 'public'; this programmatic attention toward the parallel education of several kinds of visitors is supported by a specialised, professional structure that increasingly involves and influences several other areas of museum activity, from curatorships to sales and advertisement. Museum knowledge (both as a process and as a deliverable content) is increasingly seen as constructed and augmented by interaction, involvement and engagement of museum visitors, who are then articulated as cultural agents in their own right – with a necessary reassessment of responsibilities and expertise. The museum becomes, therefore, increasingly implicated in the larger cultural milieu beyond its walls, seeking to adopt new and upcoming social spaces as avenue for education and, generally speaking, fulfilment of the ongoing basic mandate of the museum – social and cultural amelioration / remediation.

The process is rarely effortless, or automatic: in the words of Web museum pundit Jennifer Trant, 'what we can't yet see – through ourselves or our audiences – is how limiting the tunnels are in which we are trapped. There is a world beyond our museums, from which our collections come, and in our collections participate freely. People use collections images and informations in activities we have not imagined and cannot control. To some this jailbreak of data is terrifying.' The context, the 'world beyond' to which Trant's quote refers, is the Web, which she rightly understands as 'a social space and not a broadcast medium'. While this series of museum acknowledgements could be, I would argue, easily abstracted into a discourse that involves the relationship between museums and any and all emerging social contexts (such as, for example, the multiplicity of urban areas; public spaces as social contexts; and so on), the easily experienced all-encompassing nature of the Web itself as a social context makes particularly relevant any analysis of the ways in which the contemporary museum's explicitly and (most important) implicitly educational efforts construct a relationship between the museum and the Web as a social space.

For background on these items, see again Hein (1999 and 2006).

Trant (2010).

Trant (2010).

See, for more on the matter of the museum's reach to other 'sites', Kwon (2004).
I would argue that, overall, any analysis of the relationship between the contemporary (late 90s – 2000s) museum and the Web as a social space translates, inevitably, into a study of the relationship between the museum and the specificities of Web 2.0 as the 'new Web'. Support for this statement comes from the pervasiveness and importance that the Web 2.0 paradigm holds in virtually every contemporary discussion of the Web in general: we have looked at some in the previous section of the chapter, but generally mentions and commentary on Web 2.0 on the Web is too pervasive to make any listing meaningful.\footnote{An example: in 2006 'Web 2.0' was the most-cited Wikipedia entry of the year, closely followed by other Web 2.0-specific items such as 'Wiki', 'RSS', 'Blog' and 'Meme' (Nielsen BuzzMetrics 2006).} When it comes to seeking clues to the pervasiveness of the Web 2.0 paradigm in the contemporary museum on the Web, there are many quantitative or anecdotal pointers we can turn to: 'Web 2.0' has been used more times as a keyword than any other Web-related term in papers presented at Museum and the Web conference (43 times as of 2012 proceedings); one of the most popular blogs on digital museum practice is Nina Simon's 'Museum 2.0'; Google search results that include both 'museum' and 'Web 2.0' number around 44 million. Far more solid, however, than anecdotal references, or quantitative analysis in a context (the World Wide Web) in which any statistic is bound to be inaccurate, the critical importance of the Web 2.0 paradigm to the contemporary digital museum can be safely assessed when examining their relationship from a theoretical point of view: that is, looking through existing literature, as well as primary sources, for points of contact, integration and mutual sustaining between the ideologies that support the contemporary museum's agency, and the Web 2.0 as the currently dominant online paradigm.

One problem that has, so far, limited our deep understanding of the engagement between the museum and the Web is the relative uniformity of approaches that analysis of the topic has taken. Overall, it is professional in origin, scope and target audiences; it is limited in self-reflexivity and meditation on previous practices, instead producing discussions that provide rationale for the diffusion and deployment of recent, successful 'one-off' models; it does not attempt to read the Web
nor the museum according to theoretical paradigms or strategies, even when this would be beneficial or even necessary, and tends to not evoke others' research, be it from within museums or otherwise; and it usually does not seek to read the museum-Web relationship as an expression of larger, culture-wide concerns and trends.

While these discussions surely have their function, I think further insight can be gained by engaging the contemporary museum and Web 2.0 through the well-established academic strategies of theoretical discussion according to dominant ideologies; structural framing; and close reading / analysis of primary sources – all the while fitting the two items, and their intersection points into wider, well researched cultural paradigms. I will use the discussion on 'utopia', that has been the focus of the chapter so far, as an entry point. I will try to show that the systematic adoption of the Web 2.0 paradigm by the museum responds to an ideological consonance between the two contexts: just as the rhetoric of Web 2.0 pushes forward an agenda of technological remediation and amelioration through collective praxis and the expectation of a more perfected social and cultural condition to be achieved in the near future; so the contemporary museum engages the Web as an avenue in which its revised, yet ongoing, mandate of social remediation, amelioration and alternative world-building can be justified, reconnected with larger cultural activities / agencies / concerns, and revitalised. The meeting of the contemporary museum and Web 2.0 is, essentially, the meeting of two 'emancipatory utopian' projects, feeding off each other. After an introductory review of available literature and overarching ideas, I will focus on one of the loci in which this 'meeting of utopias' emerges at its clearest – media strategies.

In an article written in 2006 for a professional museum publication, the National Association for Museum Exhibition's *Exhibitionist*, digital museum professional Jim Spadaccini falls short of defining as explicitly utopian the convergence between Web 2.0 and the contemporary museum, yet unpacks to a substantial degree the rhetoric and ideology that inevitably binds the two by discussing them in parallel.200 Museum and Web 2.0 is framed as a re-assessment and celebration of another

seminal article on the digital museum, digital designer Dan Tomberlin's 'A Hitchhiker's Guide to Virtual Museums'. Written in 1996, in the midst of the 'headline grabbing, Internet gold rush of the 90s', Tomberlin's article offers a cautious, yet overall eager assessment of the convergence between the museum and the not-yet-2.0 Web: 'Everyone wants to be a part of the World Wide Web's success, including museums. Any museum, large or small, with a new computer, scanner and modem can copy a little HTML code, digitize a few images, zap in a few hyperlinks, and create a home page'.

Quoting appreciatively from Jamie McKenzie, according to Tomberlin 'the World Wide Web makes possible a powerful new kind of student centred, constructivist learning by collecting at a single site a phenomenal array of learning resources which can be explored with simple point-and-click skills'. While Web 2.0-specific concerns (community, interaction, collective grass-root engagement, remixing and prosuming) are still absent, in Tomberlin's discussion there is a wealth of points that resonate with both the theory of the constructivist museum, and the ideology of emancipatory utopia: the description of a cultural and social breakthrough achieved through incremental technologies; emphasis on how technologically-empowered new practices ameliorate the near present, and re-mediate present shortcomings; enthusiasm for the present state, as a stepping stone toward further perfected future developments. This final point is particularly strong in Tomberlin. He marvels, while 'lost in cyberspace', at what has been achieved so far by the variety of virtual museums he visits, still he wonders if what is within reach so far is but little of the total potential: 'When I began, I expected to be able to virtually walk through a three-dimensional space. I discovered 'museum' and 'exhibit' mean something quite different on the Web...'; 'But I was hoping to find more. I wanted to find sites that would display something that would communicate a sense of space, a slide show of the exhibits perhaps.' Tomberlin's peek into the pre-Web 2.0 online museum seems, therefore, to show an

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201 Tomberlin (2006) p. 31 and 35.
203 Prosumers: consumers that are interested in the product, to the point that they actively participate in its creation. See Toffler (1980).
already well developed sense of the context's utopian potential, and shortcomings.

Ten years later, Spadaccini has the instruments and historical perspective to pick up Tomberlin's experiment, with the added knowledge of the transition between Web 1.0 and Web 2.0, 'seen by many as the second phase of development for the World Wide Web', all this while 'the enthusiasm that the “Hitchhiker's Guide to the Virtual Museum” article captured back in 1996 is emerging once again'. Spadaccini explores the technology-driven character of the social and cultural change brought on by Web 2.0 by breaking down and discussing, in more depth than Tomberlin did, the empowering reach of different Web 2.0 technologies: in the museum context too, it is 'the rise of blogs, wikis, community sites, podcasts and other decentralized and democratizing technologies [that] characterises this new era'. Overall Spadaccini is, compared to Tomberlin, also more ambivalent and less 'technoromantic' when it comes to actually assessing the quality of the museum's engagement with Web 2.0. He acknowledges that the latest iteration of the Web is indeed a paradigm that many museums are buying into, yet he also consistently wonders if this engagement actually leads to worthwhile content, citing the concerns of figures we have already encountered (such as Carr). He is, however, overall hopeful for the future of the museum-Web 2.0 relationship: 'In total, these support networks [AAM and ASTC] and the deeply rooted knowledge that museum and museum professionals now possess, mean that implementation of Web 2.0 technologies is likely to be a smoother and better informed process than the scramble to create and post Web sites in the mid-1990s'. In spite of differences in attitude (and different degrees of enthusiasm), both Tomberlin's and, ten years later, Spadaccini's discussions seem to emphasise that the museum is inextricably committed to the ideologies that underpin the Web (2.0 or previous) as an operative context; and that such a biunivocal system is, at least to a significant extent, sustained by the utopian paradigm / implications within both systems.

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207 Term, again, comes from Coyne (2001).
Kevin Sumption of the Powerhouse Museum (an institution with a longer history of digital engagement than most other museums of science or otherwise) goes a step further and, in a 2006 article, coins the term *ubiquitous museum* in order to describe his Web technology-empowered, utopian vision of what the museum would become in the future.\(^{210}\) A concern of the author seems to be the configuration of such a 'ubiquitous museum' as essentially a succession of 're-mediations': once technology has made the museum 'virtual' and 'online', resolving some issues yet generating others, the task of museum professionals is to reconcile this new museum ontology with an established tradition of the museum as place, 're-connecting physical and virtual domains'.\(^{211}\) This re-mediation is, as in cases described previously, heavily influenced by emancipatory utopian notions of amelioration, ever-expectancy, and a technoromantic slant.

According to Sumption, and echoing our discussion on the origins of the museum institution, in order to fully appreciate the contemporary museum's technological innovations and colonisation of the digital one has to take into account the institution's history (in particular since WWII), and its tradition of enduring mandate and legacy, coupled with a progressive breakaway from hegemonic paradigms of the museum as a place of heritage collection and preservation.\(^{212}\) We are now at a critical juncture in the history of the museum: the enthusiasm of early adoption that, in the course of the Nineties, has led many museums to 'str[1]ve to reach beyond their walls, to infiltrate our homes, classrooms and workspaces' as an intangible and virtual presence, now makes room for a more nuanced conceptualisation, in which the physical and the virtual museum collaborate in order to offer a holistic, ecumenical experience: the *ubiquitous museum*, the museum that exists and extends both online and offline.\(^{213}\) Sumption's statements are heavily buttressed with the rhetorical hallmarks of technologically empowered emancipatory utopia that we have already diagnosed in other writers in the field, with the added enthusiastic emphasis likely due to the

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\(^{210}\) Sumption (2007).

\(^{211}\) Sumption (2007).

\(^{212}\) Sumption (2007). Sumption emphasises the impact that the diffusion and availability of popular media, and the parallel evolution of the public's tastes and interests has had on the museum's movement from artefacts collections, toward the crafting of education and experiences. This topic will be further explored in the next chapter.

\(^{213}\) Sumption (2007).
context the material was presented in.\textsuperscript{214} In order to demonstrate this point, let us consider more in detail the progression of Sumption's argument. He have arrived at the point where Sumption diagnoses a divide in our current understanding of the museum – that is to say, he identifies a need for re-mediation:

'However, at this particular moment in the history of museums and the Web, I fear we have created a divide – a separation of physical and on-line domains – which only now we are beginning to bridge... we have been waiting on the maturing of a number of key affordance technologies. As is shown here at Museum and the Web, a range of new technologies and techniques is facilitating a re-integration of these domains. From this is emerging a new hybrid museum experience, a ubiquitous place where face-to-face and automated interactivity sit side by side.'\textsuperscript{215}

By now, the rhetorical strategies deployed by Sumption, not to mention some of the vocabulary used, should be familiar to us. He poses the temporal frame ('this particular moment') that needs to be remediated as current and topical, and in parallel configures a current situation that, while in itself the outcome of a previous re-mediation (i.e., the move from the museum as collector to the museum as outreaching educator), can and should still be perfected – the present is assessed as a function of the future. A privileged place in this process of re-mediation is reserved for technology, articulated as the protean, ever-evolving \textit{sine qua non} for the utopian condition; furthermore, the technologies that Sumption addresses mainly consist of Web platforms that conjugate the Web 2.0 dictates of participation, co-creation and real time interaction, with contents and activities that put to the forefront the educational mission of the museum – among them, RSS technologies for personalised interaction; and real-time wireless communication. In final instance,

\textsuperscript{214} The 'Museum and the Web' conference has become, in time, as much of a gathering between technology professionals as a sort of soapbox for the resilience and survival of the museum's relevance within the digital domain, offering technical writing as much as calls to action and manifestos: see, for example, Jennifer Trant's yearly introductions to the conference. In many ways, this convergence of descriptively informative and rhetorically declamatory writing is typical of the digital technologies field: it is, for example, the same register 'digital pundits' such as O'Reilly (2005) work with.

\textsuperscript{215} Sumption (2007).
according to Sumption's markedly techno-utopian position, 'When switched on, future ubiquitous museums should, as Foucault intended, be able to function as comprehensive archives of material culture, capable of operating in all places at all times... these hybrid institutions may in future be capable of simultaneously receiving, re-composing and transmitting cultural messages... determined by and large by our visitor's needs, likes and dislikes. In essence, tomorrow's ubiquitous museum would be less a place than a set of transitory ideas... a knowledge eco-system.\textsuperscript{216} Far more than the feasibility, or the concrete appeal of Sumption's fancy vision of the museum of the future, which is most definitely still ways off and might or might not end up becoming a reality, what should concern us is the current paradigm that the language and register deployed imply.\textsuperscript{217} What is configured is, following one or more stages of remediation, the eventual reaching of a (likely theoretical) utopian condition of no further re-mediation needed for the museum – a progression prefigured through a linguistic projection toward the future, technoromantic jargon, and a highly speculative tone.

Essentially, what we should recognise is that the kind of discourse that Tomberlin, Spadaccini, Sumption and many others embrace is not only a technical, descriptive analysis of current and future trends in the interfacing between museums and the Web; it is, at least as much, a rhetorical exercise in utopian world-making, ameliorative re-imagining of the museum as a long-standing communicative / educational medium, and re-mediation of the institution in light of current technologies, and those yet to come.\textsuperscript{218} In order to finally elucidate this basic, yet fundamental concept further, I will now focus in detail and provide a sample analysis of an interesting typology of museum-related writing – the 'online strategy'.

\textsuperscript{216} Sumption (2007).
\textsuperscript{217} General trends in Internet studies do point toward the continuum – like integration of the physical and the local with the digital and the virtual as a significant emerging paradigm: see, to this regard, the introductory chapters in Postill (2011).
\textsuperscript{218} 'Questo nuovo rapporto [museum and Web 2.0]che ha le sue radici piu profonde proprio nell’ampia adozione di tutte le piattaforme tecnologiche oggi in uso, tipiche del web 2.0, consente anche una reinterpretazione del significato stesso di cultural value.' (Bonacini (2012)).
Museum Online Strategy

As discussed previously, according to Hein's analysis of the emergence of education as a core mandate within the museum in the past sixty-seven years or so, an important trend that is still ongoing is the progressive diversification and specialisation of museum activities and politics, leading to the subdivision and assignment of specific tasks to specifically appointed and trained professionals where previously they were carried on by generalist figures; for example, education as the core task of a 'department of education' within each constructivist museum. The implication seems to be that it is technological advancement (in the widest sense of the term, above and beyond but also including technological instrumentation) that encourages this progressive subdivision of tasks: as a new technological paradigm emerges (for example, constructivist learning), a body of professionals skilled in such technologies is hired by the museum in order to 'domesticate' it, both practically and formally.

To this regard, the Web 2.0 museum is no exception. While some certainly pre-date Web 2.0 itself (as the long history of conferences and interest groups such as ICHIM, MATW and others would suggest), most 'digital media departments' within museums have seen their relevance and scope increase dramatically once the museum began to harness the advantages that Web 2.0 afforded when it came to constructivist education – an increase that also moved these departments' concerns beyond data analysis and storage, into technologically-empowered outreach. In the process of developing and fulfilling their new and ongoing mandates, these institutional departments have produced a massive array of documentation, wildly disparate in topic, scope, language / jargon / register employed, and intended audience, most of which can be found archived.

220 There doesn't seem to be an universally agreed nomenclature for such departments: even when tasks are largely similar, they go under an array of names – 'digital media departments' (Metropolitan Museum of Art), 'department of new media' (National Museum of American History), 'digital engagement & technology' (Brooklyn Museum) and so on. Moreover, these departments tend to invariably be tasked with Web 2.0 empowered outreach, even when their name does not include Web 2.0, the Web, or the digital. There seems to be a preference for the use of the term 'strategy', which might underline the programmatic intent that some of these documents entail.
221 For a detailed account of these early stages of the digital museum, see Parry (2007).
in various sections of each museum's website, according to the material's intended audience; posted in an array of dedicated museum news blogs; and collected in the bibliographies of the conferences where it is presented. Unlike the documentation produced by the museum historically, in the 1800s up to WWII, this kind of contemporary museum documentation is only occasionally the object of reflexive analysis: this is most likely due to a variety of factors, including the ephemerality of much of this content; the abundant and largely disorganised nature of the repositories that contain it; the lack of historical distance, with relative inability to fully assess the material's implications as both a product of, and a catalyst for museum practices; and the relatively young age of many online media departments, leading to more energies being spent for innovation and production of ideas and projects rather than on structured, reflexive analysis.222223

It does seem to me, however, that there is much to be gained from an analysis of these bodies of writing produced by a synergy of departments within museums, especially if the findings can be used to further anchor practice within solid theoretical and philosophical frameworks, something which currently rarely happens. We are presented though with a problem of approach, as the multifariousness of the material threatens to disintegrate any attempt at a schematic, survey-like analysis. One possible approach is to analyse a subset of such museum-produced literature through the lens of an overarching concern or paradigm: not only this provides us with a useful thematic pivot around which to organise ideas and materials; but also, it configures a practice of analysis of museum trends according to theoretical, philosophical, widely cultural structures that I have sponsored so far. In our case I will be looking at the writing of, and about, 'online media strategies', which I interpret as multiple in their aims and scope: not only they function as professional communication between practitioners in the field of the digital museum; but also, more outwardly, they can be read as 'digital manifestos' that rationalise and justify the contemporary museum's

222 See, to this regard, Parry (2007) p. 11.
223 See, for example, the call to action (with subsequent re-assessment two years later), to 'stop thinking and start doing' by Kelly (2007).
adoption of the instruments and, most of all, ideology of Web 2.0 for emancipatory utopian ends. Following a basic discussion of what 'online media strategies' are, their rationale, and what has been written with regard to their conception, deployment and usefulness, I will focus on one paramount example, 'Smithsonian Institution Web and New Media Strategy'. I aim to show how the language, register and tone used in this exemplary media strategy fully espouse the emancipatory utopian rhetoric of Web 2.0, and uses it as a vessel for the contemporary, constructivist museum's own utopian project. It should be noted that my textual analysis will be exclusively qualitative: my 'reading between the lines' is a strategy that aims to complicate the text, and show how seemingly innocent (but not neutral) language disguises, in the end, a specific cultural /social / political project on the museum's side – an utopian one, in final analysis.

In spite of the relative rarity with which museum online media strategies coalesce into documents featuring the level of rhetorical involvement that 'Smithsonian Institution Web and New Media Strategy' displays, there is abundant work being done in the museum field with regard to museum's online media strategies – in particular, ways to develop them as an aid to daily museum practice. While not properly such a strategy in its own right, since it does not address beyond a few lines the needs and, especially, the 'mindset' of one specific institution (and therefore can be said to embody a different kind of 'voice', a concept we will return to later), a good place to start for an overview is the yearly 'Horizon Report: Museum Edition', produced and published by New Media Consortium (the most recent edition being 2012). The Horizon Report is 'a research effort established in 2002 that identifies and describes emerging technologies likely to have a large impact over the coming five years... in education and interpretation within the museum environment'.

This document embodies the trends in discussing the contemporary digital museum that we have identified in previous sources. It sets off with the iterative aspect of technologies as a solid

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224 In varied measure, of course. As I will describe, not all online media strategies take the form of a single, manifesto-like document; and, when they do, they not always display the same level of rhetorical involvement and partisanism. Also the level of 'outwardness' varies, with some thinking and writing not meant to address non-museum staff. 'Tate Online Strategy 2010-2012' should be taken as a broadly representative, yet in some ways exceptional case.

225 Johnson et al. (2012).

226 Johnson et al. (2012) p.3.
starting point: in the 2012 edition, six key technologies are identified, and put on a sort of 'timeline' of perspective importance (near term horizon; mid term horizon; and far term horizon) that exists fully in the future: the techno-utopian instruments of re-mediation and emancipation from 'issues that transcend regional boundaries' are laid out and prefigured above and beyond the current milieu – even the various examples of current deployment that the report lists do not seem to be presented as expressions of current practices, but rather as emergent outliers that embody 'expectancy' of when such emerging technologies will become commonplace. The structure of the report follows the pacing of re-mediation: museum technologies and practices are quite clearly situated as responses to 'challenges' that the museum is facing in its struggle to keep up with technology – the need for a 'comprehensive digital strategy'; chronic lack of funding; lack of professional training and support; lack of understanding from institutional powers; and the realisation that 'content production has failed to keep up with technology in an era when audiences expect to consume information whenever and wherever they want'. The strong language of this last utterance is telling: by identifying challenges, which essentially boils down to a list of current failures, we can identify 'remediable' and, technologically speaking, 're-mediable' moments. The report's language and jargon is, generally, in line with the tendency toward technoromanticism, future expectancy and desire for utopia that we have seen previously as proper of the museum, and Web 2.0. For example, it is stated that 'augmented reality can help museums accomplish one of their most fundamental purposes: helping visitors see the world around them in new ways', which is to say that the visitor's lack in awareness and consciousness can be technologically remediated, emancipating her from ignorance and leading toward enlightenment. The quasi-New Age language used belies the revitalisation, through technological means, of the museum's mandate for cultural and ethical amelioration of its public. Generally speaking, the whole document exists in a 'hypothetical future' in which - through technological re-mediation - access to a new 'event horizon', a

227 Johnson et al. (2012) p. 3.
228 Johnson et al. (2012) p. 10.
229 Which is, again, a common trait in discussions of digital technologies. See Carr (2005).
paradigmatic step into a better future in which current educational, cultural and social shortcomings are resolved (which is, essentially, emancipatory utopia) becomes possible.

While Horizon Report displays the heavy focus on technological re-mediation that is characteristic of digital strategies, other thinkers have concerned themselves with what form these strategies ought to take, beyond mere assessment of their necessity.  

Museum curator Nick Moyes, in a 2011 blog entry, laments that 'despite all the talk, it's surprisingly hard to find good, practical examples of social media plans that other museums have actually written and published': nonetheless, he also acknowledges that there are a number of resources available for institutions interested in developing a strategy. While a museum professional would find them intrinsically useful for technological deployment, what interests me is: what can guidelines on how to create a strategy tell us about the underlying reasons, rhetoric and ideology of the strategies themselves (and, by extension, the institutions that produce them)? Moyes himself produces, and presents in that same blog post a mock-up of an online media strategy that, in his opinion, encapsulates what a document for a small museum would look like. Compared to the illustrative case I will look at the end of the chapter, Moyes' mock-up seems to cut down on the ideological positioning and rhetorical play, channelling instead a more policy-oriented approach: it succinctly details changes in policy with regard to hypothetical new platforms for content, but does not address the ideological necessity for a strategy in ameliorative terms – although, since it espouses new online platforms, it does embrace re-mediation to an extent.

Another useful, and often cited source for how to prepare a strategy comes from the Executive Director of the Santa Cruz Museum of Art & History, Nina Simon. In her brief blog post 'How to Develop a (small scale) Social Media Plan', she details the directives she provided to a few of her museum studies graduate students, as they practised development of a social media

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231 Moyes (2011).
233 She is also cited by Moyes (2011). Nina Simon's significantly named blog, Museum 2.0, has become an important and often cited resource for museum practitioners that seek to engage the Web, the digital and Web 2.0.
strategy in partnership with various Northwestern US museums. She locates the critical advantage that a strategy brings to the table not in the specific technological standards it defines but, rather, in the new kinds of relationships and goals, both internal and external to the institution, that the strategy necessarily entail: 'what kinds of new relationships is the institution seeking? How would the institution like to alter or strengthen its relationship with the target audience? What kind of relationship is sought? Relationship types might include: broadcasting, spreading, listening, sharing, embracing, energizing, supporting, research, exchange, conversation...'. This statement is significant since, essentially, it emphasises the ideological aim that also more developed and high-profile strategies, such as Tate Online's, showcase: these documents seem to exist not only as insiders' detailing of technical standards and policy frameworks, but first and foremost as ideological flags that re-state, in a technologically novel context, the museum's mission of social amelioration, re-mediation of current eroded interaction paradigms, and eventually progress toward an 'utopia of the visitor', in which visitors to the museum, in collaboration with the institution itself, finally 'get it' and proceed toward cultural and (through the contemporary museum's active involvement in social justice) social betterment.

**Illustrative Case: 'Smithsonian Institution Web and New Media Strategy'**

So far, I have emphasised the importance that jargon, language and rhetoric hold in shaping, promoting and unveiling the Web 2.0 – powered, emancipatory utopian imagination that underscores most of the contemporary constructivist museum's endeavours. I also pointed at social media / online / digital strategies as one *locus* where such language and practice can be identified. I have, however, provided limited examples in underpinning such statement: while my extensive use

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234 Simon (2009).
of quotes throughout the chapter has, as an implicit aim, the emphasising of the importance that jargon and terms themselves hold in conceptualising the digital museum utopia, I believe that my point can be strengthened by providing a solid analysis of a paradigmatic document. I have selected for such an exercise the 'Smithsonian Institution Web and New Media Strategy': one of the most circulated online media strategies, both within and without the usual circuits of museum and Web professionals. I will first provide background on the document, underlining why I specifically chose to focus on it over other ones; then I will focus my attention on the strategy itself, examining it both in discursive terms, and as a piece open for textual analysis in its own right. In order to do so, I will refer to specific instances of language, jargon, formulation of ideas, and structural elements contained within the text.

Winner of the Museum and the Web 2011's 'Best of the Web' award in the 'Best Museum Professional Site' category, the Smithsonian Institution's 'Smithsonian Institution Web and New Media Strategy' is a paradigmatic example of what a digital museum strategy might look like, and the ideology it represents.236 The strategy itself is only the core document of an expansive Wiki site, which also collects an extensive array of notes on its conception and development: news, including press and articles around the Web regarding the strategy; related projects, such as the Smithsonian Commons and the Smithsonian Pan-Institution Strategy; and useful contacts. As is the case with all Wikis, anyone can sign up and log in, earning editing rights. Rather than merely a written document, therefore, 'Smithsonian Institution...' can be said to be an 'expanded document', which uses the technological instruments of Web 2.0 (the Wiki, the blog format, social media) not only as a subject, but as a structural strategy in its own ontology: the strategy remains, at least in theory, an editable work in progress, a 'perpetual beta' to use O'Reilly's jargon, which exemplifies the tenets of technologically mediate democracy, justice and grass-root collaboration inherent in the new Web paradigm.237 It is, essentially, not only about Web 2.0, but it is Web 2.0 in itself.

236 Available at http://smithsonian-webstrategy.wikispaces.com/
237 O'Reilly (2005).
Fig. 2: The Smithsonian Institution's 'Web and new Media Strategy' Wiki front page, featuring login tools; navigation bars; counters; and an introductory message encouraging editing and interaction.

The front page, drafted in the minimalist visual style common to most Wikis, features most if not all key links to site content: there is little structural depth to the site, and minimal use of sub-domains is done. A brief message at the top immediately informs the visitor that 'Anybody [emphasis in the original] – inside or outside the Smithsonian – can join this wiki and help us': although contingent upon signing up (as of early 2013, the counter on the site shows 318 registered users), in theory everyone who is interested can edit the site's contents, and the strategy (as an expanded document, not the draft itself) configures itself as an 'insiders' crowdsourced' project.

Then follows a sort of 'news' rolling blog, which details at a glance the progress of the various

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238 It should be noted that 'everyone' really stands for 'all interested parties', which are likely to be museum professional, practitioners, and other 'insiders'. It is likely that the average museum visitor would find little reason to log in and participate.

239 For more on crowdsourcing, see chapter 3. In the FAQ section, the SI team itself advocates this point, which they rationalise (through informatics parlance) as 'eating one's own dog food': 'In Information Technology circles, eating one's own dog food means to actually use the products one makes and believes in... if one believes in the power / potential of the Web 2.0 idioms, one should use such technologies to do one's work, no?' (FAQ page, retrieved 2013).
activities and side projects related to the strategy: information on the development of a dedicated Mobile Wiki; reports of various participation / digitisation surveys and webcasts; announcements for the release of the strategy, and the Smithsonian Commons; and a section dedicated to the (comparatively) extensive media coverage that the strategy has received. A side bar links to the actual strategy document; as well as to a memo detailing guidelines for the development of the strategy itself.

Fig. 3: The Smithsonian Institution's project's 'Recent Changes' Wiki page, displaying the changelog. All visible changes, including but also earlier than the visible, were done by a single, highly involved individual. There seems to be little frequent involvement by registered members.

At a glance one notices that, beyond the obvious fact of the site being a Wiki, extensive use of Web 2.0 technologies (and, to a much lesser extent, social media) is made: the look of the Wiki itself recalls the visual structuring of a blog, in spite of the actual content being positioned closer to a traditional Web site; linking to discussion posts, counters of registered members, and number of edits is pervasive and always to the forefront, emphasising the social and participative nature of the
project to a fault (and, in the case of the discussion posts, in spite of little activity).\footnote{It lacks the chronologically structured element that, according to O'Reilly (2005) is essential to the blog as a Web 2.0 technology.} \footnote{As of 2013, there are only six discussion posts, and 156 edits – modest numbers for a Wiki site.}

In the 'Web Strategy Process' section of the Wiki, the collective voice of those who participated in the assembling of the site provides a complex, layered, and extremely detailed writedown of the process that led to the establishment of the strategy, 'a vision and a set of priorities that help us make tactical decisions about where to put our resources and what kind of impact we want to have.'\footnote{The collective nature of Wiki collaboration; and the relative anonymity that the system affords makes it difficult to assign any kind of defined authorship to the site's content, beside that of the Wiki participants. The 'members' page features merely nine profiles (most internal to the Smithsonian) out of the dozens of registered users, all of which are in name 'participants' – a good example of Nielsen's 'participation inequality' at play (see Nielsen, 2006).} A good starting point is the F.A.Q., a 'somewhat canonical' and therefore rarely edited section where, in the form of answers to common questions, SI lays down the basic rationale behind the need for a coherent new media strategy; and the peculiar choice of process.\footnote{FAQ (retrieved 2013).} Besides remarking the necessity to employ the technologies at the core of the strategy not only as an end of the document, but also as a mean. SI also introduces the concept of a 'brain trust': pulling external, non-institutional voices into the strategy design process. In this, we can easily see a re-branding of O'Reilly's concept of 'collective intelligence', one of the most technoromantic aspects of the Web 2.0 vision – the idea that, by progressive aggregation of participating units ('people'), one will eventually achieve a sort of singularity, where the sum becomes more than its parts, and the Web 2.0 collective becomes, quite literally, 'intelligent' beyond the human agents that act through it.\footnote{Much different, for example, than the process that informs 'Tate Online Strategy 2010-2012' (2010).} While I have already remarked on this aspect in the appropriate section of the chapter, it bears reminding that there is an interesting convergence of process between the supposed emergence of collective intelligence and the way contemporary examples of emancipatory utopia are articulated – they both suppose a remedial breakthrough into another, higher level of knowledge, sociality and political order through collective engagement (in the case of the Web 2.0 'collective intelligence' breakthrough, democratisation of participation).
The F.A.Q. also sheds light on the particular design process that was employed in shaping both the Web and New Media Strategy Wiki, and the strategy document itself. Catalyst was a series of 'facilitated workshops with Smithsonian stakeholders', which were then 'wiki-cast' in real time as public notes on the Wiki – hoping that information would be then 'filtered, added to, improved and synthesized into an actionable strategy over time'.\textsuperscript{246}247 Compared to, for example, 'Tate Online Strategy 2010-2012', Tate Online's well known digital strategy, a more nuanced and notable type of process seems to have been employed: by involving, at least in theory, anyone who is registered to the Wiki into the strategy design process, the Smithsonian more explicitly embraces the Web 2.0 rhetoric of grass-roots participation, collective appraising and co-participation.\textsuperscript{248} In parallel, SI's process also suggests more than a similarity with the engaged utopian and microtopian projects that we have explored at the beginning of the chapter: the emphasis is on the 'perpetual-beta' -like character of the strategy, but also the very relationship between SI and audiences echoes the attention toward cumulative, praxis-guided amelioration and re-mediation that pervades contemporary utopian projects – including the digital museum. Adding emphasis to this are SI's hedging remarks of provisionality and perfectibility, constant emphasis on the fact that having a strategy does not make everything perfect, and listing common reasons for the failure of many museum digital strategies (the 'Web Strategy Process' section also features an extensive 'risks' category).\textsuperscript{249}

Our brief overview of the Wiki and some of its highlights begins to reveal how the 'Smithsonian Institution Web and New Media Strategy', right from the onset of its design, espouses ideologies and paradigms that are inherent to Web 2.0 and to contemporary emancipatory utopian thinking. The heart of the Smithsonian's engagement with Web 2.0, and therefore the clearest

\textsuperscript{246} SI (2009).
\textsuperscript{247} FAQ (2013).
\textsuperscript{248} I say in theory since, of course, reality is likely to be far more nuanced: as the relatively small amount of participation counters (registered users, edits, profiles) on the Wiki suggest, it is difficult to assess what might qualify as insufficient, sufficient, or even simply 'public' participation in the case of a still quite specific project such as the design of SI's strategy.
\textsuperscript{249} FAQ (2013).
expression of its digital utopian project, is to be found in the strategy document itself (which is viewable on the Wiki, as well as downloadable as a pdf). Not only the document, spanning over twenty-five pages, expands greatly on the ideas and ideologies presented, both explicitly and implicitly through practice and structure, on the Wiki; it also displays more fully the language, rhetoric and jargon by which this intersection of ideologies is encapsulated and expressed. I will now proceed toward a close analysis of the text; an analysis underpinned by extensive quoting, and careful weighing of register and qualifying language culled from the text.

The document opens with an 'executive summary', and a programmatic statement which echoes the sentiments expressed in the Wiki's F.A.Q.: 'This Smithsonian Web and New Media Strategy was created through a fast and transparent process that directly involved, and continues to involve, hundreds of stakeholders inside and outside the Institution.' The participative and provisional nature of the strategy is positioned right at the fore. A following statement is even more telling:

'This strategy describes transformational change for the Smithsonian. It can be successfully implemented if the Institution begins now to actively prepare itself and to accept that change will be achieved incrementally, one small victory at a time.'

This sentence expresses ideas that find resonance with a variety of utopian positions we have explored throughout the chapter – even without ever referencing utopian directly. It emphasises, once again, an 'event horizon' positioned in the future, a moment in which 'transformational change' will be both consequence and starting point of a re-mediation of the institution itself. Furthermore, such re-mediation is to be achieved 'incrementally, one small victory at a time': it is inevitable to draw a connection between such envisioned small victories ('small ameliorations', we could say) and the tenets of microtopia, which is theorised precisely as an array
of strategic 'small victories' that, eventually, will lead toward a more widespread utopian condition.  

The Smithsonian Institution is utopian also with regard to one, fundamental feature. Like much of the other material we have looked at throughout our discussion, it consistently positions the 'crucial point', so to speak, of amelioration and re-mediation of the present, into the future: it therefore only seems appropriate that the document's subsequent section, which describes four basic ways to implement the strategy, is called 'Moving Forward'. Yet, a far better example is the lengthy quote, from Secretary G. Wayne Clough, that tops the 'Strategy in Context' section:

“For the Smithsonian to remain a vital institution at this important time in our history, we need to fully engage younger generations with our collections and our knowledge. We need to use new digital technologies to their fullest potential so that we can fulfil the Smithsonian's 19th-century mission—‘the increase and diffusion of knowledge’—in a thoroughly 21st-century way for the benefit of all Americans and people around the globe.”

In this case, the utopian project is unambiguously positioned as inherent to the institution's ongoing cultural, social, and even political mandate. New digital technologies (which is to say, Web 2.0 technologies) become the means by which the Smithsonian, since the 19th century engaged in the well-rehearsed utopian project of social improvement through public culture, can hope to breach current limitations and achieve an utopian model that, at least in theory, spans the whole globe.

Within the bounds of this project, the Smithsonian is surely not shy about identifying areas ripe for re-mediation. The first strategy theme that the document identifies is an 'update of the Smithsonian digital experience': much like Stack did in 'Tate Online Strategy...': The museum institution is sharply aware that 'there are few, if any mechanisms that support [...] Web 2.0

252 See appropriate section of the chapter.
254 Stack (2010).
features...this needs to be addressed to realize the full potential of the Smithsonian's digital
initiatives'. The stage is set for technological re-mediation, and the mission is urgent: 'it is
important to note that the current model undermines our effectiveness as an *Institution*'.
Similarly, the learning model that the Smithsonian is based on needs reconsideration, with an eye
toward constructivist learning: 'This strategy is based on the growing understanding of *learning* as a
hybrid of formal education and self-directed discovery that can be brought together and enhanced
by online tools and communities'. We have already remarked the impact that constructivist
learning has on the contemporary museum: necessary now is to identify suggestions, in the
document's own words, that such a kind of learning is consonant with embracing of Web 2.0; and
the museum's wider utopian project. The first issue is swiftly resolved by observing the many
instances in which the document identifies Web 2.0 technology, and ideology, as key to the
museum's didactic mandate: for example, it states the institution's intent to 'acknowledge the crucial
role that interactive dialogue plays on the learning process and provide opportunities for it to grow
on Smithsonian and external sites', as well as 'embrace user-generated content as an important
catalyst to engagement and inquiry, particularly for younger and more “Web 2.0” kinds of
audiences'. The coincidence of the Smithsonian's educational mandate and an implicit utopian
project is less obvious, yet can be read as woven into the document's attitude toward the museum
public. For example, consider the following quote:

> 'For generations, people have been drawn to Smithsonian exhibitions. These exhibitions create
memorable experiences by encouraging close observation of artefacts, and presenting interpretation
through exhibition texts, sometimes supplemented with catalogues and/or educational programs... The
Smithsonian online experience should be a means of extending the experience of those who visit
the physical exhibits, as well as a means of engaging more deeply with audiences unable to visit in

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According to the Smithsonian’s vision, the wider educational mission itself (which, as for the quotes above, is seen as integral to Web 2.0 as technology, and as a 'state of mind') is inextricable from the cultural and social mission that the museum, as a public institution that should in theory be accountable to the public, by necessity endorses and promotes. In accordance with Web 2.0 tenets, however, communication; education; and amelioration are potentially two-way. The Smithsonian acknowledges that it can 'harness the collective intelligence of its huge base of users...the most valuable business asset we can cultivate – and the one that is most fundamental to our core mission – is a community of engaged and committed Smithsonian enthusiasts'.

Finally, another instance in which the utopian underpinnings of the Smithsonian's strategy come to the fore is the so-called 'Smithsonian Commons', 'a special part of our digital presence dedicated to the free and unrestricted sharing of Smithsonian resources and encouraging new kinds of learning and creation through interaction with Smithsonian research, collections, and communities'. This project is not merely informed by an emancipatory utopian vision, but can be seen in itself as a sort of circumscribed emancipatory utopia – a future utopia of flawless institution / visitor interaction. Once the vision here prefigured is realised, visitors will be able to comment, recommend, tag, collect, share, use, re-use and innovate without unnecessary restrictions, generating magnitudes of 'teachable' (which is to say, remedial) moments. Of course, this eventual 'utopia of the visitor' is expected to be (like any emancipatory utopia) incremental and initially more microtopian in nature: 'the first iteration of a Smithsonian Commons could be as simple as images of a few carefully chosen artefacts with links back to their collecting units and labels, that clearly give the public permission to use and share...'. Yet, rewards are plenty, since such a powerful social infrastructure would allow the Smithsonian to plan next-generation learning programs;

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260 The list, just slightly modified, can be found on page 19.
present alternatives to monetisation practices that undermine the institution's civic mission; and, most of all, 'define the Smithsonian as a leader' within the museum community.\textsuperscript{262}

**Conclusion**

Throughout this chapter, I have argued for the fundamentally utopian vision that underlies the contemporary digital museum's investment into Web 2.0 technologies, theoretical tenets, and ideological paradigms. In order to achieve a more nuanced understanding of this discursive coincidence, I have defined various kinds of utopia, each with its own characteristics and focus; I have considered how the museum itself, as a long-lived public institution, has since the very beginning embraced a cultural, social and political mandate that is essentially utopian in nature; and I have considered various angles by which another great 'cultural agent' of our time, the Web, is in itself an utopian enterprise. I have then chosen the typology of museum production known as 'digital strategies', as a type of document (and attached discourse) that displays quite clearly the complex intersection of digital utopia; museum utopia; and cultural utopia that takes place within the contemporary constructivist museum. My case of choice, among many others possible (Tate Online's strategy, or the Melbourne's Museum Victoria's), has been the 'Smithsonian Online Web and New Media Strategy', a paradigmatic document that well displays the intersection of multiple ameliorative and re-medial utopian agencies in the contemporary museum, and implicitly prefigures modes of interaction between institutions and publics that will be (albeit selectively) explored in the following chapters.

\textsuperscript{262} SI (2009) p. 20.
Chapter Two: Digital-Beings and the Contemporary Museum

In late March 2013, art historian and theorist James Elkins wrote for popular cultural / Internet magazine *The Daily Dot* an opinion article titled 'Is Google Bringing Us Too Close to Art?'. The article addresses Elkins' belief that the unheard-of degree of magnification that *Google Art Project*, Google's collaboration with museums around the world to create a platform for the digital display of art in large format, ends up taking the viewer 'too close to art'. We can look closer than we would in a museum setting; we can look closer than any art historian could at any point in time; and we can look closer to the painting's surface than the artist herself intended. To Elkins' displeasure, traditional ways of seeing and analysing art are destabilised by the perceptual affordances of the digital medium; and, along with them, established notions of the role stakeholders such as the academic, the museum and the viewer play in relation to these new 'ways of seeing'.

Shortly after its publication, the article sparked a discussion on the LinkedIn group 'Museum in the Digital Age'. The thread soon turned into a professional forum, in which various members of the group (most, but not all, museum staff; also designers, communication experts and art researchers weighed in) further developed Elkins' controversial claims – some siding in favour, some against. What I find striking is the ways in which the overall scope of Elkins' article was expanded and, to an extent, changed by subsequent discussion. In origin, Elkins' scope and context was 'traditionally' art historical: what he criticised were the ways in which *Google Art Project* destabilised 'ways of seeing', procedures and notions of art appreciation and judgement - 'that invisible boundary between historically appropriate seeing and inappropriate peering'.

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263 Elkins (2013). The article's contents will be detailed in the relevant section, an illustrative analysis of *Google Art Project*.
264 Wettendorf (2013).
265 It could be noted that Elkins' article itself, on DailyDot, has so far seen only one brief comment.
266 Such as, for example, artist intentionality; what a generic viewer would have seen at the time, and so on.
discussion on LinkedIn was ignited, however, there was almost instantly a shift of playing field: most contributors addressed Elkins' claims, but consistently contextualised them above and beyond the original writer's scope, into a very precise milieu: the contemporary 'digital' museum, and its 'virtual' visitors. Soon, the thread turned into a discussion on visitor studies, and the fine points of digitising collections for the layman's fruition. Elkins' points were, both by supporters and detractors, immediately recontextualised into a current, and controversial playing field.

This shift emphasises the surprisingly small distance that separates traditional, abstract - philosophical concerns with regard to modalities of art apprehension, appreciation and judgement; and the current, pivotal paradigm shift that museum practice witnesses as we transition toward digital identities as the norm. Pioneering mass digitisation projects like Google Art Project, but also more academically-oriented digitisation projects such as Europeana and others, bring to the fore the impact that very basic, art historical issues of perception and interaction with 'digital equivalents' of museum artworks have, when it comes to what seems to interest the contemporary museum the most: visitors, and how to engage, sustain and preserve them as the museum becomes increasingly digitised – all this, in the context of the ideological shift toward participation, inclusivity and cultural democracy that is ingrained in the constructivist museum.268

This second chapter of my dissertation, drawing on existing literature as well as original thinking and analysis of primary sources, sets out to explore, from an ontological and epistemological point of view, user interaction with digital copies of art works – in order to show how new 'ways of seeing' are encouraged by the digital, and might then have an impact on the fruition of museum contents. As museums and galleries of art penetrate the seemingly new environment of the World Wide Web, they must face the problem of how to translate their accumulated heritage and collections into a format that is both meaningful to the Web environment, and representative of the tradition that characterised their modus operandi in the physical context; the issue is further exacerbated in the case of 'virtual galleries', which have to face the additional

268 http://www.europeana.eu/
conundrum of how to meaningfully present collections online with respect to internal coherence and narrative. We also need to acknowledge that these problems are part of a larger evolution in the museum's perennial, ongoing mandate for social improvement, and constant re-mediation of its own means of education; a mandate that is carried over from the physical, onto the Web. As it seeks to create a digital identity for itself, the museum constantly harnesses; rejects; or seeks to mould available instruments that might facilitate (usually not without ambiguities and contradictions) progression toward the culturally 'emancipatory utopia' I have described in the previous chapter. The problem seems to be, at least from the museum's point of view, if epistemologically complex enterprises such as Google Art Project, and countless other 'digitisations' of art, can be successfully harnessed toward such an end.

In seeking to answer such a pressing question, museums so far have been narrow in scope and possible angles of exploration. One aspect that has been thoroughly eviscerated by museums professionals is the policy and technology behind the 'job' of presenting online visual materials: that is to say, the ways in which textual information that is corollary to the image, which usually in a Web context translates into imported labelling and meta-data, can be organised and networked within an online museum presence to structure the visitor experience; or, otherwise, filed for visitor retrieval. The annual Museum and the Web conference keeps an online bibliography which contains dozens of entries on this specific aspects of museum Web presences, and represents a fair section of the overall debate on the subject.

Discourses around meta-data, tagging, archiving and content delivery can only subsist, as they are formulated, assuming the ontological and epistemological stability of the digital image.

My discussion and analysis throughout the chapter will deal with 'virtual museums' in the sense of institutions that possess some kind of physical collection, that is however available as a cogent experience only online for visiting, and not viewable as an organic exhibit in the physical, i.e. Olga's Gallery (http://www.abcgallery.com) or parts of Rhizome (http://www.rhizome.org). For reasons that will be elucidated later in the chapter, I will not specifically address online galleries that display only, or preponderantly, Net Art or other work that does not feature an indexical physical correspondent.

For discussion of amelioration and remediation, see Chapter One.

Found at http://www.museumsandtheweb.com/researchForum. There are, for example, 26 entries containing the keyword 'meta-data', as well as about the same number under the keywords 'image(s) -); most entries in the latter, however, contain as a keyword an eminently non-visual aspect of images ('image retrieval', 'image indexing', 'image database').
This assumption must, however, be investigated thoroughly; since there is reason to suspect that an analysis of contextually digital ways of approaching, interfacing and interacting with museum digital assets would lead us to a more robust, holistic description of the many, sometimes contradictory ways in which, through cultural information delivery, the museum shapes its online presence in response to two basic conditions: its ongoing cultural, social and political mandate as a public institution; and the necessity of both translating and updating the ideology that underlies such mandate to the new conditions that the digital and the Web impose. My provisional position is that the digital reproduction of an artwork is neither a more or less pristine translation of its physical counterpart in the virtual environment, nor a 'reproduction' in the art historical sense. Rather, the digital reproduction comes to be, by virtue of its peculiar ontology, epistemology and cultural position, an item which possesses a genealogy and history that in some ways continues, in some ways breaks off from 'images' as conceived before and outside of the digital. This all happens through a complex interplay of re-mediation, transcoding and modes of apprehension and manipulation on the user's part.

This re-mediated artefact’s qualities and inherent ambiguities have a tangible and serious impact not only on museums' online digital offerings; but more generally, they are crucial to the museum institution's carving of a 'digital identity' for itself, while attempting to stay true to its long-established ideological bases. It is the frequent discounting of the digital reproduction's own issues ontology and interactivity that leads museum practitioners to adopt the attitude of assuming the 'virtual' experience of art as innately subordinate to an old fashioned encounter with the 'real thing'. Also, the dangerous assumption that digital images are apprehended the same way as other

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272 A term which I take as identifying an indexical copy, in the same or a different medium, of an item assumed to be 'original', giving origin to approximately indexical copies.

273 In very recent times, Lev Manovich has begun to address these issues, and proposed a terminology for them, in his article “How To Follow Global Digital Cultures, or Cultural Analytics for Beginners” (2009) and select chapter of The Language of New Media'.

274 For a discussion of what such bases are, refer to the previous chapter.

275 Examples are innumerable, from John Stack, 2007 ( 'Because the art is about people seeing it, and the online version is [sic] never be the same thing') to Proctor et al. in the discussion on Curator Journal online following Google Art Project's release. These are, of course, only two of many examples of a rhetoric that should be quite familiar to museum practitioners.
reproductions are potentially leads, as it is often the case, toward a dismissal of ontological and perceptual concerns then overtaken by well-rehearsed discourses on visitor education, information provision and social networking. In other words, the peculiarities that make the digital reproduction significant in its own right, different yet potentially as valuable as the 'real thing', are lost. I am of the opinion that assuming that digitisation is merely a matter of technological processes (that is, technological re-mediation) is equivalent to leaving the resulting digital reproduction of an artwork in a cultural, social and, especially, ideological vacuum. The construction of an explicit discourse around the whole process is necessary to the successive step of inserting such digital items into the intellectual economy of the 'museum going digital', and see how they might weigh into the ideological communality between the museum as a social institution, and recent iterations of the Web – such as Web 2.0. Neither the technologies and their products, nor the ideologies that socially underpin them can be discounted, or taken for granted: we must fully understand what these digital reproductions are, before focusing on the technological and practical how.

This chapter will be roughly divided into two sections. In the first part, I will explore a variety of existing discourses on the ontology of the image, its reproducibility and epistemological bases, in order to reconstruct from isolated discourses a well-rounded theorisation of the digital reproduction of artworks. I will confront a variety of mostly contemporary accounts and sources, with special relevance given to WJT Mitchell's and Gottfried Boehm's 'pictorial turn' (and the subsequent redefinition by others as an 'iconic turn' by Keith Moxey and others), Lev Manovich's 'interface', and theories of body perception and haptics for the digital image as both object and space by Laura Marks, Douglas Davis and Joohan Kim among others. The theoretical aim of gathering together such a disparate array of perspectives is to well support the case for one specific point: the necessity to understand how users can / should / will approach, apprehend and interact with the formal peculiarities of digital artworks; in order to then see how these 'new approaches' might have a fallout on other, more properly cultural, social and politically ideological concerns in a museum
context - including contextually-digital relationships between museum and visitors; and the museum's ongoing mission of amelioration and remediation described in the previous chapter. As the discussion moves from abstract visual concerns toward the contemporary museum's specific conditions, I will also present some relevant examples of art works that, while often 'digitally native', highlight some interesting aspect of user interfacing and manipulation; and, in doing so, move us from theoretical concerns into cases of actual deployment.

The second part of the chapter will consist of an extensive, in-depth study of the *Google Art Project*, whose analysis I hope will elucidate the existing problems in articulating the digital art experience, and a range of possible solutions, both existing and hypothetical. The case will set off from a detailed, descriptive analysis as an attempt to 'break down' into its basic pieces the 'interface' – according to Manovich, the *crux* of user-artefact interaction.²⁷⁶ Then I will deploy theoretical points from the first half of the chapter, in order to connect case-specific observations to larger trends and concerns – levels of interaction; usability; 'genealogy' of the interface; and so on. Finally I will examine, where available, museum debate and discussions related to the case, in order to suggest how the formal and practical peculiarities of the *Google Art Project* relate to the museum's current issues and concerns with regard to digital engagement and digital audiences.

**Chapter- Specific Terminology**

In the introduction to the dissertation, I outlined some of the key terminology that I employ throughout my work; some of such terminology will also be found in this chapter, when ideas and operative concepts overlap with previous or following discussions. I feel that there is the need, however, to dedicate some space to the brief definition and discussion of terms that are specific to this chapter. The main reason is the abstract theorisations that this section entails: as ideas such as

²⁷⁶ See Manovich (2001).
'the iconic turn'; 'interface'; 'immersion'; and 'telepresence', among others, require extensive theorisation before providing concrete examples, there is the risk that a clear, concise definition of the terms might be swallowed by discourse if limited to the body of the discussion itself. A list of terminology can then constitute a reference we can return to as necessary.

In second instance, as with nearly all theoretical discourses around the Web and the digital, we are far from consensus on what terms actually mean, or their validity: Manovich criticises, for example, the widespread term 'digital' as essentially devoid of meaning, due to the impossibility of applying its implications in all necessary circumstances.277 Jargon that seems obvious at a glance reveals, upon investigation, to be riddled with multiple meanings, not all of them widely accepted: what is an 'interface'? Where does it begin, where does it end, and does it mean the same thing to a techie as it does to a digital humanities academic? Questions such as these are ongoing, and will most likely never be fully resolved.

'Web' vs World Wide Web vs Internet: the three terms are, in almost all cases, not interchangeable. By 'Internet', I refer to the interconnected system of networks that constitute the technological infrastructure which hosts the global hypertext 'World Wide Web'.278 By 'Web', on the other hand, I refer to an altogether different concept: the social, cultural, political context and, by extension, relationships that agents establish through use of the World Wide Web, in all its possible iterations and platforms.

Interface: the concept of an 'interface' is fundamental to the theoretical underpinnings of this chapter. At its most basic meaning, mutated from computer science, 'interface' identifies the point of interaction between components, be they hardware or software, that allows for communication and exchange.279 This definition can be then expanded beyond the machinic, into human relations

277 See Manovich (2001) p. 68. I wish however to preserve this term, as a 'necessary evil': Manovich does not seem to provide a robust alternative; and the abundance of 'digital' talk in the professional discourse this chapter will be concerned with suggests that the term does have a field-wide valence, in spite of its surely difficult theoretical articulation.

278 These definitions are fairly standard, and are attested, with minimal lexical variations, in most dictionaries (i.e.Oxford Dictionary, retrieved 2013).

279 See, for examples and further discussions, the Java Tutorials' clear and simple explanation of an interface at the concept level (Oracle, retrieved 2013).
with technology, and to a more abstract level of human interaction in general: 'interface' then becomes a framework of appraisal, 'how the computer user conceives the computer itself' – and, by extension, a key locus of digital content appraisal.280

Interactivity: By 'interactivity' I intend the meaningful process by which an agent attempts to activate a response in another through some kind of stimulus, following which a logical reaction is expected. While I do agree with Manovich's assessment that, per se, interactivity tells us little of significance when it comes to human-machine exchange, I do think that the term, when properly qualified, is still quite useful.281 This is because 'interactivity' does not merely define the act of acting upon a peripheral (a mouse, a keyboard or, more recently, a screen) in order to elicit a response from a machine: more widely, it points at the philosophical, theoretical conditions that make such moment of exchange discrete, meaningful and contextual. In this sense saying, for example, “I 'interact' with a digital object in an art installation” is tautological if interaction is taken to mean merely the machinic action – it is instead, more meaningful if it is contextualised as an expression of the perceptual and intellectual dynamic at play, through the machine, between the user and a history / genealogy of interaction with reality.

Virtual: ‘virtual' remains a highly contested and controversial term still.282 Here as well, I do acknowledge that a different choice of term would be ideal: I don't see, however, any that can successfully substitute what 'virtual' implies. For simplicity's sake, I intend by virtual any object that is not indexical with its own interface: that is to say, any item or relationship that is mediated by an easily identifiable interface, and is therefore experienced as something 'other', materially and intellectually, than communally agreed reality.

Digital Reproduction: The recreation, in digital format, of an item; artefact; or space which stands to the 'original' as variably indexical. As it will be evident soon, Mostly I will not focus on

282 During the roundtable that followed 2012's Virtual Worlds conference in Edinburgh, a heated debate ensued on whether only 3D spaces qualify as truly virtual; whether 'virtual' implies disembodiment or otherwise; and if the term virtual stands in contrast, or in parallel to another controversial term, 'physical'.

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one of the ongoing trends within the digital museum, the creation of dimensionally developed 3D spaces; neither is my intention to focus on Net Art and similar.\textsuperscript{283} I am chiefly concerned, instead, with the ways in which interfaces allow for apprehension of virtual / digital items that are indexical (in other words, 'copies') of more traditional museum items: paintings, sculptures, installations, and even artist studios. My focus is due to the fact that there is already abundant literature available on the presentation of 'digitally-native' artwork – items that, in whole or in part, were designed to have a digital component. Google art Project, \textit{Leonardo Virtual Tour} and, more generally, online galleries introduce new, digitally-native problems in objects that have a very strong, established history of display, interaction and apprehension that runs in parallel with the museum's history as an institution.\textsuperscript{284}

\textit{Embodiment / Presence / Telepresence:} following Minsky and Steuer's account, as well as others to a lesser extent, I will use terms such as 'embodiment'; 'embodied'; 'presence'; and 'telepresence'.\textsuperscript{285} Each term will be fully explained, and put in relationship with the others in the appropriate section: it is useful to introduce, however some key points. When I talk about the idea of 'embodiment', or say that something or someone is 'embodied', or suggest that one has or feels like she has a 'presence' I am not referring to intuitive definitions, such as identification with an avatar in a 3D space, or participation in a chat: appraisal through certain interfaces (in particular haptic (touch) based ones but also some kinds of visual interface) can engender in the user a perception akin to 'being there' in a way that is distinct, yet similar to being in the 'real world'. The interface, to an extent, continues mechanically yet perceptually recedes from mediation, and the user feels 'present' and 'embodied' in the digital, a clear impossibility from a physics point of view. 'Telepresence' further refines the idea that such 'presence' allows for the reduction of incommensurable distances, such as the physical / digital divide. These terms are quite closely

\textsuperscript{283} The one case that could be roughly qualified as a 3D space (\textit{Leonardo Virtual Tour}) is not an exception, as I will look at it assuming that it is, by large, not a true 3D space.

\textsuperscript{284} In support to this, consider Manovich (2001) p. 68: 'The alleged principles of new media which are often deduced from the concept of digitization — that analog-to-digital conversion inevitably results in a loss of information and that digital copies are identical to the original — turn out not to hold under closer examination.'

\textsuperscript{285} See Minsky (1980) and Steuer (1992).
related to 'proprioception': the body as it perceives its own presence and body-parts relations, relative to position and distance in space.  

_Image:_ according to W.J.T. Mitchell, the most relevant characteristics of the term 'image' are 'the incredible variety of things that go by this name. We speak of pictures, statues, optical illusions, maps, diagrams, dreams, hallucinations, spectacles, projections, poems, patterns, memories...'; and that 'the calling of all these things by the name of image does not necessarily mean that they have something in common'. Acknowledging both these hurdles, and the lack of an alternative term as widespread, solid and familiar as 'image', I will be using the word with a very specific meaning, which however does not exclude Mitchell's points. In this chapter 'image' will refer to an 'item' with a visual component (which, however, does not necessarily exhaust it) and that can be approached and interacted with, in some way, by an user – such interaction not necessarily entailing modification of the item.

**Theoretical Background**

While not digitally native, or museum-related in its origin and basic theoretical positioning, a key paradigm that can function as a starting point in understanding the ontology of the digital museum, and its related digital reproductions, is the so-called 'iconic turn'. Finding its origin within history of art, in particular the writings of theorist WJT Mitchell, this supposedly 'new' paradigm of image apprehension, interaction and rationalisation seeks to bring to the forefront the relationship between an image and an 'agent' (rather than a spectator) that is engendered when

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286 'Proprioception' is a term that is mostly used in medicine, but has found use in informatics: see, for example, Mine et al (1997).

287 Mitchell (1984) p. 504. The article my Mitchell is, in general, a good starting point for clarifying the meaning of 'image' as a term.

288 WJT Mitchell (1995), where the theorisation finds its origin, referred to it as a 'pictorial turn': a term that, however, I do not prefer, due to the more relevant implications that 'iconic' engenders. In particular, I avoid 'pictorial' for its associative power to painted surfaces and traditional media – which is sure a place where the iconic turn makes itself manifest, but far from the only or the most important one.
mediation happens not only through textual and linguistic means; but also through perceptual immediacy, sensorial apprehension, and a complex process of embodiment and presence.²⁸⁹

While the 'iconic turn' does have its shortcomings when it comes to ideological assumptions, and it is surely not universally applicable to all instances of image-user interaction, it does provide support, and is in itself a consequence of the renewed interest toward complex problems of perceptual mediation that, in the end, cannot help but inform any instance of visual digitisation – including the digitisation of artefacts. A non-biased assessment of the 'iconic turn' might help us decide upon its usefulness for resolution of one problem that hinders the status of the digital reproduction in a museum context: the paradox between 'the age of electronic reproduction, [which has] developed new forms of visual stimulation and illusionism with unprecedented power' and 'on the other hand, the "fear of the image"... as old as image making itself' which leads us to arguing for the 'real thing' as invariably better than its reproduction.²⁹⁰ As we will see, platforms such as Google Art Project, perhaps unknowingly, heavily play upon such dichotomy, if not exactly in the terms Mitchell states.

The 'Pictorial Turn' and the 'Iconic Turn'

The genesis of the 'iconic turn', albeit under a different name, can be retraced to an essay by W.J.T. Mitchell, collected in the volume Picture Theory, that addresses what the art historian saw as a critical paradigm shift in the very identity and conditions for existence of the image; and, in parallel, a significant overturn of the presuppositions that underpin any meaningful discourse around such images.²⁹¹ In “The Pictorial Turn” Mitchell diagnoses, as the last of a series of ‘critical

²⁸⁹ ‘Spectator' does not encapsulate well a tenet of the 'iconic turn': that is, perception and apprehension do not happen in a disembodied, observant modality, but rather through bodily and sensorial engagement.
turns’ within philosophy and history of art, a progressive movement away from the image as a ‘veil’, a layer of representation that has to be overcome in order to get to the 'real thing' – the various discourses (such as, for example, semiotics) brought to light by piercing the image as veil.\textsuperscript{292} According to Mitchell, there are signs that a new paradigm of experience and knowledge is emerging – one that does 'not begin with the assumption that language is paradigmatic for meaning'.\textsuperscript{293} Language is not ruled out, but it does no longer constitute a sort of 'truth', it is no longer the final epistemological goal in a progression within which the image itself is merely a stepping stone.

Mitchell does not clearly set out a reason for this shift – he merely suggests what might constitute, upon analysis, a motivator toward the change. He diagnoses in the writings of many twentieth century philosophers a sort of ‘dark underside’ to the dominance of the linguistic: a growing concern and ‘anxiety with the visual’, to Mitchell the most clear indication that ‘a pictorial turn is taking place’.\textsuperscript{294} According to him, 'the commonplace of modern studies of images, in fact, is that they must be understood as a kind of language: instead of providing a transparent window to the world, images are now regarded as a sort of sign that presents a deceptive appearance of naturalness and transparency, concealing and opaque, distorting, arbitrary mechanism of representation, a process of ideological mystification'.\textsuperscript{295} It is this dual place of the image - 'paradigm...and anomaly' that, ultimately, feeds a resurgence of interest toward what pictures and images really are.\textsuperscript{296} In response to this schizophrenic understanding of the image's positioning with regard to epistemology and understanding, the 'pictorial turn' allegedly seeks to establish the image

\textsuperscript{292} See, in particular, Mitchell (1995) p. 11-13. As examples of such linguistic approach to the image, aside from those mentioned by Mitchell himself, I would count paradigmatic examples such as Barthes' analysis of popular images (Barthes (1957)), or many feminist / postcolonial critiques of visual culture. It should also be added that, according to Mitchell, the 'textuality'-based understanding of experience is not limited to images or the visual, but permeates any aspect of cultural life, even the subconscious (p.11, a reference perhaps to psychoanalytical dream interpretation).

\textsuperscript{293} Mitchell (1995) p. 12.


\textsuperscript{295} Mitchell (1984) p. 504. Mitchell returns to this concept, albeit in a somewhat different discursive context, also in a more recent publication from 2002, where he puts anxiety toward images in relationship to the development of visual studies as a discipline. While this issue is far from what I am addressing, it bears mention as it shows that Mitchell's engagement with the pictorial turn did not exhaust itself in the mid-90s.

as an actor instead of a sign: an agent that has a vital part in the creation and sustaining of meaning.297

While Mitchell's contribution toward the construction of a case for the image and, more generally, the non-textual artefact as an agent rather than a text is invaluable, when it comes to application to my specific topic – ways of 'approaching' the digital reproduction – Mitchell's formulation of the 'pictorial turn' can only take us this far. Coming (at least at the time of writing 'The Pictorial Turn') from an art historical background, Mitchell is mainly concerned with how a pictorial turn might re-discuss established art historical frames such as the legacy of Panofsky's iconological methods – a concern that takes up the bulk of the article.298 While this section of the discussion is fascinating in its own right, I do not find it particularly illuminating with regard to our contemporary digital context, which is mentioned by Mitchell only in passing: it remains, for better or worse, a rather traditional analysis of art historical methodologies. At the same time, Mitchell does not seem too interested in addressing what theoretical form the pictorial turn takes, once the switch is done: his extensive analysis surely identifies the point of rupture, and the reasons behind the rupture itself, but do not paint, for the reader's benefit, a clear picture of what the 'pictorial turn' actually entails.

Following the lead given by the 'pictorial turn', a whole range of scholarship has turned toward a reconsideration of the image with regard to modalities of apprehension and relationship other than language. Most discussions have adopted, however, the term 'iconic' rather than 'pictorial' to define the proposed turn from the linguistic, toward a more holistic and sensorially mediated understanding of images' cultural economy – configuring therefore an 'iconic' turn.299 The term finds its origin in the work of Gottfried Boehm, in particular his anthological work Was ist ein Bild? (What is an Image?) from 1994, and a brief (two) letter exchange with Mitchell himself.

299 Mitchell might have chosen 'pictorial' rather than 'iconic' in the first place to emphasize the pertinence of his discourse to history of art; and to avoid referencing the term 'icon', which he saw as controversial and charged (see Mitchell, 1994. Footnote on p. 15)
which I will now focus on.\textsuperscript{300} There is agreement that Mitchell's 'pictorial turn' and Boehm's 'iconic turn' seem to have been conceived nearly at the same time, independently for the most part but, according to Boehm, with a high degree of serendipity: once the two met and exchanged communication, they seem to have agreed on the presuppositions that the two terms entailed, if not on each exact detail.\textsuperscript{301} Boehm's letter, rich in detail with regard to the intellectual progression that led the thinker in a similar direction as Mitchell's, provides however limited rationalisation for the choice of 'iconic turn' as a term: the intention seems to re-emphasise the 'icon' part from the 'iconology' equation, at the partial but not exclusive expense of logos.

Overall, in spite of the different name, Boehm's project does not seem far off from what Mitchell delineated in \textit{Picture Theory} and his other works I mentioned. W.J.T. Mitchell's response, on the other hand, is perhaps more illuminating, as it homes into some of the aspects that, as I hope to show in time, make the 'iconic turn' relevant to the topic and material of the chapter.\textsuperscript{302} He is onto a very important point when he asks, with regard to the use of images in the sciences, 'I wonder if you would agree that images might not just “play a role” of subservience or instrumentality within the exact sciences, but themselves might be seen as \textit{targets} or \textit{objects} of these sciences' – especially if we consider the subsequent references to the 'technical and physical transition from a chemical basis to an electronic and computational support, with many implications for the ontology of the image' in the field of photography; and to the implications that the immateriality of the image has for analysis and discussion of the same.\textsuperscript{303} Essentially, it is revealed that central to these 'turns' is an understanding of images as 'items' in and for themselves, whose 'image-being' (and, I would add, the kinds of physical relationships this permits or forbids) can be the subject of research as with any other material culture artefact, without necessarily resorting to ideologies of the image as exclusively a conveyor of linguistic discourse. Mitchell also reinforces the idea that this 'turn' is

\textsuperscript{300} Boehm and Mitchell (2009). My discussion of Boehm will be mostly based on this letter exchange, and regrettably briefer than it should be, as Boehm's book-length work itself has not been translated in English yet.
\textsuperscript{301} Boehm and Mitchell (2009) p. 104.
\textsuperscript{302} For brevity, from now on I will use 'iconic turn' rather than 'iconic or pictorial turn', unless discrimination is essential.
\textsuperscript{303} Boehm and Mitchell (2009) p. 114.
taking place not merely within academia, but in all levels of public culture: even in the popular realm, there is a return to 'the image' as, epistemologically speaking, an end in and for itself with a 'life of [its]own'.\textsuperscript{304} By clarifying that 'the pictorial turn involves both the "disciplines of the human sciences and... the sphere of public culture"', Mitchell dispels the impression, suggested in the 1995 essay, that the pictorial turn could be exclusively an art historical 'insider's', theoretical affair: the paradigm shift has, in fact, a profound impact on everyone's relationship with images. Furthermore Mitchell suggests that, at least to an extent, there is a technological factor in the triggering of a 'turn' – implying, perhaps inadvertently, that the 'pictorial turn' might be construed as a moment of 'remediation', at least according to the guidelines described in the previous chapter of this dissertation.\textsuperscript{305}

The question is then, what can be taken from Mitchell's and Boehm's analysis that is eventually relevant to the digital? There are multiple 'lessons' from the two, that we should keep in mind as we continue exploration of the pictorial turn, once it becomes an 'iconic' turn. First of all, we are cautioned against excessive enthusiasm toward the shift itself, as it comes with a danger: we might assume that a renewed interest in the visual and the sensorial over the textual entails the existence of images that represent reality, or offer access to reality, in an unmediated manner – a misapprehension that Mitchell dispels.\textsuperscript{306} As we will see once we enter discussion of interfaces, mediation plays a part in any kind of interaction and apprehending.

More proactively, the 'pictorial turn' introduces a factor that, arguably, was lost when the image was merely a point of access toward a text: that is, a reformulation of the image as a sensorially loaded, interactive, mutual agent, and a renewed interest toward what happens in the space (literal, and metaphorical) between image and user. Here seems to be the innovative payload of the 'pictorial turn' paradigm; and, coincidentally, the point that has been explored most extensively by those who pick up Mitchell's and Boehm's line of thinking where they left off.

\textsuperscript{304} Bohm and Mitchell (2009) p. 114.
\textsuperscript{305} Bohm and Mitchell (2009) p. 115.
\textsuperscript{306} Mitchell (1984) p. 505.
Mitchell's 'pictorial turn' and Boehm's 'iconic turn' constitute a privileged vantage point from which to look at how 'the image', both as an abstract entity and as a context-specific item, is approached; interacted with; argued over; and ideologically instrumentalised in our contemporary context, without adopting the reductive stance of seeing its sensuous nature as merely a distraction from 'true' discourse. The moment of interfacing, the 'encounter' with the image becomes key to understanding the three-way, mutual relationship between image producer, image consumer, and the image itself as an actor: what the 'iconic turn' stands for is, then, a significant 'remediation' not only of the image as an ontological object, but of the network of information and interfacing that it is a part of, as well. In order to develop further understanding of these factors' relevance with regard to the specific examples and materials I will visit later in the chapter, I will now introduce a number of recent discursive takes on the 'iconic turn': all of the setting out from Mitchell and Boehm's analyses, yet furthering specific secondary aspects – be it the technological aspect, the ontological one, or the perceptual one – that put the theory of the iconic turn into action.

The Iconic Turn and Digital Media

A necessary follow-up to Mitchell and Boehm is a further honing of the new methodologies, the new 'practice' that the iconic turn entails – since, as presented by the two scholars, the iconic turn remains mostly an abstract project; and more is said to justify the very legitimacy of talking of a 'turn', than on the new praxis this turn actually might encourage. There is also, I would argue, a need for the expansion of the vocabulary associated with the iconic turn – especially if we are to show the paradigm's relevance to the digital realm, and digital objects.

307 It should be noted that my discussion of material regarding the 'iconic turn' will be necessarily selective, picking from an extensive pool of existing material (in many ways, it is this turn itself that has given rise to visual studies as a discipline). This selectivity is both intentional, and out of necessity: not all discussions are ultimately relevant to the topics of the chapter (digital reproductions); and most material is still available only in the original, usually German language. My discussion should not, therefore, be taken as a comprehensive survey of literature on the pictorial or iconic turn.
While written long after the first relevant publications of both Mitchell and Boehm, art historian Keith Moxey's 'Visual Studies and the Iconic Turn' constitutes a good starting point for expansion on the two previous thinkers' ideas: making reference to an extensive array of scholars and practitioners, Moxey introduce further 'sub-concerns' into the iconic turn, refining its project and language. In particular, Moxey introduces the ideas of 'presence' and 'encounter' as essential factors in the new understanding of images' nature, role and agency after the iconic turn. Both are terms that, as we will see, will be fundamental to my subsequent articulation of such turn in relation to museum digital reproductions.

In accordance with Mitchell and Boehm, Moxey states that the image and, more widely, the visual realm has been on the receiving end of an established tradition in Western philosophy that discounts the materiality and the 'being there' of the image- the "life" of the world', in favour of an emphasis on the image as an epistemologically dubious object, something between an hindrance and a necessary evil in the intellectual progression toward the real thing – that is to say, the 'content' of an image. This intellectually hegemonic paradigm has been, however, ruptured for quite a few years: 'many scholars are now convinced that we may sometimes have unmediated access to the world around us, that the subject / object distinction, so long a hallmark of the epistemological enterprise, is no longer valid'. That is to say, there is an ongoing re-evaluation of presence over meaning; what this entails is that the image, as image, now has something to say to us - it has its own modes of existence, presentation and embodiment that exist at least in part independently from the meaningful content we linguistically fill it with. In parallel, we can be said to 'encounter' the image as an object of sensorial apprehending, not exclusively but at least in addition us reading it as a semiotic carrier of meaning. It should be noted that Moxey does not specifically mention the fact that sensorial understanding is what the iconic turn substitutes for the 'reading' that was integral to the linguistic mode of reading: it is, however, implicit when he states, for example, that 'the

contemporary focus on the presence of the visual object, how it engages with the viewer in ways that stray from the cultural agendas for which it was conceived and which may indeed affect us in a manner that sign systems fail to regulate, asks us to attend to the status of the image as presentation.\textsuperscript{311} It is not a stretch to surmise that these 'ways that stray' are indeed the sensorial, the perceptual and the bodily manipulative, which do not substitute entirely, but become a necessary precondition to the contextualisation of the image within a certain cultural or political environment.

Moxey's analysis elaborates and expands Mitchell's and Boehm's insights in a number of ways, in particular with regard to specific vocabulary and the array of re-theorisations, in disparate fields (including digital scholarship), that the iconic turn might encourage; yet, he is not immune from omissions, and does not necessarily take his own arguments to their logical end point. A first factor that limits the scope of the iconic turn as formulated so far is its insistence on the visual, with little to no attention paid to the other senses that are involved in apprehending of an object – from the merely haptic, to more complex perceptual processes, such as proprioception. This absence, more than in Mitchell's case, is somewhat surprising in Moxey, as he evokes right at the first line of his essay the idea of 'presence': given the implications of the term, which points at some kind of physical and immediate 'being there' that requires a response, it is difficult to reconcile with an iconic turn that is exclusively visual in nature.\textsuperscript{312} Perhaps more attention is needed to other modalities of sensorial perception – or rather, we need to attend to how the cumulative intervention of visual, haptics, proprioception and embodiment inform holistically a 'presence' that, according to the dictates of the iconic turn, stands as an alternative to the textual 'browsing through'.

I also would say that Moxey's occasional appeals to the supposed 'unmediation' of the image under the iconic turn's regime is not entirely convincing. He states, at the very beginning of the article that 'many scholars are now convinced that we may sometimes have unmediated access to

\textsuperscript{311} Moxey (2008) p. 133. Regarding the issue of 'presentation' with relation to the visual / linguistic information in the humanities, and the new importance attached to the visualisation of information and data, see also introduction in Manovich (2012) and its bibliography.

\textsuperscript{312} Moxey (2008) p. 131.
the world around us': not only this is intuitively not true, but it also does not seem in concordance with what the 'iconic turn' is really trying to achieve – which is not the image as unmediated, but rather the image as not mediated by language.\textsuperscript{313} Even after language has taken a backseat when it comes to understanding images, innumerable levels of mediation between 'us' and the image remain: only, they are not linguistic. Perception in itself is a mediation process, even in its barest form of visual apprehending; and the process of perception itself always happens in the context of a complex interplay between the image as an ontological object; the apprehender (us); the environment in which the encounter takes place; and the structural elements that make encounter and meaningful presence possible.\textsuperscript{314} These final elements in particular are those I intend to explore more fully: the chief layer of mediation that exists between an image and an apprehender, as equal actors in a 'iconic turn' informed encounter, is what I would call the 'interface' – to be intended as the structure that orders and informs sensorial encounter.

The need to understand our interactions with images, under the regimen of the 'iconic turn', as an active form of engagement that can and should be understood as engendering affect and response, is emphasised by A. Srinivas Rao.\textsuperscript{315} After retracing, in the spirit of the authors already mentioned, the genealogy of the iconic turn as borne from intellectual reactions to the hegemony of the textual – as well as a rebellion against the academically widespread suspicion of the image as being more of an hindrance to meaning rather than an asset – Rao expands the discussion by focusing on the ontological underpinnings of 'the image', making explicit concepts that were already implicit in Moxey's analysis. Rao insists particularly on the active nature of engagement with images, on both sides of the communicative equation: 'as human beings we are not passive recipients of optical stimuli but responsive subjects, touched and moved by pictures'.\textsuperscript{316} In this sense, interaction is mutual since we human beings are, by nature, wired for meaningful response to

\begin{footnotesize}
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\item \textsuperscript{313} Moxey (2008) p. 131.
\item \textsuperscript{314} These caveats are shared even by other proponents of a reduced distinction between perceiving subject and environment. See, for example, Clark et al (2006).
\item \textsuperscript{315} Rao (2006).
\item \textsuperscript{316} Rao (2006) unnumbered.
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sensorial stimuli, which are actively sought and are an essential precondition to presence and understanding; yet, at the same time, the image can also be said to be an agent, as it elicits emotions and, through modes of interaction and interfacing, allows for a set amount and type of communication at any given time. This mediation is a fundamental stage in the process of apprehending, furnished with its own rules and limits: quoting psychologist J.J. Gibson, Rao reminds us that 'surfaces have affordance meanings (horizon, angles, surfaces, grading) and marks on a surface formed by a graphic act have referential meanings'.\footnote{Rao (2006) unnumbered.} This insistence on 'surfaces' is important, but needs clarification. These 'affordances' that Gibson attributes to images as surfaces also exist within three-dimensional objects; and within objects that give the illusion of three-dimensionality. Therefore, if we take 'surface' in its expanded meaning of 'a point of contact between object and user' (or, according to our discussion so far, actor and actor), we come to an important realisation – the apprehending, and interaction between images as actors, and users is always controlled by, guided by, and negotiated through a variable 'interface' that, by large, contributes to determining the intellectual and cultural place of the artefact, the user, and the interaction engendered.

As a means of moving our discussion towards one of the central topic of the chapter – the digital – while further exploring the complex points raised so far, I would like now to address (always keeping the 'iconic turn' in mind) the specificities of a certain category of interfaces, and therefore object - user relationships: digital ones. By discussing what an interface, and interfacing are in the context of digital artefacts we will come closer to an useful understanding of digital items as ontologically sound entities, different yet related to the physical realm; and also, we can compare these 'new' interfacing modes with more traditional ones, and see what kinds of cultural, social and political implications these new modes might have for traditional institutions, and cultural gatekeepers – such as digital museums.

A transitional text, that connects the theoretical concerns about images we have explored so
far and their digital specificities, is Barbara Stafford's collection of essays Good Looking: Essays on the Virtue of Images. In this text Stafford seeks to show, by juxtaposing historical materials and discussions of current, digital modes of display and apprehending, how both the distrust toward images' epistemological relationship to knowledge and truth that Mitchell and Boehm remarked upon, and the continuous re-mediation of how images are understood through different media and evolving cultural context is not endemic to one period or the other, but rather transversal to human history. In other words, what she calls the 'imagist' attitude toward culture (which is a project nearly synonymous with the iconic turn') turns out to be a project that is ongoing throughout most of modern history; with variations according to available communication channels and media. 

Compared to Moxey and Rao, Stafford is far more polemical and politically minded with regard to the artificial hegemony of linguistic and textual discourse over the visual and the perceptive: she goes as far as characterising the position of the image throughout modern culture as 'the throwaway medium'. This polemic is coupled, in more than one instance, with scepticism toward the social potential of new technologies: such scepticism is oriented not only towards specific technological platforms, such as ECG scanning and other instruments for the visualisation of the body; but also, more generally, toward a general contemporary milieu that is characterised as disjointed, depersonalised and disconnected, substituting meaningful visual representation with a flux of images that, once argued as being meaningless spectacle, end up becoming just that. While not outright nostalgic, I do find Stafford's scepticism at times excessive in characterising the image as a hapless victim of contemporary discourse: nonetheless, her parallel analysis of historical and current trends is relevant, as it allows us to see how certain imaging paradigms for the

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319 A very well-researched case, which is only tangential to my topic and I will therefore not explore in detail, is the case for the deceptive vs. indexical nature of photography and filming. For background see, for example, Gunning (2004).
320 For use of the term, see for example essay 4, 'The New Imagist'. Stafford (1998) p. 68-82.
321 This perception of Stafford's attitude is not exclusively my perception: see Rao (2006).
322 Stafford (1998) p. 11. There seems to be a double meaning to the image as a throwaway medium: a commentary on the subordinate ontological and epistemological value that images held, and hold with regard to the written and language; and, related, a comment on the devaluative power of pervasive image diffusion, in Walter Benjamin's tradition.
contemporary digital era can be understood not as 'revolutions', but rather as alternative understandings of traditional ways of seeing – and perceiving.

How does Stafford actually characterise, with relation to the historical, the status of the visual and the perceptual in the digital era? Stafford adopts a dual stance, recognising the difficulties that the digital engenders with regard to display and interfacing, but also recognising that we are witnessing, thanks to the digital revolution, a culture-wide re-ignition in the image *per se*, 'reawakening a deadened appreciation for meraviglia' that is possible when the image (and, I would add, the digital object) is encountered sensorially as a presence before a sign.\(^324\) Elaborating further on this dichotomy, Stafford then introduces various corollary observations. She states that, on the side of scepticism, 'powerful new media has exacerbated the nostalgia for primitive environments not yet besmirched by the duplicities of the video screen or the computer monitor': in other words, as re-mediation occurs, digital ways of interfacing with digital entities (of course, through digital interfaces) cannot help but being but in a hierarchical relation – of subservience, superiority or coexistence – with existing 'typologies' of non-digital being, and non-digital interactions.\(^325\) Also, this line of thinking implicitly seems to suggest that supposed 'fear' of images as epistemologically misleading sophistry does not only concern the 'item' – image, but also frameworks and interfaces of apprehending, and in a digital context, interfaces that gate access to images or objects become problematic instruments.\(^326\) In Stafford's own words:

'In the domain of the artificial, where scenery is endlessly painted through the agency of hidden numbers emitted by a CD-ROM player, the memory of silent texts continue to evoke nostalgia. Late twentieth-century Luddites yearn for some supposed pristine existence before the advent of on-screen displays and home cinema.'\(^327\)

\(^{326}\) Stafford (1998) p. 46.
\(^{327}\) Stafford (1998) p. 44.
While the characterisation of digital sceptics as Luddites might be at least partially far-fetched and unjust – few critics would deny the importance and tangible advantages of digital technologies to that extent – I think there is a truth in Stafford's claim: specifically, we are reminded again that the negotiation of the philosophical qualities, and limits, of objects with digital elements is an ongoing project that rarely happens without struggle, false starts, and contention. As we will see later in this chapter, this is very much the case for the museum, and even more when powerful platforms such as the *Google Art Project* are evoked. I will now introduce one of such possible philosophical descriptions of digital objects: one that qualifies them as 'digital-beings'.

**Digital-being**

The 'qualities' of the digital object (including digital reproductions of artworks) that make it a prime field of contention with regard to notions of materiality, perception, interfacing and ontology are explored in more detail in a paper by communications researcher Joohan Kim.\(^{328}\) A brief overview will show us that more precise terms on what a 'digital item' actually is might be useful for further exploration of interfacing, embodiment, presence, and the cultural implications these processes have for new and old cultural stakeholders.\(^{329}\)

Kim presents us with a fundamental, yet complex and multi-faceted question, that encapsulates the conundrum that the image, the digital, and their coexistence pose to those who have to understand them, and work with them:

'Are these computer files and programs another sort of "throughtly beings," since we can perceive, interact with, work on, use as a tool, and even touch them? Or, are they merely "non-things" ... because they

\(^{328}\) Kim (2001).
\(^{329}\) Kim (2001).
are not "real" and do not have material basis nor specific places in objective time and space? Or, rather, are they close to Plato's "idea" (or "eidos"), as they are not constrained by spatio-temporal conditions and may be even "eternal" due to their perfect duplicability? Or, are computer files just a part of "the world of dreams", since they are real only when we are dreaming and can be completely and instantly "deleted" without leaving a trace? Can we say computer programs are a kind of "tools" and can consist of "equipmental contexture" even though they are not "thingly beings"? When we are reading the Web page with our computer, can we say that the Web page is here and now? Can we determine the specific time and place of the Web page or any? thing that we can encounter in the Internet? Can we say that the cyberspace called the World Wide Web is a part of the world where we meet and interact with other Daseins? Can "being-in-the-World-Wide-Web" be another way of becoming a "being-in-the-world"?

This lengthy quote expresses well, as relevant to a digital context but also beyond it, the problem that, I think, Mitchell and other were trying to get to when they addressed a supposed 'fear of images': how does technological re-mediation impinge, and modifies, the ontological status of images as agents? The problem is not merely philosophical or semantic: it has fundamental practical ramifications, since the status of the digital item, and therefore the relationships with individuals and the cultural milieu at large that such item entertains; in other words, the cultural relevance of the digital item determines how it might be included or excluded from certain cultural discourses - such as museums.

The solution proposed by Kim is, essentially, a new categorisation. He suggests 'digital-being' as a new ontological (and, consequently, epistemologically defining) class of beings, which includes 'all kinds of digitized information that is, a series of bi-nary dig-its or bits that can be ultimately perceived by the human body' – images included. How does Kim's re-definition help

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330 Kim (2001) p. 88. Note, among his introductory examples (too lengthy to be discussed in detail), Kim mentions explicitly visual material: he presents as one of such 'digital beings' a billiard ball and cue in a computer game. Therefore, the quote does not specifically cite the visual, but is surely applicable to.

331 Kim does not use the term 'agent': I prefer it, however, since it expresses better both the idea of a 'thing', and at the same time the interactive and mutual aspect (which Kim addresses implicitly) that makes the digital being a (at least seemingly) pro-active element by design.

us in making the case for a digital object that is apprehended not at the receiving end of language discourses or disembodied gaze, but as an agent that, through interface, both facilitates and defines modes of communication that are embodied and 'presence'-based? One clue is in the central role that Kim gives to the digital-being's quasi-physical manipulability through interfaces. According to him, 'digital-beings are not physical objects; however, they can have several “thing-like features” that have long been regarded as unique to the nature of physical things. Digital-beings have certain degrees of durability, substantiality [length, height, surface properties] and extensions': digital-beings, which include for example images, but also non-physical interfaces (for example, a Windows desktop, or a framing device for an image), are not completely akin to the physical, and possess novel qualities – such as the possibility to be stored indefinitely; yet, in final analysis, they also possess fundamental and engendering similarities to physical objects when it comes to interaction, interfacing, apprehending and, generally speaking, 'experiencing'.\footnote{Kim (2001) p. 92.} Essentially, the digital-being is 'a kind of “thing” with quasi-bodily presence'.\footnote{Kim (2001) p. 92.}

According to Kim, another characteristic that make digital-beings notable is their 'usefulness': which is to say, the possibilities for manipulation and channelling that they afford.\footnote{Kim (2001) p. 95.} While Kim uses this observation to argue for digital-beings' similarity to physical-beings, I think that the issue does not resolve itself so easily. This 'usefulness', which it seems to me is another word for the impact that digital-being's embodied features potentially have, is logically something that accomunates digital-beings to physical-beings; yet, it is also a marker of difference. Part of the reason why we call of a 'digital revolution' is that digital-beings, and the physical supports they inhabit, allow us to do also more and different things, compared to what exclusively physical-beings afford: they open up relationships, interfacing and operations that are, somewhat counter-intuitively,
not unlike what physical-beings permit; yet, very unlike both quantitatively, and qualitatively.

I would argue that it is the interface – in its multiplicity of forms and levels – that makes this empowering paradox possible, while at the same time making digital-beings a cultural point of contention. In the museum context, for example, digital-beings (for example, reconstructions of objects /spaces; interactive artworks; or simply just reproductions) are extensively used as teaching tools, both in a pedagogical context and through less mediated interaction. Such digital beings can, however, be experienced exclusively through some kind of interface, be it physical (a kiosk or interactive station) or digital in itself (objects within a reconstruction of a room). Digital-beings, in the museum and otherwise, hold therefore great experiential potential, which is controlled by the means of fruition – the interface. I will now briefly discuss interfaces and interfacing, referring mostly to material by digital theorist Lev Manovich, and film theorist Mark Hansen: my aim is to reach a definition of the digital interface-being complex that highlight the similarities, and divergences with physical-beings when it comes to apprehending; interaction; interfacing and manipulation. Eventually, this will lead into discussion of how cultural institutions – such as museums – might find such similarities and divergences empowering, or threatening.

**The Interface-being Complex: Mutual Mediated Interaction with Digital-beings**

The most comprehensive account of the digital interface complex is provided by Lev Manovich in his seminal book- length work *The Language of New Media*. The work introduces us to a bewildering array of ideas and paradigms with regard to machine-machine interaction; machine-human interaction; and the interface, to the point that providing a comprehensive summary is nigh impossible. My illustration will therefore (echoing the book's own 'visual index' that acts as an introduction) feature ideas roughly in the order Manovich presents them, with some measure of

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personal interpretation and connection-making.  

Manovich presents us with a basic, yet fundamental concept: 'All computer users can 'speak' the language of the interface. They are active users of the interface, employing it to perform many tasks: send email, organize their files, run various applications, and so on'. This remark is a necessary underpinning, as it emphasises that interaction with and through interfaces is not an occasional event, reserved only for insiders or the tech-savy: everyday, multiple times per day, we all act upon and through interfaces in order to engage with a digital-being. The necessity to investigate and understand such digital-beings, therefore, is particularly urgent as it is likely to have an impact on large sets of the public, not to mention institutions that partake in the contemporary 'network society'.

Following this key remark, Manovich presents us with a series of questions: 'What are the ways in which new media relies on older cultural forms and languages and what are the ways in which it breaks with them? What is unique about how new media objects create the illusion of reality, address the viewer, and represent space and time? How do conventions and techniques of old media—such as the rectangular frame, mobile viewpoint and montage—operate in new media?' Breaking down this statement of intent reveals the consonance of Manovich's discussion not only with our theoretical discussion so far, but also with regard to our ultimate intent of analysing some museum-related digital-beings. The accent is, as it was in Moxey and Kim, on the affordances that interfaces (as access to digital-beings, and as digital-beings themselves) bring to the table, especially with regard to perception, manipulation, and an overall sense of 'being there', of acting on something that has its own existence and epistemological charge. Additionally,

337 See Manovich (2001), Introduction.
338 Manovich (2001), p. VII.
339 For the origin of the term, see Castells (1996). In brief, a network society is 'a society where the key social structures and activities are organized around electronically processed information networks. So it's not just about networks or social networks, because social networks have been very old forms of social organization. It's about social networks which process and manage information and are using micro-electronic based technologies.' (Castells and Kreisler (2001)).
340 Manovich (2001) p. 34.
341 Relevant to this and the following point, note also that, according to Manovich, interaction is not merely a bodily act, but a body-psychology continuum: 'When we use the concept of “interactive media” exclusively in relation to computer-based media, there is danger that we interpret “interaction” literally, equating it with physical interaction
Manovich introduces us to the importance, already implicit in Mitchell, Boehm and especially Stafford, that the process of re-mediation holds in putting into a biunivocal relationship former interfacing paradigms, and more recent (for example, digital) ones: as we will see in the case of the *Google Art Project* and the *Virtual Leonardo Studio Tour* of the National Gallery of London, new modalities of interfacing, interaction and 'being there' cannot escape comparison and dialectical relationships with traditional, established modes of accessing works of art.\(^{342}\) Manovich, while including in his analysis the 'remediation' paradigm, refers to this process as 'transcoding'.\(^{343,344}\)

Beyond these general concerns, Manovich discusses at length the 'digital interface' proper, addressing in detail its aesthetics, peculiarities and commonalities with other modes of perception.\(^{345}\) Manovich introduces the topic in a manner that, at least apparently, runs counter to arguments on the iconic turn and the sensorial nature of digital interaction, as he possibly remarks on the interface as linguistic carrier when he states that that 'in semiotic terms, the computer interface acts as a code which carries cultural messages in a variety of media'.\(^{346}\) Yet, he soon expands the horizon of his discussion, moving into concerns of interaction, embodiment and perception. 'The interface shapes how the computer user conceives the computer itself. It also determines how users think of any media object accessed via a computer. Stripping different media of their original distinctions, the interface imposes its own logic on them. Finally, by organizing computer data in particular ways, the interface provides distinct models of the world': in other words, the interface is not merely a layer that is added on top of a pre-existing 'item', but an essential and, Manovich argues, inseparable part of the digital-being – an element of a whole that re-discusses the digital-being as an artefact, as an ontological item, and as a piece of human

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\(^{342}\) While not addressing museums per se, consider also the following quote: 'The computerization of culture not only leads to the emergence of new cultural forms such as computer games and virtual worlds; it redefines existing ones such as photography and cinema.' (Manovich (2001) p. 35)

\(^{343}\) Manovich (2001) p. 95. I have discussed at length Grusin and 'remediation' in Chapter One (see also Bolter et al, 2000).

\(^{344}\) For the section on transcoding, see Manovich (2001) p. 63-64.


\(^{346}\) Manovich (2001) p. 76.
culture. Emphasising this final point, Manovich introduces us to the term 'cultural interface', arguing that 'we are increasingly “interfacing” to predominantly cultural data: texts, photographs, films, music, virtual environments. We are no longer interfacing to a computer but to culture encoded in digital form': the mechanical aspect of the interface, and the actions we undertake upon and through it, recedes in favour of perception, relating, embodiment, intellectual communication and other 'cultural' actions. The interfaces becomes not simply a carrier of meaning, but also a carrier (and means) of action and experience.

It can be said, therefore, that our 'experience' of the interface, with the specificities it entails (according to Manovich, an eminently spatial, post-modern experience of sensorial wandering through a rhizomatic database) actively shapes our understanding of the digital -being, and of traditional forms of sensorial experience, vision, movement and display with relation to cultural artefacts, in ways that involve yet transcend the mechanical praxis of clicking, moving a cursor or grazing a touch-screen - descending into cultural experiences of presence and embodiment.

According to Manovich the digital interface has the potential of re-defining the remedial impact of traditional 'ways of interfacing'. In parallel, the interface's inseparability from its content, re-defines those very contents, and their cultural status as well. Throughout *The Language of New Media*, Manovich addresses from a multitude of angles the process by which, in our interaction with digital interfaces / digital-beings, the inherently 'human' qualities and dynamics of perception, presence, embodiment and interaction are not inevitably reduced to the machinic terms set by technology, but are instead re-shaped in an organic and, arguably, re-humanising process of 'being there'. Once again, we need to keep in mind that the issue is not merely academic: as we will see in the case of the *Google Art Project*, debate rages over the potential of digital interfaces / digital-beings to enrich or, conversely, impoverish traditional and – so the argument goes – culturally empowering ways in which the public can relate to art.

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Manovich (2001) p. 76.
This line of thinking is explored, in general terms and also within a specifically artistic context, by digital media and film researcher Mark Hansen in 'Seeing with the Body: The Digital Image in Postphotography'. In this article Hansen retraces a paradigm that, in many ways, runs parallel to the various renditions of the iconic turn we have previously explored: according to a number of thinkers (in particular John Johnston and Paul Virilio) the digital has given birth to a new kind of visual perception, a 'generalized and extended condition of visuality' through depersonalised and disembodied mechanical interfaces, but also akin to disembodied machines, that Johnston brands as 'machinic vision'. According to Hansen, this 'machinic vision' is indeed a contemporary dominant mode of vision, but one that has to be either resisted or meaningfully engaged:

“... what the phenomenon of machinic vision foregrounds is the urgent need, at this moment in our ongoing technogenesis, for a differentiation of properly human perceptual capacities from the functional processing of information in hybrid machine-human assemblages, of vision proper from mere sight. Only such a differentiation can do justice to the affective dimension constitutive of human perception and to the active role affectivity plays in carrying out the shift from a mode of perception dominated by vision to one rooted in those embodied capacities – proprioception [the body's sense of position in space and movement] and tactility – from which vision might be said to emerge.”

Hansen's discourse exists in parallel and overall addresses the same cultural shift that is encapsulated in the emergence of the previously described 'iconic turn'. 'Machinic vision' is the logical discursive outcome of imposing upon the digital-being the traditional modalities of visuality and semiotically-inflected textual reading that Stafford argues against: the methodologies developed throughout the course of the 'linguistic turn' fail to encompass holistically the human -digital experience, as they merely register the technological means by which the digital is exclusively

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350 See Hansen (2004) p. 60, and Johnston (1999). It could be argued that this definition of machinic vision is, essentially, a machine-powered expansion of the 'distracted viewing' Walter Benjamin diagnosed in the conditions of modern visuality (Benjamin (ed 2008)).
 apprehended as circulation of data. If we accept machinic vision as a paradigm, 'the digital image is not really an image at all: far from being a correlate of the imaginary domain of sense experience, it designates the 'objective' circulation of digital data'. Human and embodied modalities of perception are short circuited by the digital image's existence as 'disembodied', and the act of seeing becomes an alienating mechanisation of perception. As the passage by Hansen I quoted suggests, a way of overcoming this impasse is a reconsideration of the modes of apprehending implicit in the 'iconic' context of contemporaneity: a sidelining of disembodied, purely textually-oriented vision in favour of other, more embodied modes of perception, which are then to be reconsidered in light of crucial ideas of rapport and affection.

Hansen deploys a number of examples to explain the specifics of this 'post-machinic' paradigm of perception, all of them being artworks conceived in the context of Net Art: that is to say, works that are (at least in intention) positioned at the forefront of a discourse that presents itself as innovative and problematic with regard to perception and relational practices. These kinds of artworks, in their exploratory; educational; and interactive slant, reflect the context in which they appear: the digital constructivist museum, a place in which issues of perception and relation become avenues by which the visitor's knowledge is dialectically augmented by having to engage, choose and sometimes defend choices taken. They are quite different from the material presented, for example, by Google Art Project; yet, certain dynamics of apprehending and interaction are remarkably consistent across the two.

A paradigmatic case that Hansen presents is a video piece by Waliczky and Szepesi, The Garden. In the video work an infant clumsily moves within a vividly rendered three-dimensional space, the camera following the child as it seemingly interacts with an array of digital...
objects: while the human figure is (or at least seems to be) extracted from a live capture, the environment is visibly synthetic, from its bright colours to the peculiar fish-eye perspective that the hypothetical camera lens employs.\textsuperscript{358}


The child, and by extension and 'presence' the user as well, is an embodiment of the post-machinic modality of perception, as she explores and relates to the digital environment: she touches virtual items, responds to changes of lighting and space, re-enacts in the digital context proprioceptive activities that would not be out of place in a 'real' environment. Through the metaphor of child-like pre-intellectual engagement, we are introduced to a typology of interaction that does not limit itself to machine mediated disembodied gazing, nor detached language-informed textuality (both are impossibilities, given that the digital space is quite literally 'enclosing' the

\textsuperscript{358} A perspective the artists dubbed 'waterdrop perspective' as it resembles being on the inside of a water bubble (Hansen (2004) p. 66)
human actor), but rather engenders acts and rapports to elements of a digital space, of which the human 'presence' is the centre. The waterdrop perspective morphs the environment and wraps it around the human, generating a space that cannot be gazed as pictorial *tabula*, but has to be experienced through the senses – as interaction shapes its very geometry in real time. The partial indexicality, that is to say the mimetic content of the environment presented in *The Garden* (including the title) is not made wholly irrelevant, but it is at least subsumed: its referentiality loses relevance in the face of the mutual reshaping that the human and the digital enact upon each other.

Addressing similar thematics as the examples presented by Hansen is Julian Oliver's *LevelHead.*

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359 A video of the artwork is visible at [http://www.youtube.com/watch?v=UJYKSFANuaQ&list=UUN8Aax8XICzHJzLScrViWQ#index=309&feature=plcp](http://www.youtube.com/watch?v=UJYKSFANuaQ&list=UUN8Aax8XICzHJzLScrViWQ#index=309&feature=plcp)

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Fig 2: Julian Oliver's *LevelHead* (2008).

The interface tool is a physical cube, with a screen on each face: each screen opens into a different visual space (a room), each space logically interconnected to the others through doors. In these virtual spaces a simple, stylised human figure tries to find its way out: the object of the 'game'
is to manipulate the cube in order to direct the figure through the various spaces, toward the exit. The voyeuristic drive that might push one to merely look into these fascinating miniature virtual spaces, as one would do in the case of a fish tank, is mediated and mitigated by the need to act mechanically upon the interface in an extremely granular manner (the cube seems quite responsive to movement) in order to fulfil the goal of the game. The interface is haptic (that is to say, based on tactile communication with, in this case, a responsive avatar of sorts), relates to the movement and functions of the user's body in a straightforward way (there are no abstract 'symbols' to be interpreted on the cube – action equals reaction), and opens up a virtual space that is available for manipulation through one's own body, as well as an 'avatar' of sorts that does the actual moving from room to room. Possibility of spatial and sensorial rapport (both positive and negative) with a virtual entity is suggested, and ultimately LevelHead engages on various levels the idea of the 'distance' generated by interfaces – suggesting that presence, rapport and haptics might provide a non-machinic, non-textual avenue for closing of such a distance. Implicitly, it can also be said to metaphorically prefigure digital 'places' – such as the digital online museum – as places of sensorial engagement with digital-beings.

Another rather visionary and discursively significant work that addresses the issues of interfacing is Tom Gerhardt's Mud Tub (2010). Billed by its creator as a 'tangible interface', the tool takes to an extreme the idea of embodying the relationship between user and digital-being, by having the former negotiate an interface that stands ideologically at the far end of the spectrum from the sleek, clean, 'disguised' and unobtrusively invisible interfaces and tools the hardware (and software) market constructed most of its user-friendly image upon. A tub filled with mud is manipulated by users with their bare hands: the movements of the mass of mud, by interfacing with a remote computer, allow manipulation of a digital visual overlay over the mud itself, so that users

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360 A video is viewable on YouTube. [http://www.youtube.com/watch?v=4kb0u2jPotU&list=UUN8Aax8XICzHJzLScciViWQ&index=104&feature=plcp](http://www.youtube.com/watch?v=4kb0u2jPotU&list=UUN8Aax8XICzHJzLScciViWQ&index=104&feature=plcp)

361 [Gerhardt (2010).](http://tomgerhardt.com/mudtub/)

362 Lev Manovich has discussed the issue at length in a number of his publications. For examples, see the appropriate chapter in *The Language of New Media* (2008, p. 75), or his short essay *Friendly Alien: Object and Interface* (2008).
can literally control video game interfaces by acting upon heaps of moist soil.

Fig 3: Tom Gerhardt's MudTub (2010).

The installation (that is also available as a commercial application) satisfies all the requirements of an interface, and falls in line with contemporary trends, both experimental and commercial, toward boundary-pushing away from codified interaction models; yet at the same time injects into the interaction with the machine not only the sense of the haptic and the direct manipulation of living matter, but also a granularity of states, of possible degrees of interaction that maybe only the fluidity, the 'analog nature' of organic matter allows.\(^{363}\) In Gerhardt's own words, “instead of having an user click a mouse button with their pointer finger, or gesture with two fingers in a specific way, he or she is simply asked to create a state in the Mud Tub surface, which can be accomplished in any manner of ways, including digging, melding, pressing, piling, etc.”\(^{364}\) Through this array of physical, embodied actions that create a rapport between user and machine by way of an 'hybrid' interface, the danger of disembodied 'machinic vision' is exorcised, and the sensuous and

\(^{363}\) As acknowledged by the creator himself (Gerhardt (2010)).  
\(^{364}\) Gerhardt (2010).
the bodily is re-introduced into our rapport with digital-being.

Embodyment, Presence and Telepresence: Leonardo Virtual Studio Tour

The next fundamental element of the digital-being / user interaction, 'presence' in its various declinations, will be discussed through a brief analysis of a museum digital product, created in conjunction with the celebrated exhibit of works by Leonardo da Vinci at the National Gallery of London between 2011 and 2012. The exhibition, which smashed attendance records and prompted an extension of opening hours and dates by the Gallery, was also occasion for a series of innovative media experiments in distance museum-going, and integration of digital and physical media / places of interaction. The opening night of the exhibit was broadcast live in forty cinemas across Britain, where full capacity was recorded almost at all venues, as well as being shown (not in real time) on Sky Arts television. Along with the exhibit, an application for smart phone and tablet computers was developed by advertising agency Euro RSCG London and sponsored by Credit Suisse. The App Leonardo: The Studio Tour offers a 3D on-screen reconstruction of Leonardo da Vinci’s studio, featuring a range of objects that can be interacted with, in order to gather more information on painting techniques, materials, art practices and other historical information.

365 “Leonardo da Vinci: Painter at the Court of Milan”, 9 November 2011 – 5 February 2012. Kickstarted by the recent restoration of The Virgin of the Rocks by the National Gallery, the exhibit collected works produced in the 1480s and 1490s.
368 Euro RSCG London’s web site (now renamed Havas Worldwide London): http://www.eurorscg london.co.uk/ The website itself is an interesting enterprise, as it relies entirely on Tweets, rather than traditional Web design platforms. As such, most of the information on the application that can be gathered by Euro RSCG London is in the form of Tweets by collaborators, with links to external sources as documentation.
The app, once downloaded, can be seen at full screen on a tablet computer. The introductory screen presents a view of the rendered Leonardo studio, with a semi-transparent text overlay giving basic information on the app, remarking that ‘the design of Leonardo’ studio is inspired by details from his paintings of the period. Upon clicking ‘explore’ the text disappears and the viewer can look 360 degrees within the studio, from a central fixed point. The environment features a single room, in which items such as canvasses, wooden furniture, vellum and papers, a sculpture of a horse’s head are strewn about in a seemingly random fashion, simulating a busy workshop. In total the studio includes nine interactive elements, including a few paintings; a table with art materials; and a book of sketches and a sculpture, all of them recognisable as interactive by the white arrow bobbing over them. Upon selecting one, each item provides a new screen with a brief (a couple of paragraphs of average) text description, as well as some mind of visual material: for example,

*Leonardo: The Studio Tour.* Introductory screen, bottom. No hints is given to which elements of Da Vinci’s paintings might have been deployed: the ones the application focuses on, at least, do not show any kind of studio environment or element.
clicking on the table with pigment-making tools gives a spinning 3D rendering of the table itself, and selecting *The Virgin and Child with Saint Anne and Saint John The Baptist* provides a zoomable image of the cartoon, not unlike the lower resolution images in *Google Art Project*, or the explorable version of *St.John the Baptist* (also by Da Vinci) created for the an exhibit in Milano, in 2009.370

![Image of C2RMF interface](http://merovingio.c2rmf.cnrs.fr/iipimage/showcase/StJohnTheBaptist/)

Figs 4: Leonardo Da Vinci’s *St. John the Baptist* as seen through C2RMF’s interface, which allows for close-up exploration in colour, infra-red reflectography and X ray.

The *Leonardo: The Virtual Studio Tour* application has attracted both positive and negative feedback. A few pointed out the relative lack of content, inconsistent historical accuracy and lack of truly educational material, in spite of the boasting promises made by its creators.371 Most have, however, avoided deep analysis of the interactive model the application espouses, and limited themselves to complimenting the visually captivating interface and the diverting interactivity it...

370 Application is viewable at [http://merovingio.c2rmf.cnrs.fr/iipimage/showcase/StJohnTheBaptist/](http://merovingio.c2rmf.cnrs.fr/iipimage/showcase/StJohnTheBaptist/) (C2RMF (2012)).
371 Deborah Mends, in her blog post “Apps: Leonardo: The Studio Tour”: ‘In reality you don’t learn that much, there are historical and technical inaccuracies, and encapsulating Da Vinci’s technique in a few lines seems a bit thin.’ (Mends (2011)).
elicits. Attention seems to have focused, therefore, more on the quality of the material presented, than its characteristics. While not necessarily a pinnacle of digital-being design, a cursory analysis of Leonardo: The Virtual Studio Tour could guide us in exploring yet another element of the digital-being / user interaction: that is, presence and its digital relative, telepresence.

The term ‘telepresence’ was first employed by Artificial Intelligence researcher Marvin Minsky in 1980, when state-of-the-art technology in the remote interaction field mostly meant operating machines at a distance, within a seemingly machinic paradigm of vision and interfacing: it is therefore little surprise that Minsky’s definition of ‘telepresence’ doesn’t really touch on the human side of the equation, rather emphasizing the technological and operative benefits in researching further interaction at a distance with machines. A more culturally and socially inflected definition of ‘telepresence’ is provided by Jonathan Steuer in his 1992 article “Defining Virtual reality: Dimensions Defining Telepresence”. Here Steuer seeks to define telepresence as ‘the experience of presence in an environment by means of a communication medium’, further adding that:

“Presence” refers to the natural perception of an environment, and “telepresence” refers to the mediated perception of an environment. This environment can be either a temporally or spatially distant “real” environment (for instance, a distant space viewed through a video camera), or an animated but non-existent virtual world synthesized by a computer (for instance, the animated “world” created in a video game).

Essentially, telepresence is a condition in which, during some kind of experience of the digital, the physical world recedes to the background, and the user's experiential flow is focused

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372 The Creative Director of the project himself, Gerry Moira, mildly described the app as 'something diverting and informative to do in preparation for viewing the long-anticipated exhibit.' (Euro RSCG London, 2011)).

373 Minsky (1980). It should be mentioned, however, that Minsky does touch on one of the main issues of telepresence, which is ‘presence’ as a state of interaction: ‘The biggest challenge to developing telepresence is achieving that sense of “being there.” Can telepresence be a true substitute for the real thing? Will we be able to couple our artificial devices naturally and comfortably to work together with the sensory mechanisms of human organisms?’


375 Steuer (1992) p. 6 for both quotes.
entirely on the digital environment, which becomes the site of perception, interaction and rapport.\textsuperscript{376}

According to Steuer, telepresence is encouraged by vividness (quality of the perceptual payload) and interactivity (further defined by range, speed and mapping or responsiveness): 'It seems that vividness and interactivity are both positively related to telepresence; that is, the more vivid and the more interactive a particular environment is, the greater the sense of presence evoked by that environment'.\textsuperscript{377}

An important element of Steuer’s analysis is the downplaying of the machinic aspect of the experience of telepresence, while emphasizing the experiential aspect of what, perceptually and bodily, telepresence and immersion entail. In particular, paramount is the new model of communication with the digital-being that is established through telepresence; one which 'focuses attention on the relationship between an individual who is both a sender and receiver, and on the mediated environment with which he or she interacts'.\textsuperscript{378} Within a digital context, I find this definition significant, as it meshes well with theorisations of digital-being apprehending, and 'bodily vision' such as those proposed by Kim and Hansen.\textsuperscript{379} Since it emphasises communication strategies that displace traditional sender – medium – receiver systems of communication, favouring instead circumstantial encounters between digital and non-digital agents that are 'embodied' (that is, they have a seemingly sensorial tangible 'being there') within a responsive environment, one can also see a coincidence between Steuer’s telepresence, and the iconic turn: both espouse a model in which, at least in theory, we can 'encounter' things and digital-beings through the instruments of the technological interface – but in a way that, eventually, makes such an interface recede to the background, making room for quasi-physical perception over self-consciously distanced reading.\textsuperscript{380}

The question then becomes, is telepresence possible without full physical immersion as in

\textsuperscript{376}Steuer (1992) p. 6-7.
\textsuperscript{377}Steuer (1992) p. 15.
\textsuperscript{378}Steuer (1992) p. 7.
\textsuperscript{379}It also neatly describes the experience offered by many digital art experiences, such as those I have described in the first part of the chapter: for what is The Forest if not an attempt to move presence from traditional models of digital communication, toward embodied and sensorial environment interaction?
\textsuperscript{380}Obvious place of departure to explore the topic further is the publication Presence; but also the lengthy bibliography put together by Lombard and Jones (Lombard and Jones (1997)).
stereotypical ‘gloves and goggles’ VR systems, such as when the user interacts through, for example, a mouse, a touchscreen in a gallery, or a handheld device? We can analyse *Leonardo: The Studio Tour* in this direction, with multiple aims in mind: a further exploration of presence and telepresence as key concepts; a first introduction to the application of theoretical paradigms to actual examples of museum-contextual products; and as a blueprint that the main illustrative case, an analysis of *Google Art Project*, will follow closely.

How is the user allowed to interact with this digital space, both as a container of digital-beings, and as a digital-being in itself? The experience overall, I would argue, is characterised by narrow scope, normative modes of interaction, and overall a spatial ‘window’ metaphor that discourages telepresence, coming instead close to the machinic vision Johnston prefigured.\(^{381}\) The viewer is locked into a fixed-centre position, which allows for limited exploration of the actual environment: liberty of movement is restricted greatly, and vertical exploration (tilting down the point of view to look at the non-extant ‘digital feet’ of the viewer) is mostly precluded, and does not add anything substantial to the experience. Essentially, the viewer is limited to a panoramic, screen-like, distant ‘machinic gazing’: there is no discernible avatar or digital body, and the experience is not unlike 'looking into' a space beyond. The experience is also heavily guided, and exploration gated. It seems to be assumed that the viewer would have no actual interest in exploring further the environment itself as a place, as a signifier or as a *locus* where one can be digitally present: centrepiece is the digital room as a container of instructional elements, and the point of view we assume throughout our exploration of Leonardo’s studio enforces this function.

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\(^{381}\) Johnston (1999).
As suggested above, the environment of Leonardo: The Studio Tour is designed to look enticing, realistic and compelling at a surface level; yet its spatial architecture and aesthetics discourage those dynamics of embodiment, non-linguistic perception and, in particular, 'presence' and telepresence that we have described as important to meaningful interaction with digital-beings. The sometimes poor visual quality of its digital-beings; the very limited, and tightly controlled range and depth of interaction the app allows; the unequivocally informational and education aim of the product discourage natural (or semi-natural) immersion, presence and flow. Intuitively, one could ascribe this difficulty to the inconsistencies of the graphics engine, at times surprisingly unrealistic (the fireplace) but, more often than not, hyperreal in a sleek, artificial way that immediately evokes Masahiro Mori's uncanny valley.\footnote{Mori (1970).} I do think however that, much as in the case of the obviously different case of Google Art Project, the visual per se is by far not the dominant crux of the matter. What prevents presence and, given that interaction happens through a screen...
interface, telepresence is the limited, heavily gated quality of interaction; and the distance that is interposed between the user of the application, and the digital-beings with which she is presented. As the user is limited in interaction to a few select objects, chosen for their educational content, the environment by necessity cannot behave indexically to a physical environment: actions that would get a response in the 'real world', and proprioceptically testify to our 'presence', have no follow-up within the app's framework. Conversely, the inability to truly move within the studio space limits further our sense of 'being there', of truly engaging the digital-being, since no sense beyond sight – as a gateway to textual information – is engaged: we are returning to a disembodied, machinic mode of limited interaction that reads the digital-being, the 'image' as merely a gateway to the textual. Leonardo's desk floats in mid-air, unhinged from context and impervious to manipulation, a 'digital-being' only in its being composed by 0s and 1s: much like the studio's space in general, it does not feature nor play upon the principles for an engage-able digital-being set out by Kim.

It might be argued therefore that, without the appropriate level of meaningful interactivity it is impossible to achieve, at least in a 3D environment of the type Leonardo: The Studio Tour belongs to, a telepresence that successfully deploys the inherent, affective qualities of digital-beings. While I would intuitively argue that this difficulty is inherent to 3D environment, mainly due to their uncanny nature, this issue also resurfaces in some ways in the rather different context of the Google Art Project.

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383 My thesis would be, of course, different in case the app was an interactive 'game' proper, with a degree of freedom and ability to at least partially deviate from the educational progression; and, more generally, there is indication that the quality of visuals does have an impact on telepresence (Bracken and Skalski (2009)).


385 This realisation also allows us to remark on the tight relationship between interaction and telepresence: since the sense of 'being there' is given by a concomitance of perception and action, I suggest that it is essentially impossible to evoke presence without complex, quasi-embodied flow (Csikszentmihalyi (1997)) of interaction of the iconic type. The relative failure of most VR current VR environment in truly evoking telepresence (unlike, for example, video games (Chen (2007))) is an indication of that.
In spite of having presented, in the preceding section of this chapter, a few concrete examples of the interplay between the theory I have spent various pages constructing and illustrating, and art oriented practice, so far my discussion has remained, to a large extent, theoretical and abstract. I have addressed the need, eventually, to explore the potential and actual impact of theoretical structures upon contemporary cultural discourse and practice, both academic and professional; yet, I have not properly done so. The next section of this chapter aims at filling this lack by providing, through an in-depth illustrative analysis, concrete examples of how theoretical concerns on visuality, perception, embodiment and interaction do, in fact, have a tangible impact on a relevant contemporary institution – specifically, the museum.

In the previous chapter of this dissertation I have argued, both circumstantially to the topic and as a general rationale for the project in general, the need to acknowledge further the necessity and impact of scholarship and theory in a field that, overall, is dominated by relatively informal professional and technical discourse injected with technoromantic, future-oriented 'emancipatory utopian' thinking.\(^{386}\) While I do think that these professional discourse is useful and necessary in its own right (I will resort to it extensively throughout my analysis of Google Art Project) I am concerned that marginalisation of culture-wide theory by the museum field might result eventually in myopic takes on the field's state and perspectives; or, quoting Manovich:

'I am afraid that future theorists and historians of computer media will be left with not much more than the equivalents of newspaper reports and film programs left from cinema's first decades. They will find that the analytical texts from our era are fully aware of the significance of computer's takeover of culture yet, by and large, mostly contain speculations about the future rather than a record and a theory of the present. Future researchers will wonder why the theoreticians, who already had plenty of experience analysing older

\(^{386}\) For a discussion of the topics of utopia and technoromanticism, see Chapter One.
cultural forms, did not try to describe computer media's semiotic codes, modes of address, and audience reception patterns'.  

In order to reach a more holistic understanding of the contemporary digital museum's place within larger cultural paradigms, more interdisciplinary and theoretical efforts, that meaningfully integrate existing professional discourse, must be undertaken.

I have suggested, in the previous chapter, that the contemporary museum, seeking to establish for itself a meaningful digital presence within the Web, has adopted a variety of strategies and tools, spurred by one overarching motivator: the consonance of 'emancipatory utopian' vision within the museum's own constructivist paradigm; and the Web's social and cultural dynamics, as exemplified by its recent iteration Web 2.0 in particular.  

Looking at the museum professional discourse and the paradigmatic example of the Smithsonian Institution's 'Web and New Media Strategy', we have seen how the museum programmatically embraces the Web as a context in which utopian ideals of remediation, and amelioration of the institution's public can take place. Beyond a bird's eye view of some platforms (blogs, RSS feeds, collaborative platforms such as Wikis) however, we have not looked specifically at the tools that the museum employs in negotiating interaction with its public: partially because of the rather theoretical concerns of the chapter itself, partially because there exists a monumental body of literature concerning tools for audience engagement, in particular with regard to social media.  

Chapter Three, dedicated to crowdsourcing in the museum, will address deployment of a technology that the museum already widely uses.

Somewhere in scope between Chapter One's concern with the conceptualising and programmatic rhetoric of the museum on the Web, and Chapter Three's analysis of an already

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388 It should be remembered that, while concerns over visuality make our discussion so far applicable largely both to online and offline digital-beings (as my previous examples show); the peculiarities of my main example, Google Art Project, and the digital museum mean that, from now on, I will focus more on Web-based dynamics and interactions.
389 For examples of such literature, see relevant sections of Chapter One, and the extensive bibliographies compiled by 'Museum and the Web' conference organisers.
'domesticated' platform, most of the remainder of Chapter Two will look at a platform that could be harnessed by the museum (and, to an extent, already is), yet is still in a phase in which reception is controversial – it still has to be fully domesticated.\textsuperscript{390} As we will see, most of the debate within the professional museum field with regard to Google's digital partnership with museums, the art viewing platform \textit{Google Art Project}, verges around the issues of visuality, interaction, interface, perception and embodiment that we have looked at so far. While the platform is proving, albeit somewhat controversially, to be a boon to the art museum's outreach efforts, its impact on the museum as a cultural agent, especially with regard to long-established (or long-enforced) models of art-visitor interaction, is still in active negotiation.

**Illustrative Case: Google Art Project**

In February 2011 Google launched a new digital venture: the online art-viewing platform \textit{Google Art Project}.\textsuperscript{391} Relying upon a partnership between the Web company and (originally) seventeen Western museums, the enterprise was developed from a side project initiated by Google’s Group Marketing Manager Amit Sood, and aims at providing, on a Web platform, a number of digital reproductions of works from participating museum institutions, which can then be visualised in high resolution and explored through a drag-and-drop, zoom-in-and-out interface. Each participating institution also commits to having one iconic work photographed in ‘gigapixel’ format (about seven billion pixels) with Picasa technology, generating a digital reproduction of resolution hundreds of times higher than other large resolution images commonly found online. These 'super-reproductions' enable the user, for example, to “zoom in to see Van Gogh’s famous brushwork down to the tiniest stroke, or watch how previously hard-to-see elements of an artwork suddenly become

\textsuperscript{390} For background on the 'domestication' of technology, see Hetland (2012).

\textsuperscript{391} The \textit{Google Art Project} is however managed by the Google Foundation, the not-for-profit philanthropic arm of Google Inc.
fully visible – such as the tiny Latin couplet which appears in Hans Holbein the Younger’s The Merchant Georg Gizse.”; or, more controversially, see all the hidden embarrassing and puzzling details Elkins decried in his article. Finally, each work can also be viewed in context, in a lower resolution “gallery tour” mode analogous to the QuickTime VR tours museums have widely employed for a number of years, and more recently by popular platforms such as Google Street View. In this mode, the user can use the painting as a starting point for exploration, albeit with serious limitations in movement and interaction, of the museum context in which the art work appears.

As one might expect, a project of this magnitude and involving such a high-profile partnership has gathered plenty of attention in the general media, the technology blogosphere, and among museum practitioners. Attention from the academic world has been, however, limited so far – in spite of the frequent occurrence in media and blogosphere, no comprehensive survey of Google Art Project exists at the time of writing. Within existing debate, criticism seems to be quite divided: Google Art Project has received acclaim and accolades in equal measure as criticism on the actual reach and value of the impact that the platform might have upon established patterns of museum-going and art-gazing.

On one side, Google itself, and much of the project’s supporters, heavily deploy technologically-driven and utopian notions of democracy, freedom of information and cultural amelioration in order to justify the ideology underpinning the enterprise: access to large resolution digital reproductions will 'make their art more accessible — not just to regular museum-goers or those fortunate to have great galleries on their doorsteps, but to a whole new set of people who might otherwise never get to see the real thing up close'; the brushwork and patina of paintings

392 For quote, and overview, see Sood (2011).
393 According to Elkins', particularly notable is the defecating man that can be seen in a Bruegel painting; or, less notably but even more puzzling, the monstrosities many human figures become once broken down by immense zooming – as in the case of Seraut's bathers (Elkins (2013)).
394 See, for example, Birchall's skepticism in Spurdle and Birchall (2013): 'perhaps Google sees museums less as partners in development than a source of valuable content?'
395 Even discussions by scholars, such as Elkins' criticism, has been published outside of academia (Elkins (2011)).
can be explored with the naked eye and no chance of setting off alarms. The primary aim of the project has always been to promote free public access to information on museums and their works. The Google team itself heavily deploys jargon that suggests lively engagement, goodwill and a basis for the endeavour in human needs and interests: according to Sood the project, 'started when a small group... who were passionate about art got together', will inspire, afford new points of view, and encourage fun engagement for an audience that is, implicitly, assumed otherwise to have little interest, affordance or simply access to art. Even at a glance, when coupled with the company's typically casual tone and approach to its users, Google's own rationale for the project heavily relies on the tropes of informal collaboration, community, engagement and social movement 'from small to large' that we have identified, in the previous chapter, as characteristic of microtopia and emancipatory utopia. In this case, arguably, users would find in Google Art Project utopian emancipation from the constrains of art as a boring, stand-offish or simply far away sphere, irrelevant to the common man's life.

On the other side of the discursive fence, critics and detractors of the project emphasize the practical limitations and fallacies of the content delivery model it proposes and exemplifies. One year after the project’s inception, criticism verges mostly upon the exceedingly narrow range of participating institutions, and art works licensed for scanning; the privileging of iconic works or, conversely, the puzzling exclusion of celebrated paintings, de facto enforcing a canon in which 'someone else is deciding which images are worthy of studying on your behalf – an impulse that surely runs counter to the democratic motivation of the project in the first place. There are also

397 Knowles (2012).
398 Niyazi (2012).
399 Sood (2011).
400 For a refresher on emancipatory utopia, see Levitas (1990) and the relevant section in the previous chapter. While associating a Google project with microtopia might be counter-intuitive at first, it might be convincing if we consider the rhetoric that the project's own birth implies: an initially small, secondary side-project limited in scope that, by virtue of its timely remedial power, becomes something more. As I have suggested in the previous chapter, microtopia always offers itself implicitly as a model for, eventually, a more dominant (if not hegemonic) framework.
401 It should be noted that the first issue at least is being lessened in subsequent iterations of the platform: an early 2012 major expansion of the project expanded participation to another 151 museums from 40 countries; as well as increasing the range of languages and social / learning tools supported by the platform.
worries about the potential exclusion of not easily digitised yet key media, such as sculpture or installation; and the limited, skewed perception of context that the gallery view mode provides, since unlicensed paintings are purposefully blurred, and exploration through the low-quality image environment is clunky and unintuitive – reminiscent of now obsolete QuickTime virtual tours.\textsuperscript{403} In addition, other critical voices emphasise and reiterate long-established fears of the disappearance of 'real' museum visitors (who would find little incentives to leave their home and travel miles when some form of 'experience' can be easily achieved without moving); and eventually museums, in the face of improving technology, in conjunction with decreasing incentives for physical visits.\textsuperscript{404} Others defensively restate that, in the end, even the most magnificent digital reproduction should not, and essentially cannot substitute the auratic experience of seeing the 'real thing'.\textsuperscript{405}

Therefore, we can see that \textit{Google Art Project}, both as a technological platform, and as a cultural enterprise can be considered somewhat controversial. Existing positive and negative criticism, however, hardly scratches the surface of the \textit{Google Art Project}'s significance as a manifestation of current trends of Web exploring, digital visuality, and human-digital sensorial interfacing. Most commentaries merely take the project as an emblematic stand-in for larger perceived issues in museums, education, mass culture or technology. The meagre scholarly commentary available also tends to investigate exclusively paradigms of visuality and vision as they appear in \textit{Google Art Project}, failing to address other methods of interaction and rapport.\textsuperscript{406} There is, essentially, no academic exploration that takes as a departure point the platform itself, analysing it in order to either corroborate or disprove existing commentary; or, further in, relate \textit{Google Art Project} to existing theories of digital display, interface and interaction.\textsuperscript{407}

\textsuperscript{403} Brand (2011).
\textsuperscript{404} ARTINFO (2011).
\textsuperscript{405} Adams (2011).
\textsuperscript{406} A recent and interesting study, which however addresses Google Art Project exclusively from a visual studies / film studies perspective: R Herrera Ferrer (2012). “Google Art Project: la Construccion de la Mirada Omnisciente.” \textit{Telos} 90. The paper compares Google Art Project to Malraux’s de-historicised museum, the first-person omniscient point of view in contemporary cinema, and issues of image copyright to suggest that the project enforces a highly normative and essentially hegemonic mode of seemingly all-powerful omniscient vision, disguised behind an apparently democratic and cultural freedom fostering façade.
\textsuperscript{407} \textit{Google Art Project} has often been compared, usually negatively, to other massive digitisation efforts such as \textit{Europeana}: these comparisons, however, are usually passing comments, and do not set out from an actual
In this section of the chapter I assess *Google Art Project* according to the theoretical paradigms explored so far throughout this current chapter, as well as Chapter One. Setting off from a first-hand exploration of the project as a platform, an application and an interface, I will adopt and combine professional and scholarly discourse to address a few fundamental questions: what kind of user experience does *Google Art Project* offer? As a project that is at the same time a platform, an interface and a medium, what kind of encounter with the digital reproduction does it allow to happen? How does this encounter configure itself sensorially and rapport-wise? Finally, how does it compare to established modes of interfacing with originals and copies of works of art, especially online, but also offline? This last question is particularly relevant since, as I have mentioned previously, theories that easily emerge in Web-specific artwork become more complex and layered when the artefacts one experiences are digital reproductions of ‘real’ objects. Exploring *Google Art Project* will be a good chance to test the effectiveness of the theories I explored in the first half of the chapter, and see if and how they apply to the specific category of digital objects that art work reproductions are. Furthermore, reactions by museum professionals to *Google Art Project* reflect and unveil discourses on the contemporary museum itself: much like the digital media strategies discussed in Chapter One, the rhetoric and philosophy that underpins acceptance, rejection or scepticism by the museum institution (in other words, the process of 'domestication' of Google's platform) can enlighten us on the position of the museum itself relative to issues of digitalisation, Web presence, visitor interaction and education.

*Layout of Google Art Project*

*Google Art Project*'s user interface and overall look is designed by Schematic, a WPP Digital company, and does not follow the predominantly white, stripped-down 'Google template'

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comparative analysis of the two platforms. While such a comparison is surely needed and timely, I do not find *Europeana* to be a case as paradigmatic as *Google Art Project*, which I will focus upon.

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established by the company's search engine, mail service, or scholarly articles portal. Upon opening the front page http://www.googleartproject.com/en-gb/ in Google Chrome, we are presented with a gigapixel reproduction of a randomly chosen artwork, for example Carl Hofverberg's Trompe L'Oeil (1737). 

![Google Art Project](image)

**Fig. 7: Google Art Project's splash page, displaying a random artwork.**

Most of the screen around the reproduction is occupied by a patterned light grey field, which acts as a sort of virtual workspace. Two darker bands occupy the extreme top and bottom: the top band houses links and drop-down menus for navigating 'collections', 'artists', 'artworks' and 'user galleries'; a link to the 'street view' mode; the search engine and the login link. The bottom bar houses legal terms, language selection (18 languages available as of now), FAQs and a lighter grey 'Featured' tab, which slides down the main workspace to offer a selection of three featured artworks.

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408 Now part of WPP Digital (WPP Digital (2013)).
409 Visual results may, of course, vary with different browsers.
from the pool. In more recent updates, most likely in order to emphasise the expanding scope (geographically and culturally) of the project, another scrolling band partially superimposed to the image field has been added: it displays recent additions, a link to new collections available for exploration. While all images can be magnified to a certain degree, only select 'gigapixel' reproductions can be explored through Google Art Project's special magnifying interface, which has seen a degree of re-iteration over time.

Fig 8: Google Art Project exploration of Seraut's A Sunday on la Grande Jatte.

By dragging with the cursor, the gigapixel reproduction can be moved around the workspace, as well as beyond the frame of the browser's window. In a previous iteration of the

As I have mentioned previously, one of the main criticisms that have been moved to Google Art Project is the very limited range, at least initially, of its collections; both geographically, and in range of media. Recent additions emphasise sculpture-based collections (for example, the Carlsberg Glyptotek), and non specifically art-oriented collections (for example, the Kunsthistorisches Museum's collection of armours).

As of 2013, there are 46 artworks available in gigapixel format. Of these, only seven are reproductions of non-European artworks, and only six are from the Twentieth century. Also, likely due to the limitations of three-dimensionality on a flat surface, nearly of them are paintings, draperies, or scrolls.
platform, the gigapixel image could be explored through a sort of 'magnifying glass': by dragging this square section of the interface across the reproduction, as one would do with an actual magnifying glass, one can enlarge specific sections of the reproduction itself against the smaller whole. More recently, gigapixel reproductions can be explored by manipulating a thumbnail, superimposed to the workspace: in this case, the magnified section comes to occupy most of the workspace, while it is the thumbnail that remains static. This last interface iteration is, arguably, more in line with other well-established interfaces for the observation and manipulation of images in a digital environment as it recalls, for example, 'explore' tools used by many photomanipulation programs, and *Leonardo: The Studio Tour*. Upon idling, the navigation bars disappear from the field, leaving the image 'floating' over the workspace with a thin black shadow underneath.

Movement from one image to the other is made relatively easy. Moving the cursor toward the bottom of the workspace produces a semi-transparent slideshow of other gigapixel items available, as well as access to institution-based menus: non-gigapixel images can be magnified by zooming in with clicks, arrows or a mousewheel. Upon idling, the navigation bars disappear from the field, leaving the image 'floating' over the workspace with a thin black shadow underneath. A selected image can be then also be added to one's personal gallery, which is then visible to other visitors and open to comments; it can be shared through a number of social interfaces, such as Facebook, Twitter or Google+. Finally, each artwork constitutes an entry point for exploration of the galleries themselves: a number of participating institutions have provided QuickTime-style panoramas of their physical environments, which the user can navigate in a fashion rather similar to Google's own *Street View* tool.

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412 This interface is still used for the introductory, non-gigapixel image in *Google Art Project*'s splash page.
Fig 9: Google Art Project – the interface that allows exploration of online collections. Along with semi-transparent slideshows and intuitive menus, more traditional-looking thumbnail galleries are available.

Debate around Google Art Project

Google's ambitious project has been the object of a great deal of discussion in the professional museum field. While, as I previously mentioned, there has been very little research to date actually being done on Google Art Project's underpinnings and impact; informal discussion through professional-societal avenues has been, and still is, frequent and rather complex in the range of positions and arguments adopted. Common lines of argument are rather consonant with the concerns explored in the theoretical part of the chapter: digital-beings in relation to museum collections, and the new paradigms of 'aura', presence and interaction the relationship between the two hemispheres entails; the perceptual 'user experience' as central to apprehending, interfacing
and, eventually, constructively learning from museum materials; the complex dynamics by which
the existence and deployment of digital-beings rediscusses established notions of curatorship,
heritage, and the museum's cultural status and authority in general. I will now describe a selection
of the most relevant instances of debate around Google Art Project, and highlight how different
positions and arguments can be contextualised according to the three general typologies I have
presented above. I will particularly focus on discussions and criticism that, instead of merely
speculating on the cultural and social value of Google Art Project, specifically address elements of
the project's interface, modes of display and interaction, and meaning-making through digital tools.

Although not in the context of narrowly academic discourse, one of the earliest and most
talked-about assessments of Google Art Project's potentials and shortcomings has been provided by
art historian James Elkins, in two relatively brief articles: the already mentioned opinion piece for
online magazine TheDailyDot, which focused on appraisal of the platform's potentials for viewing
art; and an article for The Huffington Post, which continues assessment in a more hands-on manner,
by exploring unfinished works of art as displayed on Google Art Project.413 Both pieces are relevant
to my discussion as they constitute a methodological transition between theory-informed analysis,
and professional debates proper. Elkins adopts the register, tone and 'goal-oriented' appraising
attitude that is typical and pervasive in professional museum discourse, yet sets off from a
theoretical place that is very close to Mitchell's, Boehm's, and Stafford's philosophical assessments
of the place of vision and perception in modern culture, relative to understanding and contextual
framing.

In 'Is Google Bringing Us Too Close To Art?', Elkins argues that the immense scope for
visually deep, detail-oriented exploration of artworks that Google Art Project allows is not
necessarily a unambiguously useful, key technical affordance, or 'just a useful tool or a simple
diversion': it is, instead, a symptom of a new 'way of seeing' that is pervasive on the Web, and that
profoundly destabilises established ways of apprehending, understanding and 'reading' works of art

413 Elkins (2011a) and Elkins (2011b).
– raising, in the process, 'an entirely new set of problems'. According to Elkins, there exists a traditionally 'proper' way of looking at an artwork, largely defined by the visual and discursive position, relative to the artefact, that art historian have implicitly assumed throughout the past century: this proper way can be described, in a nutshell, as close; yet not any closer than the artist herself would be. Commenting on the visually disconcerting effects that *Google Art Project's* magnification has on Seraut's *Sunday Afternoon on the Island of the Grand Jatte*, he states:

'What a strange face this is. The woman seems to have eight or ten lavender-colored eyes, a bit like a spider. Clearly Seraut did not expect people to see this. But what, exactly, did he want people to see? That is not at all a simple question; in fact, it's one of the oldest and most important tenets of art criticism. For consideration of a piece of art in these terms, Google Art Project doesn't help at all. You cannot tell what the limits of ordinary vision are. For that, you have to go to the original.'

Let me consider the implications of Elkins' position. According to Elkins, 'vision' is not an end in and for itself, but rather a channel that allows, and enforces access to what the picture is actually about – meaning, content, and context. In spite the centrality of vision to his argument, Elkins' position is essentially well within the bounds of the linguistic, and most definitely pre-iconic turn. Setting off from this assumption, it should not be surprising at all that *Google Art Project* might seem to Elkins 'a zoo of oddities', and the 'endless seeing of the Internet' that the platform represents 'a kind of cultural illness': this because the great degree of visual and, therefore, perceptual magnification that Google's zoom-in tools allow necessarily privileges that range of perceptions, experiences and ways of interfacing that Moxey and other succinctly synthesized as 'encounter', at the expenses of the quest for meaning and context which is at the centre of pre-iconic turn ways of seeing. There is a strong clue in this direction once we recognise the emphasis that

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414 Elkins (2011a).
415 Elkins (2011a).
417 Elkins (2011a).
Google Art Project puts on first-hand encounter and exploration of an iconic kind with the digital-being over educational, informative interpretation and meaning-making. Adopting a rhetoric that frames the active, praxis-oriented exploration of an implicit canon of 'great works of art' as the desirable mode of interfacing, the Google Art Project provides a theoretical framing device for the viewing of art that discounts tenets of traditional visual analysis such as artist intentionality; social positioning, both physical and metaphorical, of the viewer with relation to the work of art; and historical framing as essential to apprehending. The result is what could be synthesised as a 'interface-mediated encounter with a digital-being' that, in the end, offers very little to those – like Elkins – who conceptualise the 'right vision' as a respectfully distant, historically aware gazing into and through a frame, onto meaning and content. Elkins' own use of Google Art Project in his article 'Exploring Famous Unfinished Paintings in Google Art Project' is meaningful to this regard: references to the platform itself are spare and overall somewhat scathing. Elkins' rather traditionally-minded visual analysis only occasionally takes advantage of the tools for extreme magnification available, and arguably the same analysis could have been done with large prints at disposal. The ideology at play behind the article seems to reflect a perceived need to remediate Google Art Project's textual and semiotic shortcomings – reducing the platform to a mere tool for traditional analysis, a new toy for an old game.

For better or worse, Elkins' argument seems to have struck a note with museum professionals, since one of the most substantial collective negotiations of Google Art Project's status within the museum field takes departure from his DailyDot article. This debate, which takes the form of a thread on the popular social media platform for professionals LinkedIn, also expands

418 Sood (2011).
419 Various (2012).
420 Medium-aware could be added to the list. Looking closely at a Parmigianino painting, Elkins remarks that 'the Google Art Project scan makes it look sharper and brighter than it does in the original, which makes it seem even more polished': he reinforces the idea that, even in negative, the original painting has a quality of presence and context that makes it, historically, a more meaningful artefact than the digital-being reproduction in the context of a 'right way to see' (Elkins (2011b)).

421 For example, Elkins alternatively laments the puzzling effects of extreme magnification (as with Ofili's No Woman No Cry), and the lack of gigapixel images in other cases (Dadd's Fairy-feller's Master Stroke). It is not clear at all what warrants, in Elkins' eyes, extreme magnification – and what comes out the worse because of the same.

422 Elkins (2011b).
further the innovative and destabilising scope of Google's platform: discussion extends beyond the simply visual into issues of presence, embodiment and interaction; and issues are refined in a more museum-specific direction. The discussion was started in April 2013 by Henning Wettendorff of CELLA Production, and was open to all members of the group 'Museum in the Digital Age': Wettendorff's post simply linked Elkins' article for DailyDot, with the clear intent of eliciting responses from the group's sizeable membership (5,957 members as of May 2013). Compared to other discussions initiated within the group, and the general size of debates within professional museum fora, Wettendorff's thread proved extremely successful: as of May 2013, it gained 27 responses by 11 members, and was recommended by 12 members. Eventually, conversation died down and little agreement was found on the issues the thread, or Elkins' article raised: nonetheless, many points raised by Wettendorff and the other participants meaningfully bridge the distance between Elkins' rather general, abstract concerns with vision, perception and contextualisation; and more current issues within the museum field, such as visitor engagement, outreach, the hurdles of technological deployment, and the ways in which new platforms recontextualise the museum's own cultural place and ongoing relevance.

Google Art Project as an empowering or problematic way for traditional museum audiences to interface with art – or, using the conceptualisation and jargon we have seen in Chapter One, the technological platform as an instrument for the remediation of the relationship between visitors and museum artefacts and context – seems to be a paramount concern: the contemporary constructivist museum actively seeks new technological instruments, digital ones included, that might facilitate amelioration of audiences and constant re-mediation of the means by which museums might fulfil their educational mandate; and Google Art Project is no exception. In this sense, it could be said that Google's technology driven re-mediation of digital audiences' relationships to famous works of art is consonant, in ideology if not in deployment, with the constructivist museum's emancipatory

424 While these numbers might be tiny, they overtake by far any other conversation on LinkedIn, as well as most if not all available debates around Google Art Project.
utopian drive for constant remediation of its own educational strategies.\footnote{See, for example, Owens and Wettendorff in Wettendorff et al. (2013): 'As a company they [Google] saw a need that they believed needed to be addressed, and believed that with their resources could do a good job in addressing the need of our community.'} Arif Saeed of the Qatar Museum Authority quite clearly positions this remedial project as trumping over Elkins' concerns:

'I think this a great project – it exposes art to a larger audience that might not have the opportunity to experience art pieces in museums... the gigapixel view of specific objects from each museum is another excellent feature which brings you closer than even curators and preservation specialist are able to see'. \footnote{Saeed in Wettendorff (2013).}

While, due to the nature of informal discussions between professionals and the constraints that the thread format put on responding, Saeed's reaction to Elkins is somewhat unsophisticated, the underlying difference in point of view is clear: in the museum's quest for re-mediation, more access – both in number of works, and depth of access to each – should be embraced with little reservation. In the same discussion, this sentiment is also embraced by Adam Mikos:

'It seems the crux of the discussion is whether or not to provide the “general public” with these viewing options. I believe in making it available and encouraging the exploration. Allowing “experts” to determine if the public should be breathing the rarefied air of inclusion is a throwback to museum theory long departed. Let's keep it there'. \footnote{Mikos in Wettendorff (2013).}

Wettendorff is more cautious to this regard, arguing that 'The \textit{Google Art Project} discussion is hardly about privileged access or not, but rather a question of whether this type of instant hi-res access to painting is a privilege at all – from an art's perspective'. \footnote{Wettendorff in Wettendorff et al (2013).}

Mikos' quote also opens up another important issue in the relationship between museums and Web platforms such as \textit{Google Art Project}. We have discussed, in the previous chapter, how the
contemporary museum's adoption of the philosophy underlying Web 2.0 as the 'de facto Web' was predicated upon a series of parallel values that the two embrace: democratic inclusion of a plurality of voices; the 'wisdom of the crowd', which in a museum context translated in constructivist learning, and participation as an added value; and a general 'humanisation' of technology, which comes to be seen as a context for human relationships, various forms of fraternity and informal, sometimes selfless collaboration.\textsuperscript{429,430} We should recognise at this point that the kind of embodied, sensorially-oriented, and interactive co-creation of experience that, in a digital context, we have identified as the 'encounter with a digital-being' fits well within the underlying paradigm of Web 2.0: in the latter's context, ideologies of immediacy, co-participation / co-creation, and general 'de-hierarchisation' of digital relationships extend all the way down to the basic apprehending of the digital itself. Google Art Project is an ideal example of such a dynamic. Doing away (at least rhetorically) with the distancing, culturally hierarchical elements of interpretation, textuality and cultural authority, Google's art viewing platform focuses on a few discursive elements resonant with Web 2.0 on various levels: free exploration, unmediated encounter with the image through an interface that, through roaming manipulation and visual awe, encourages telepresence, and immediate sharing at the grass-root level (through social media) of items that are exchanged not necessarily because fitting established museum frameworks, but possibly due to their immediate appeal for exploration and non-linguistic, 'iconic' interfacing.\textsuperscript{431,432} Essentially, Google Art Project could be conceptualised as one form that the contemporary constructivist museum could take by taking the latter's embracing of Web 2.0's underlying philosophy to its logical consequences. Given that, overall, there is still little agreement as to what form such a museum could, or should assume, it does not come as a surprise that an iconic and, perhaps, prophetic item such as Google Art Project

\textsuperscript{429} O'Reilly (2005).

\textsuperscript{430} Such as, for example, crowdsourcing and crowdfunding.

\textsuperscript{431} This has not been necessarily conceptualised by all as a positive trait: Will Brand, for example, argues: 'I struggle to imagine when I’d use the social media functions of Art Project for anything other than “Hey look at this cool tech!”' (Brand (2011)).

\textsuperscript{432} Quoting Proctor (2011): 'Maybe those [user-made]collections reflect the circuitous logic of what people love, rather than (just) what they want to learn'.
would become the crux of heated debates. Pre-dating by nearly two years the LinkedIn discussion, another fundamental moment of Google Art Project's discursive 'domestication' by museum professionals happened when Nancy Proctor of the Smithsonian Institution produced for the trade magazine Curator a blog entry commenting on the opening to the public of Google's platform. The blog entry takes an overview / opinion piece format, outlining some of the most immediate reactions pro and cons the platform, some of them echoing moments in our discussion so far. For example, one could find support for Google Art Project as an iconic platform for rapport in the included comment by Julian Raby: 'the gigapixel scans enable a kind of encounter with art that is not even possible in the galleries... the ability to engage with the work of art in this way transforms the web experience from an informational one to an emotive one'. Without addressing specifically the iconic or digital-beings, Raby's words well define the new kind of 'encounter' that, potentially, Google Art Project allows for; and, at the same time, underscores the remedial power of the platform itself, as it allows the viewer to see more and better than she could in the physical gallery. This enthusiasm is counterbalanced by Proctor's assertion that:

'What I’m most intrigued by is the way that the gigapixel images underscore the importance and centrality of the original object. Yes, you can find some high resolution images of many of these artworks online already, but if not taken by the museum, they have been scanned from catalogues and other print reproductions. As such they are inherently limited: ultimately you will zoom in to paper textures or simply stop. Without access to the painting, the level of detail presented in the Google Art Project can’t be achieved'.

As in the case of Elkins' article and the subsequent thread on LinkedIn, most meaningful

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433 See, for example, frequent heated debates that engage heritage-oriented professionals and education-oriented practitioners on the Museum Association blog.
discussion happened subsequently in the comments to the blog entry. In particular, comments to Proctor's post explore one aspect that, beyond basic appreciation, has been explored seldom by professional commentators: the qualities and limits of *Google Art Project* as an interface. James Davis of Tate Gallery states:

“Online the interface in effect plays a similar role to the frame, the glass, the label, the map, the wall and so on in gallery. These can either support or distract from an artwork, and many of our existing collection websites do not support the display of artwork very well because we only consider these digital reproductions as mere references to the real thing. I would humbly suggest that if it is possible to be moved to tears by a photograph online then the same could be true of a painting. This in no way dents our agreement that the real thing is by far the richest, most visceral and emotional experience, it more suggests that there is a space between the two that Google’s interface takes a couple of steps into.”

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It is easy to see Kim's digital-being as meaningfully fitting into the experiential space between physical and digital that Davis refers to: an entity that can be interacted with in a way that can be as meaningful as one could in a gallery – the difference being in the kind of interaction rather than its inherent quality, or its experiential value.438 This does not preclude positions that emphasise the limitations of the technology behind *Google Art Project*, as when Daniel Garcia underlines how certain kinds of media (sculpture, process-based art, unusually large or small art) are necessarily marginal or excluded by a platform that relies on screens, and therefore remain the precinct of museums.

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Davis also addresses another controversial element of *Google Art Project*: the Street View-style tours of participating galleries, in which works can be seen in the context of their hang as the users navigate the halls of the museums from a first-person point of view. This tool has been met, overall, less than positively by museum professionals and commentators: Will Brand tempers

437 Davis in Proctor (2011).
excitement over the feature by admitting that 'the reason this works, though, is that I’m an art nerd. Relatively few people are going to gain anything from seeing the works in their museum context other than a renewed appreciation for how important these museums are' – this due, according to him, to an array of factors, including the contextual ‘maiming’ that the blurring of unlicensed artworks causes; implicit enforcement of canon, since access and contextualisation of the gallery tour hinges upon few canonical works as 'entry points'; and the perceptually underwhelming experience that the (by gigapixel technology standards) low tech of the virtual tour offers. 440 ArtPrize’s Kevin Buist specifically contextualised the experience of navigating these virtual galleries, rife with blurred painting and impossible to cross archways, with reference to Masahiro Mori's 'uncanny'. 441

‘But as I started clicking around various virtual museums I found myself dwelling on the limits of the experience, despite the fact that it does so much to expand access to these museums. Running up against virtual barriers eventually became more intriguing than the art itself... Technology often creates this effect. The closer a virtual experience gets to a genuine experience, its deficiencies become more apparent, not less.’ 442

Davis focuses his commentary on the perceptual and proprioceptive aspect of the virtual tour. While acknowledging the relative intuitiveness of navigating the virtual environment, at least after a bit of practice, he also points at some very specific perceptual, spatial and interface issues that, in the end, diminish the experience's immersiveness and potential for telepresence:

1. QTVR panoramas are based on a static location. I can’t go over there, I can only see it. When I ‘zoom to go’ the image immediately degrades. 2. The controls for these things always feel bizarre. Whether they have reversed the pilot controls or made a counter intuitive decision regards left-right panning, it is

441 Mori (1970).
442 Buist (2011)
always a struggle to get it to go where you want. It is click-hold to spin rather than drag and this is simply wrong. It feels like balancing on one leg with a giant glass ball over your eyes. These controls wouldn’t last a minute in the console games industry. 3. As you move around the perspective gets distorted in a strangely unsettling manner. The smoothness actually contributes to this problem. 4. Loading loading loading. I don’t want a heavy overhead everytime I make a decision to go somewhere. You know what? If I suspect that gallery is of only minor interest then I am not waiting for it to load to be proved right. 5. Flash overload. Street View uses Flash but only where needed. If you have found yourself redesigning scrollbars for use in Flash then something has gone wrong already.443

According to Davis and others, technologies such as Google's virtual gallery tours still have a long way to go before they might successfully deploy those 'dimensions determining telepresence' that Grusin pointed out as essential to a convincingly 'embodied' and 'affective' experience.444 This tool remains, much like the gigapixel technology, the manipulable interface of Google Art Project, and the very role of new art-viewing platforms in relationship to the museum, a difficult point of contention, which arises questions on the place itself of the museum in a culture-wide context – be it digital or otherwise. The statement that best encapsulates this difficult, work-in-progress status of the domestication of digital-beings in a museum context is Beth Harris':

'The question that interests me is why we all feel compelled – when we talk about what’s we like about the google art project – to say “but of course its not as good and important as seeing the real thing.” I’m not as interested in the truth of that statement, as I am in our need to keep saying it. I noticed it at the press preview, and now here, on this discussion thread. After all – these are two entirely different experiences.'445

While the contemporary constructivist museum might be on the constant lookout for

443 Davis in Proctor (2011).
instruments that might remediate its mandate, relevance and educational scope, the process comes at a cost: the constant redefinition of the cultural, social and political boundaries that the evolving digital context enforces upon cultural agents. Overall, the plurality of positions and arguments brought to the table, as museum professionals argue over the merits of Google Art Project (and, implicitly, other similar projects to come) is expressive of the multiple remediations that are taking place within the museum: on a macro-level, remediation of the visitor's ways of relating, on a variety of level, to cultural media; on a micro-level, the impact that evolving 'ways of seeing' have on cultural stakeholders – of which the museum is one.

Conclusion

Chapter Two aimed, on a philosophical level, at providing a necessarily partial yet strategically key account of a very important, contemporary dynamic at play in museum discourses – the issue of how far, practically and ideologically, digital reproductions of museum assets can go in fostering the museum's ends and goals, particularly in the face of the many theoretical hurdles such reproductions' very existence as digital-beings entail. Such an account is intended to exist not as an alternative, but as an integrative line of thinking that runs parallel to a far more common breed of discussions that verge around professional praxis; deployability; and goal-oriented sharing of success stories. Another secondary, yet important goal of the chapter was the production, in the form of an illustrative case, of an account of Google Art Project: while Google's endeavour is, in my opinion, paradigmatic of the many challenges that museum materials (and, consequently, museum institutions) face as they transition from the only-physical to a life as partially digital-beings, at the time of writing discussions of the platform have remained mostly informal or artificially constructed in order to support techno-optimist visions for the future of the museum.\footnote{See, for example, Bonacini (2013).}
My analysis moved, theoretically, from the macro-level progressively toward more detailed, museum-specific aspects. I have first discussed emerging culture-wide paradigms of seeing as a sensorial activity alternative to the textual reading of images, with special regard to the 'pictorial turn' and the 'iconic turn' envisioned by Mitchell and Boehm. Once an account of this necessary groundwork was provided, I moved into the digital proper, but also beyond the exclusively visual. I sought to answer one specific question: how does the new attention toward 'encounter' with objects; sensorial interaction and interfacing; and embodiment encouraged by the 'iconic turn' translate when the involved item and interface are partially, or entirely digital? I have invoked, through discussion of a range of scholars of different fields, the idea of the 'digital-being': an actor that is ontologically digital, yet possesses characteristics that allow for not-disembodied encounter and interfacing akin to encounter with 'real' objects. My proposition is that thinking of digital artworks, and also digital reproductions of existing artworks as theoretically sound digital-beings might help us better contextualise them within the museum's own digital evolution, avoiding pitfalls such as reducing the digital to a degraded copy of what is available in the physical gallery; or, conversely, being entranced by the new possibilities that digital interfaces offer, to the point of forgetting that (as Stafford usefully pointed out) even digitally-native modes of apprehending, interfacing and interacting have to be understood in relationship with more traditional avenues for encounter.

As a final step in showing how theoretical concerns do not impede practice, but rather do have a tangible impact on professional museum discourse and deployment, I undertook an analysis of the art-viewing platform Google Art Project. By adopting a variety of angles and strategies – first-hand exploration; presentation of professional debates; deployment of a theoretical framework from the chapter's first half – I tried to show how the powerful tools for art apprehending and interfacing that Google Art Project offers still have to be fully domesticated by the museum institution. The platform entails a relationship between actors that reconfigures, to an extent,
established ways of relating to artworks in the museum's cultural context, both on a philosophical and on a praxis level. At the same time, the model of interaction with digital-beings and the active, hands-on involvement that the platforms affords potentially qualifies it as a powerful tool to the contemporary constructivist museum described in Chapter One: essentially, Google Art Project is an expression of that utopian drive within Web 2.0, that the museum actively seeks to harness and deploy for its own ends. It should, therefore, not surprise that the domestication of Google Art Project (and, implicitly, any other similar platform to come) is likely to remain a work in progress, especially as the ideologies behind the Web itself evolve beyond Web 2.0.450

There are, however, Web 2.0 technologies that have been domesticated by museums to a far larger extent than Google Art Project: Chapter Three will look at such a technology. Crowdsourcing is, nowadays, routinely employed by museums in order to harness the 'collective intelligence' of their visitors, who then perform menial tasks that would otherwise require intensive work by museum staff. One little-explored aspect is the ideological underpinning for this activities: in museum discourse, they are almost universally acclaimed for their potential to involve the public in the museum's workings, while generating data and useful material at rhythms impossible should the museum do it on its own. In Chapter Three I will, instead, contextualise crowdsourcing as an aspect of society-wide shifts in labour dynamics, both online and offline. By referring to Autonomist theories of immaterial and affective labour; as well as the concept of 'playbour' which I will borrow from game studies, I will argue that crowdsourcing in the museum cannot be simply read as a politically positive or neutral activity, but has to be contextualised as an activity that – within a labour framework – entails benefits and dangers of exploitations for both agents, reconfiguring further the museum - public relationship.

450 For 'domestication' of technology see Hetland (2012).
Chapter Three: Museum Crowdsourcing as Playbour

In her lecture “Gaming the Future of Museums”, Jane McGonigal of Palo Alto's Institute for the Future defines games as 'one of the most important materials of the future', to the point of foreseeing a game designer nominated for the Nobel Prize by 2034.\textsuperscript{451} Available data seems to be on her side: according to her now outdated statistics, 69% of all US households play computer games regularly (in the UK in 2011, 82% of the 6-65 y.o. online population does), and worldwide gamers of all nationalities log hundreds of millions of hours a week in games.\textsuperscript{452} McGonigal diagnoses in video games's inherent immersiveness and fun factor a 'happiness engine' that could be harnessed by the museum in order to bring social good, well-being and '[make] ordinary people feel like superheroes.'\textsuperscript{453} She is not alone in her assessment: digital humanities researcher Mia Ridge would 'love to see museums making crowdsourcing games because they're a great way to engage audiences'.\textsuperscript{454} The Rochester Institute of Technology's 'Museum Games and Technology Initiative' (MGTI), one of many think-tanks on museum games that emerged in the last few years, is a 'multidisciplinary community [...] that focus on the integration of museum practice with game and technology', seeking to actively inform policy and practice; the Whitney Museum offers a Digital Media internship that requires 'undertak[ing] significant research on museum online gaming initiatives'.\textsuperscript{455,456} Overall, games and gaming seem to have become an integral part of the museum as a business, and as an entertaining and /or educational experience for its visitors.

This chapter seeks to reassess and reposition the role of games, and game-like activities within the contemporary museum context.\textsuperscript{457} While a sufficient amount of discussions; analyses; and criticism on the role that games and similar activities play in museums is available, mostly

\textsuperscript{451} McGonigal (2008).
\textsuperscript{452} IAB Game Steering Group (2011).
\textsuperscript{453} McGonigal (2008).
\textsuperscript{454} Bhutta (2011).
\textsuperscript{455} MGTI's web site.
\textsuperscript{456} Whitney Museum Internship Page (2012).
\textsuperscript{457} 'Game': 'a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome.' (Salen and Zimmerman (2004) p. 80).

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thanks to professional fora where such products are usually first displayed and contextualised, the near totality of this material presents a number of factors that limits its scope and relevance: it is largely written by professionals in museum media and marketing, for professionals in the same field; it often concentrates upon single case studies, usually undertaken by those who engineered the case themselves, with little attention toward interrelation and framing beyond mere comparison and mutual reinforcement; it routinely fails to engage ongoing theoretical discourses that, while situated outside the context of contemporary museum studies proper, would provide a larger frame into which one could locate ongoing trend of game-like activities in the museum – and, more generally, the museum's interaction with its ever-evolving audiences.  

The chapter will be divided roughly into three sections. In the first section, I will mostly lay down theoretical groundwork for further, more targeted discussion. I will be looking at a series of key theoretical concepts borne out of a specific strand of neo-Marxism – Autonomism. By referring to key texts and analyses by Michael Hardt, Antonio Negri, Maurizio Lazzarato and Tiziana Terranova, I will seek to hone, update and make relevant to the museum key concepts such as 'immaterial labour'; 'affective labour'; and, to a lesser extent, 'biopower' and 'biopolitics'. While these paradigms have been widely deployed within the larger context of contemporary global economics and politics, they have barely ever been introduced in the discourse around creative industries; even less, in museum studies discourse. This is, in my opinion, a significant lack, as theories of immaterial labour can be usefully deployed to clarify current paradigms of content production, consumption and interaction within the museum, and nuances of the institution – user relationship they engender.

The second section will build upon concepts explored in Chapter One and Two, but will recontextualise them in light of the paradigms of 'immaterial' and 'affective' labour. Chapter One

458 I am thinking especially of conferences such as ICHIM / Museum and the Web; as well as sectorial publications both in paper and digital, such as the MA website and blogs, or even well known and followed individual museum blogs, such as Nina Simon's 'Museum 2.0'. As far as professional discourse goes, the museum field, in my experience, is perhaps the most fast-moving within digital humanities.
raised, in the context of the contemporary museum and the Web's converging utopian paths, one of
the supposed advantages of the so called 'Web 2.0' paradigm: the harnessing of the Web's 'wisdom
of the crowd' in order to improve data gathering, archiving and selection.\(^{459}\) In recent years there
has been a surge of Web activities, practices and platforms that would fall under what is,
collectively, defined as 'crowdsourcing': in the spirit of open access and sharing of Web 2.0 the
audiences, often facilitated by invested institutions, harness their 'collective intelligence' and put
work hours, often for free, into the production, classification and upkeeping of digital content.\(^{460}\)
Such practices have been, in their general features, well researched: however, since research and
commentary upon these crowdsourcing practices are often produced by individuals with more or
less vested interests (and, as we will see, this is very much the case for museum practitioners),
accounts tend to be biased toward the benefits, both tangible and immaterial, that harnessing the
Web's 'collective intellect' brings to the social sphere, digital or otherwise.

While such benefits are certainly there, and should not be discounted, we should also
acknowledge that crowdsourcing and collaboration between museums and the public on the Web
are very much social and political acts, that have serious social and cultural repercussions, and can
or, rather, should be read as one instance of ongoing global trends in a variety of interconnected
fields, mitigating and integrating a focus on the specificities of museum crowdsourcing. In light of
this philosophy, I will seek to embed the Web 2.0 crowdsourcing phenomenon within the
framework of immaterial and affective labour generated in the first section of the chapter: far from
being exclusively a positive instance of cultural restitution of power to the people, nor a logical
development of the Internet (or humanity's) spirit of sharing and 'happiness [as] passionate,
successful participation in really big systems we care about', Web 2.0's harnessing of the user's free
time is but a development of an ongoing trend toward disguising, under more or less obvious and
acceptable pretences, the increasing amount of work that we are asked to do outside the workplace,

\(^{459}\) O'Reilly (2005).
\(^{460}\) In other cases, such as Kickstarter's 'crowdfunding' practices, users provide real currency along with free
networking, advertisement and support.
This, in turn, feeds into the new ways in which the sociable human creates networks, affects, and justifies her social place in a context in which precarious, a logic of flexibility and periodic deskillings / reskillings shake established modes of relationship between the individual and institutions.

I will then turn toward a concept that, while feeding heavily both into immaterial and affective labour, and crowdsourcing and free labour economy, has seen very little usage outside of the discipline of game studies, where it originated. I am referring to the concept of 'playbour'. Developed by Kucklich in 2005, I think the term can be usefully deployed to describe a range of activities in which digital museum visitors are routinely engaged, ranging from social tagging efforts; to proper 'game' activities, and a wide array of experiences in-between. In order to facilitate such deployment, I will re-interpret 'playbour' as defining the economy of a range of games, or quasi-games, that disguise their actual function as productive activities, sponsored by cultural institutions, under the guise of entertainment and evasion. Unlike in the heavily exploitative game industry described by Kucklich, in the museum context this disguise is not necessarily pernicious to the 'crowdsourcee': both agents engaged in the playbour activity gain something, although it might not be what was explicitly promised.

The fourth section, which also functions as an introduction to selected illustrative cases, will tie together the theories and paradigms presented in the previous three sections, in order to describe the many 'game' activities that museums routinely use to capture visitors, as much as to get onerous work done for free. I will challenge established notions of audience participation as an outgrowth of the public's natural disposition to seek engagement, and problematise a set of museum practices that, while surely mostly benign and sometimes necessary to the museum's own survival, need to be contextualised as inherently political and, some times, exploitative. Examples explored in support

\[461\] McGonigal (2008).
\[462\] Kucklich (2005).
\[463\] Kucklich (2005). See, in particular, Kucklich's discussion of the modding scene, and its exploitation by the game industry.
of this contextualisation include the various crowdsourcing project around the *steve.tag* effort; the *Victoria and Albert Museum's Crowdsourcing Project*, The Brooklyn Museum's *Tag! You're It!* and *FreezeTag*.

**Immaterial / Affective Labour**

In order to fairly assess the relevance and success of games and game-like activities within the museum, we need to move outside of museum theory and discourse exclusively, foraying into other interdisciplinary fields. Only then, we will be able to develop a solid cultural theory that assesses gaming, and then gaming within the museum, without resorting to artificial notions of inherent fun, immersion and cooperation, instead emphasising the transactional and cultural role that these activities play in the museum and the audience's respective economies.

In 2000, theorists Michael Hardt and Antonio Negri published *Empire*, a key text in the contemporary critique of global capitalism, as well as a thorough exploration of the dynamics and psychology of contemporary labour. The book seeks, essentially, to trace the developments of capital, and subsequently capitalism, in a context in which the stage for socio-political struggles of power has moved from the sovereign state, to the global – in other words, the context of globalisation. The new global condition, in which capitalism's ultimate frontiers for expansion and consumption have moved beyond geography and power centres, turning instead toward the globe, has radically redesigned the political world as we knew it in the colonial and postcolonial eras, including the dynamics and the very 'forms' of labour itself. In spite of the text's seminality, we should keep in mind that Hardt and Negri wrote *Empire* with the specific goal of giving a critique of capitalism's universal oppressive power, mainly in order to configure global, and local yet globally networked strategies of resistance ('new possibilities to the forces of liberation') that are discussed.

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for the best part of *Empire* itself, as well as in its spiritual successor, *Multitude*. Discussions of immaterial labour, affective labour and biopower / biopolitics from a neutral and descriptive point of view remain somewhat secondary to the authors' revolutionary intentions; these concepts find their genesis in *Empire* and its antecedents, yet are developed as more than arguments for a revolution mostly afterwards, and by other thinkers' rereading of Hardt and Negri.

For now, it should be mentioned that *Empire* introduces labour in Part 3, which narrates 'the passage [from Modernity to Postmodernity] from the standpoint of production, whereby production is understood in a very broad sense, ranging from economic production to the production of subjectivity'. The central issue is, according to Hardt and Negri, the inherent tendency of capital toward expansion, seeking 'noncapitalist markets in which to exchange the commodities and realize their value.' Capitalism's productive machine (be the production a commodity; a surplus of capital; or subjectivities) is always on the lookout for new lands to colonise: not only in the geographical dimension, but also in the inner dimension of the subject's habits, and temporally inside and outside established working hours. In other words, capital and capitalism are always on the lookout for unproductive surplus (of space, time and humanity) to remake productive, in order to generate new areas of exploitation: such areas can equally be, on the macro-level a new Third world nation; as much as on the micro-level, the inner habits and lifestyles of sectors of a specific Western, long-capitalist population.

It is also key to recognise that capital's colonisation of spaces is all encompassing; and its symptoms can be diagnosed at all levels of society and culture. '[Capital] ransacks the whole world, it procures its means of production...from all levels of civilisation and all forms of society...'

466 Hardt and Negri's strategies for active resistance have not endured as soundly as the notion of *Empire* itself, and have come under criticism as far-flung, unfocused or flattening of singular, local differences (see, for example, Camfield (2007)). They largely do not apply to my topic, at least in the form Hardt and Negri present them; therefore, they will not be thoroughly examined.
468 In order to prove their point, Hardt and Negri evoke, especially, analyses by Marx (in particular the *Grundisse*, with the concept of a 'general intellect' (see Terranova (2006)) as well as Rosa Luxemburg. This discussion, mostly concentrated in pgs. 222-226, is important to the inner architecture of *Empire*, yet too expansive and wide in focus to be rehearsed here.
469 Luxemburg (1968) p. 358.
Empire limits, however, its scope of analysis to the macro-level, and does not truly descends into describing the conditions of this, supposedly, new capitalist regimen that Empire embodies. Nonetheless, from the Hardt and Negri's text we can extrapolate a few key issues that will then be further developed by others, especially Hardt on his own, and Lazzarato: the universal reach of capitalism, both geographically toward unexploited areas (be them within or without previously colonised regions), and biologically, operating on established normatives of life in search for new grounds for exploitation, with particular emphasis on a growing conflation of work and leisure as once, and now no longer, different activities.

Immaterial and affective labour are more thoroughly explored by Hardt in his short 1999 essay 'Affective Labor'. Hardt's definition of affective labour, which is 'one facet of what I will call “immaterial labour”' is rooted into a contradiction: while traditionally 'focus on the production of affects in our labour and our social practices has often served as a useful ground for anticapitalist projects', one must consider that 'the past twenty-five years have positioned affective labour in a role that is not only directly productive of capital but at the very pinnacle of the hierarchies of labouring forms'. In other words, immaterial labour, and its related affective labour have become, in the context of Empire, the typical modes of wealth and subjectivity production that are symbolic of Empire itself: it is through immaterial and affective labour that we generate ourselves as subjects, with the assistance of those that supply the work to be done.

But what is exactly 'immaterial labour”? The context that one has to keep in mind is, according to Hardt, the shift (since the early 70s) within modes of production, from industry toward services. Parallel to this, is a progressive shift toward the informatisation of that same burgeoning service industry, eventually leading toward an informatisation of agriculture and industries as well; and new patterns of world development, in which service and industrialisation, rather than industry proper, become the means by which Third world countries enter the global market arena.

As Hardt acknowledges, 'the passage toward an informational economy involves necessarily a change in the quality of labour and the nature of labouring processes.'\textsuperscript{472} One, and perhaps the most important of such key changes, is the increasingly immateriality of the goods that are exchanged in a service-based economy: information and networking themselves become the goods that are produced by a type of labour that becomes, more and more, \textit{immaterial labour} – "labour that produces an immaterial good, such as a service, knowledge or communication."\textsuperscript{473,474}

Even further, according to Hardt, current trends in service industries and immaterial labour adopts a more specific, nuanced performative model: that of \textit{affective labour} – which is to say, immaterial labour that produces, as a good, the manipulation of affect; ease; well-being; satisfaction; passion; connectedness; and community.\textsuperscript{475} Hardt takes as a point of departure for the exploration of affective labour a range of 'labour in the bodily mode', such as nursing, caring for the elderly, housework and other activities that, by nurturing bodies in ways that could be described as 'womanly', also produce as an immaterial good the networks of affect, caring and relationship associated with the care and service business; in order to then expand the range of activities beyond bodily care, into any activity that generates a network of relationships and ties as a result.\textsuperscript{476} It would seem that, in the end, most activities that are not basic agriculture of industry, that involve some kind of information exchange between cultural subjects, might be considered to an extent affective labour.

The emergence of affective labour as a dominant paradigm (at least in the developed West) has not only economical, but serious and tangible political consequences. According to Hardt, affective labour effectively shapes a new 'form of life': one in which labour produces 'collective subjectivities, socialities, and society itself'.\textsuperscript{477} Such a potentiality is identified as \textit{biopower}: 'what is

\textsuperscript{472} Hardt (1999) p. 93.
\textsuperscript{473} While this point will be discussed further later in the chapter, we should for now keep in the back of our minds that the museum, and the whole cultural apparatus that, appropriately, falls today under the 'creative industries' nomenclature, belong rather squarely to the informatised service industry that Hardt is referring to.
\textsuperscript{474} Hardt (1999) p. 93.
\textsuperscript{475} Hardt (1999) p. 96.
\textsuperscript{476} Hardt (1999) p. 96-97.
\textsuperscript{477} Hardt (1999) p. 98.
created in the networks of affective labour is a form-of-life.\textsuperscript{478} The term is taken from Foucault's identification of the sovereign's power to determine and manage life; however, according to Hardt, there exists also a biopower from below, which is the potentiality of affect and relationships that is produced through affective labour. This second instance of biopower, which is deemed \textit{biopolitical}, becomes, according to Hardt, 'precisely the ground for an investigation of the productive relationship between affect and value'.\textsuperscript{479} Among such investigations, typically anthropological in approach and nature, one could cite, for example, Muehlebach's study of the potentially disruptive consequences of affective work in the context (which I will return to later) of volunteer labour; Brown's investigation of Flickr as an example of the use of unwaged immaterial labour; Wissinger's examination of the model industry as a factory for affects and biopower; Cotè and Pybus's study of MySpace as a 'training ground' of sorts for the future immaterial labourer; and, eventually, my own analysis of museum games as an exemplary instance of immaterial, affective and biopolitical labour that construct museum wealth, and user subjectivity.\textsuperscript{480}

Hardt and Negri, and Hardt's own discussion of immaterial / affective labour and biopower have been, since their publication, both hotly contested, and also further refined and honed by other thinkers, in an attempt to keep them relevant and up-to-date. David Camfield, in a 2007 article, harshly criticises the theory of immaterial labour laid out in \textit{Empire and Multitude} for its pretences of explaining global phenomena by resorting to sweeping paradigms, such as wide-ranging informatisation and affective labour, which eventually collate experiences of waged work, and resistance to its capitalist logics, obfuscating localities, differences and contradictions.\textsuperscript{481,482} Very similar criticism is moved by Dyer-Witheford, who also included a call to 'recontextualise many of Negri's most brilliant, earlier insights into the importance of communication, the possibilities of

\textsuperscript{478} Hardt (1999) p. 98.
\textsuperscript{479} Hardt (1999) p. 100.
\textsuperscript{480} Muehlebach (2011); Brown (2012); Wissinger (2007); Cotè and Pybus (2007).
\textsuperscript{481} Camfield (2007).
\textsuperscript{482} Another outstanding, perhaps the most vocal and relevant criticism by Camfield concerns the idea and role of the 'multitude', the 'new' world proletariat class that the logics of immaterial labour create: which, however, has not been discussed in this chapter, as it is largely tangential.
self-valorization...and the ever changing and renewed forms of contestation.\footnote{Dyer-Witheford (2001).}

Rather than siding with Camfield in wholesale abandoning the concepts introduced by Hardt and Negri, I would tend to adopt a middle ground, along with some of Dyer-Witheford's cautions: the paradigms of immaterial / affective labour and biopower can be useful theoretical scaffolding in describing a certain kind of labour politics at play in the cultural sector; that is, if one resists the error (which \textit{Empire} and \textit{Multitude} are surely guilty of) of universalising and automatically vilifying as pernicious such concepts. Rather, they should be applied as structures through which we can better understand specific contexts and instances of immaterial and affective labour, as they appear in the global cultural arena.

Recent re-elaborations of Hardt's terminologies have moved in this direction, often applying an immaterial / affective labour perspective to emerging economics and political milieux – such as, for example, the digital. Many scholars of digital media seem to have been drawn toward Hardt's paradigms, successfully applying them to what could perhaps be identified as the new, emerging immaterial context \textit{par excellence}. Tiziana Terranova, an Italian researcher in sociology and media studies, has convincingly tuned immaterial labour for the digital in her 2000 article 'Producing Culture for the Digital Economy.' Key to her argument is a property of immaterial labour: the tendency, prefigured in \textit{Empire}, for it to colonise the life of the new subject, generating the 'informatised service worker.' Longer work hours, the blurring of the line between work and free time, the tendency for work and the workplace itself to become bathed in an affective light are all hallmarks of the immaterial service economy's desire to ascribe for the ends of capital the whole of the human being, well beyond prescribed work hours.\footnote{This tendency has been thoroughly explored and systematised by Lazzarato (1996).} In a nutshell, immaterial labour, being not merely (contractual) but also affective, tends to colonise the subject, with the consequences described by theorist Maurizio Lazzarato: 'difficult[y] of distinguishing leisure time from work time'; the worker as 'responsible for his or her own control and motivation'; that 'we should all
become subjects’ as ‘one has to express oneself.’

Terranova inserts the labouring subject described by Lazzarato within the productive logic of the digital, which seems nothing less than natural, as Hardt and Lazzarato underscored plenty how the immaterial / affective labour’s subject is facilitated by the ubiquity of information networks and tools, both on the workplace and in the private sphere. Terranova’s digital labourer, often under-waged or unwaged, which she terms the 'NetSlave' (citing the eponymous webzine), is the typical labourer of an economy that ‘is animated by cultural and technical labour through and through, a continuous production of value that is completely immanent to the flows of the network society at large.’

In this sense, the digital immaterial labourer is exemplary of the immaterial economy at large, in its tireless and ceaseless production of information, networks and relationships between cultural and social agents. How is this immaterial, digital labourer implicated, if at all, in the creation of affects, in the exercise of ‘affective labour’?

Terranova states that:

‘...the NetSlaves are not working only because capital wants them to; they are acting out a desire for affective and cultural production that nonetheless real just because it is socially shaped... the moment where this knowledgeable consumption of culture is translated into productive activities that are pleasurably embraced and at the same time often shamelessly exploited.

The affect, relationships and desires generated by affective labour, therefore, run in both directions: as a labourer generates affective (as well as, often, material) goods that are made available for consumption, she also rehearses her own desires, affectivities and social ties by performing the affective labour itself. As Terranova aptly puts, immaterial affective labour

\[485\] All quotes are from Lazzarato (1996).
\[487\] It should be noted that unwaged and informal labour are, for the most part, not addressed anywhere by either Hardt or Negri.
\[488\] Terranova (2000) p.34.
\[489\] A reference, it would seem, to Castell's famous 'Rise of the Network Society' (1996)
constitutes a powerful mean for the post-industrial, post-Fordist worker to establish, and be established as a culturally legitimate subjectivity; and a powerful mean of regulation, exploitation and coercion to productivity.\textsuperscript{491}

Christian Fuchs, in 'Labor in Informational Capitalism and on the Internet', further expands the category of the 'immaterial affects worker' as delineated embryonically by Hardt and Lazzarato, and more fully and 'digitally' by Terranova, identifying seven 'classes' (definitions) of knowledge labour that, in varying degrees, span the possible forms of the 'affects worker'.\textsuperscript{492} Particularly relevant both to the digital, and to my forthcoming discussion in the context of museums, are: Internet users as a new class of cultural and social agents; knowledge labour in the digital creating a new class, the 'cybertariat'; and precarious knowledge labour as a new class.\textsuperscript{493} These definitions apply to the digital domain in different measures, and not all of them are as relevant to the subject delineated so far: nonetheless through a medley of these three definitions and those that came before from Hardt and Terranova, one can surmise a near-complete picture of the digital immaterial /affective labourer: she is digitally skilled, often works for little to no wage in a mostly immaterial productive cycle where the two-way exchange of affects and subjectification (from labourer to consumer, and vice versa) is the rule; very often, as we will see in the next section, the labourer and the consumer are conflated, one and the same.\textsuperscript{494-495}

Now that the subject of the new forms of digital immaterial labour has been established, the next section will move toward an analysis of the context, both productive and philosophical, in which such labour take place: the Web, the digital, and the Internet. The discussion will be geared toward an understanding of crowdsourcing, folksonomies and the Web 2.0 \textit{milieu} as cause and

\textsuperscript{491} For the movement from Fordist to Toyotist labourer, and beyond, see again Hardt (1999).
\textsuperscript{492} Fuchs (2010).
\textsuperscript{494} Of course, we must keep in mind the distiction between one's earning 'job' and 'work' as an all encompassing activity: the two might or might not be the same in some cases.
\textsuperscript{495} This holds true, of course, if we consider the 'immaterial' aspect of the digital: as critics of Hardt and Negri have shown, this aspect, although the one I am concerned with in this chapter, is not the only one in which dematerialisation and the digital have become essential (i.e. Modern agriculture and factory work).
consequence of the typology of digital labourer described so far.496

Web 2.0, and the tools for digital labour

In the digital context, the immaterial / affective labourer that works for little or no monetary wage, but rather as a way of positively subjectifying herself and her agency, cannot be divorced from the innovations and paradigms that have come to be collectively referred to as 'Web 2.0.' While I have argued, in Chapter One, that the definition of Web 2.0 as a cohesive, revolutionary paradigm shift has been vastly overstated, it cannot be denied that, although in a looser and less organic manner than what the literature would suggest, a watershed moment has occurred some time between then end of the 90s and the beginning of the 2000s, due to which the World Wide Web has become a significantly different cultural, social and political context.497 As Tim O'Reilly justly said in a 2005 response to Tim Bray's criticism of Web 2.0 as a term, 'Memes are almost always marketing hype... but they tend to catch on only if they capture some bit of the Zeitgeist'.498

In an August 2005 article on Wired.com, editor Kevin Kelly briefly narrates the scepticism that surrounded the Internet in the years before the supposed advent of Web 2.0.499 Before the advent of user-friendly browsers such as Netscape, the Internet was largely an affair that was, in the minds of economy and financial pundits, bound to either lapse into irrelevance, or repeat the pattern of big-business colonisation that characterised 'real world' transactions.500 As Kelly reports electronic engineer Jeff Johnson's words, 'ideally, individuals and small businesses would use the

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496 Folksonomy: coined by Thomas Vander Wal in 2004 (2007), it is a portmanteau of 'folk' and 'taxonomy'. It describes 'user-created bottom-up categorical structure development with an emergent thesaurus'.
497 For a discussion of the issue, please see chapter 1, under the 'Web 2.0' section.
498 O'Reilly (2005).
499 Kelly (2005).
500 Johnson's chief example is, of course, only one of many software innovation that contributed to the switch from content delivers to user-oriented Web economy. O'reilly 2005, for example, pits Netscape as a model of Web 1.0, versus Google as an example of a Web 2.0 platform: there is no established consensus on what is Web 2.0, and features are often intuitively assessed (O'Reilly, 2005).
information highway... but it is more likely that the information highway will be controlled by Fortune 500 companies in 10 years.\textsuperscript{501} The greatest stopper toward the colonisation of the Web by the small-time business and the not-for-profit sector would have been the, back then, substantial sums of money required for a meaningful investment; and the difficulty in generating meaningful content for an audience that was still quite sectorial and interest-oriented.

While it could be argued that the Web has indeed become a ripe exploitation ground for capitalism in recent years; one should note that this process has happened in a far different, and more ambiguous and multifaceted way than what Johnson, Kelly and others expected. Pivotal to the shift toward an user-centred Web was the gradual adoption of platforms adept at, in O'Reilly's words, 'harnessing collective intelligence': Web content, as well as structure, is not merely developed by businesses, and then delivered to the end-user as a packaged good, which is then to be used under a license agreement where provider and end-user are sharply separated; the end user, instead, actively shapes the content and the structures of the Web, by responding to them, re-purposing them, exploiting them.\textsuperscript{502,503} O'Reilly offers a long list of exemplary platforms that correspond to this 'new Web', broadly falling into two permeable categories. On one hand, commercial platforms that have 'embraced the power of the Web to harness collective intelligence' to enhance proprietary software or engines: among them, Google; Ebay; Yahoo!; and Amazon.\textsuperscript{504} On the other hand, there are platforms that have been more deeply influenced by the user-led web development paradigm, and harness collective intelligence according to a more radical modality, in which the user actively, often times consciously and purposefully shapes and augments both content and structure directed by more or less loose guidelines negotiated among participants: among them, the most famous would be Wikipedia and the Wiki platform in general. In the middle, sit a number of free, ads-supported sharing sites such as Flickr, del.icio.us, Pinterest, Instagram, and so on.

\textsuperscript{501} Johnson as quoted in Kelly (2005).
\textsuperscript{502} O'reilly (2005) p. 2.
\textsuperscript{503} Although, in many instances, this is still the case; and often, while the platform is philosophically 'free', the coding is still manufactured by specialised technicians, rather than the end user herself.
\textsuperscript{504} O'reilly (2005) p. 2.
Yet, how specifically is this ‘collective intelligence’ harnessed? What is the operating paradigm that guides the crowd as it redesigns and fills up the Web? A dominant framework for the harnessing of online collective intelligence goes under the name of ‘crowdsourcing’.

Internet researchers Estellès-Arolas and Gonzàles provide the following definition of crowdsourcing:

‘Crowdsourcing is a type of participative online activity in which an individual, an institution, a non-profit organization, or company proposes to a group of individuals of varying knowledge, heterogeneity, and number, via a flexible open call, the voluntary undertaking of a task. The undertaking of the task, of variable complexity and modularity, and in which the crowd should participate bringing their work, money, knowledge and/or experience, always entails mutual benefit. The user will receive the satisfaction of a given type of need, be it economic, social recognition, self-esteem, or the development of individual skills, while the crowdsourcer will obtain and utilize to their advantage that what the user has brought to the venture, whose form will depend on the type of activity undertaken.’

The extensive literature that the writers surveyed in order to come up with the definition (40 different definitions from 209 documents, ranging from conference papers to technical reports) testifies to the amazing interest, and subsequent body of research that has been construed around crowdsourcing in the last few years. The definition clearly states that, in essence, crowdsourcing is a mutual contract between two groups of individuals; it is largely voluntary on the responder’s part, and often involves some kind of remuneration that is other than economic; it involves varying, yet invariably mutual benefit for each side of the equation. In light of these three key points, it should not be difficult to see a parallel between crowdsourcing online, and the theory of immaterial / affective digital labour described in the previous section: in order to further scaffold this analogy, I will now look at academic literature that specifically addresses relevant aspects of

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crowdsourcing as an economic, social and political activity.

It is necessary, first of all, to understand the motivational and contractual aspect that lies behind crowdsourcing as a rising model for digital labour and transaction. One of the earliest cogent descriptions of what crowdsourcing is, and what it entails when it comes to politics and ethics, comes from another Wired article, penned in 2006 by contributing editor Jeff Howe.\textsuperscript{507} The article, which narrates in a journalism-like exposé a number of instances in which, by pooling collective intelligence on the Web, individual or companies managed to creatively solve a problem at a fraction of the cost it would have taken otherwise, is significant since it presents cases in which 'real world' companies (e.g. companies such as Colgate) benefited from crowdsourcing, it locates the dynamics of the paradigm as steeped in Internet politics and sociology, yet affecting 'real world' flows of ventures, capital and information as well; and also, it provides an antidote to the unbridled enthusiasm of Web 2.0 gurus such as O'Reilly, by highlighting the financial displacement, dubious quality of content, and dodgy practices that crowdsourcing allows, along with new avenues for self-affirmation, ventures and financial gain. Essentially, we are confronted with the reality that harnessing the collective intelligence of the Web is a process that cannot be divorced from the existing labour practices it encourages and modifies. Howe opens the article, for example, by narrating the predicament of stock health photographer Mark Harmel, who has been slowly driven out of the substantial living he made out of his niche services by the widespread availability of images, for little to no cost, on specialised online repositories of user-submitted content.\textsuperscript{508} This is counterbalanced, for example, by the case of small-time physicist Ed Melcarek who earns a living by solving creative problems, posed by corporate companies on the InnoCentive online platform.\textsuperscript{509}

From an ideological point of view as well, crowdsourcing seems to sit uneasy in-between conflicting views of unmitigated benefits, and parallel exploitation typical of long-established

\textsuperscript{507} Howe (2006). Later on Jeff Howe further developed his theory of crowdsourcing through video (July 2008, \url{http://www.youtube.com/watch?v=F0-UtNg3ots}) as well as in a lecture at Digital October in 2012. Howe is widely credited with coining the term 'crowdsourcing', or at least popularising it.


\textsuperscript{509} Howe (2006) p. 3.
capitalist labour practises. Larry Huston of Proctor & Gamble tries to draw a clear line between what he describes as 'bringing people in from outside and involving them in this broadly creative and collaborative project', and the morally dubious practice of outsourcing job in search of the minimum possible expense. Yet, the previously cited story of Mark Harmel; iConclude's Sunny Gupta's enthusiasm at crowdsourcing work that used to cost to companies thousands of dollars for a pittance; the meagre cents that faceless workers perform for Amazon's task solving system 'Mechanical Turk' program; these cases speak of a system that, while surely profitable, could easily turn exploitative of those Web users it theoretically empowers as economical and social subjects.

Then where does the value for the contributor (or the exploited) lies in the context of crowdsourcing, beyond a meagre pay for a job that, in another context, could fruit various hundred times as much? The already cited Melcarek, who was paid $25,000 for solving a challenge posed by Colgate, said to Howe that 'These [which he solves] are rocket science challenges... it really reinforced my confidence in what I can do.' Malcarek received, in his specific case, more than a pay check; he also received legitimisation, gratification and confidence, a veritable treasure trove of subjectification for a semi-retired fifty-two year old who, by his own admission, built a meagre career in middle-tier private sector before turning to competitive crowdsourcing. To further comment on this point, it might be worth considering an interesting comment in the previously cited essay by Muehlebach: using the example of the mobilisation of the retired for unpaid volunteering in Italy, she notes how tasks that promote well being, essentially 'affective' tasks, provide a sense of social legitimisation and subjectification in absence of the typically Fordist 'legitimisation by work'. Essentially the retired, the unemployed, the young precariat, and generally those who do not earn substantial wages through labour, find in volunteering low-pay tasks that 'make them feel good about themselves' a wellspring of self-legitimisation, that overcomes the sense of

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510 Larry Houston is the Proctor & Gamble sponsor of open sourcing platform InnoCentive.
514 See Muehlebach (2011).
515 Which, operationally, is virtually the same as saying 'affective labour'.
displacement, despair and uselessness that the demise of the Fordist model of labour, and the emergence of global capitalism, has caused.

Other relevant literature on the topic can be said, overall, to continue along the lines of this dual understanding of crowdsourcing: as a source of opportunities for a new model of economic interaction, that puts the power of contribution and self-enrichment (be it material or social) in the hands of what used to be merely a passive consumer; and, also, as a dangerous instrument for the creation of new areas of economic exploitation by guided subjectification. Daren Brabham, in 'Crowdsourcing as a Model for Problem Solving: An Introduction and Cases' (2008) defines crowdsourcing as 'not just another buzzword, not another meme... not just a repackaging of open source philosophy for capitalist ends either. It is a model capable of aggregating talent, leveraging ingenuity while reducing the cost and time formerly needed to resolve problems.'\textsuperscript{516}\textsuperscript{517} Brabham's argument does not hide the potential dangers that lurk behind widespread adoption of crowdsourcing as a dominant model for digital labour; yet, he is quite defensive with regard to the tangible benefits, dismissing the destroyed careers and the magnitudes of exploitation that crowdsourcing brings as 'necessar[y] casualties, as any shift in production will.'\textsuperscript{518} It seems somewhat reductive to define the drawbacks of crowdsourcing as mere unavoidable casualties; especially as, while it might hold true that the phenomenon 'is enabled only through the technology of the web', it seems likely that the implicit philosophy behind crowdsourcing – the exploitation of digital workers for activities of the immaterial / affective type, repaid by minimal financial remuneration, more often by social legitimisation, affect and a sense of 'well-being' – has ties into

\textsuperscript{516} Brabham (2008).
\textsuperscript{517} Brabham (2008) also attempts a somewhat dubious distinction (spurred by Howe's) between crowdsourcing proper, in which the immaterial product of crowdsourcing is turned into marketable commodities by a structured commissioning agent (i.e. Colgate using Melcarek's intuition): open source, which is not remunerated except in kudos, and happens among 'crowdsourcer'. The distinction, I would argue, is flimsy at best. First, if that were to be true, it comes through all the clearer the positioning of crowdsourcing within a traditionally capitalist system that aims at generating surplus value at the expenses of the labourer's wage. Second, on an empirical level, in final analysis very little peer-to-peer interaction happens in crowdsourcing or open source, without an 'institutional' power sitting at some point as an overseer: even Wikipedia is, in the end, an 'institution' that has its own charter, mandate, and gains from its users' work – in the form of donations, but especially intellectual currency. While this aspect will be explored further as we look at crowdsourcing in museums, it seems not very useful to draw typological lines through types of remuneration, or hierarchies of exploitation, as multiple 'typologies' usually coexist.

the far wider emergence of immaterial and affective labour as a global system of production, both online and offline. The crux of the matter is the necessity to move beyond perspective potentials and immediate instances of empowerment, toward a system that understands crowdsourcing as part of an ongoing system of immaterial and affective labouring that produces different kinds of wealth for all agents involved, sometimes at a cost.

Sociologist Frank Kleemann and others begin their analysis by emphasising exactly this point: crowdsourcing is 'made possible by technological innovations associated with “Web 2.0” but is evidence of historically significant change in the relations between firms and their customers.' Yet, much like Brabham, Kleemann argues a distinct definition between crowdsourcing as an organised strategy deployed by corporate entities, and other forms (which, in this case, would come to include all forms of low-paid or unpaid work) that constitute 'peripherally related phenomena'. Such a sharp distinction defies not only widespread acceptance of crowdsourcing as a label and brand in a variety of online endeavours that do not uniformly fit the institution → consumer as unwaged labourer paradigm; but also, it cuts off from definition within the useful framework of crowdsourcing phenomena, such as open source and open content projects, that do sit outside corporate relations, but also adopt much of the philosophy, theory and organisational structure that is typical of crowdsourcing, the only difference being the rhetoric of direct engagement and democratic levelling that they employ.

Yet, Kleemann et al delve, compared to Brabham, deeper into the larger 'broad and historically significant trend' crowdsourcing belongs to. Crowdsourcing represents for them 'a trend by which the capitalist firm is targeting consumers for integration into the process of value creation', all the while exploiting workers: it is therefore in continuity with global systems of

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519 Kleemann et al. (2008) p. 5.
520 Kleemann et al. (2008).
521 Empirical experience, in fact, would most likely show that the average Internet user would recall Wikipedia as a case of crowdsourcing, rather than Amazon's 'Mechanical Turk.' Surely, as I will show later, the tag and rubric of crowdsourcing has been extensively adopted by museums, who would not fit a standard understanding of a corporative outsourcing of jobs.
production that are well-established, and well-deployed on many levels of immaterial labouring.\footnote{Kleemann et al. (2008) p. 19.}
The key points of this analysis resonate deeply with the picture of immaterial and affective labour that I have provided so far, this in spite of Kleemann's narrow focus on firms; thus eliding the ways in which crowdsourcing, as a practical translation of immaterial and affective labour principles, permeates contemporary economy well beyond corporate capitalism, into virtually all aspects of human life.\footnote{And this would be, one supposes, why Hardt and others have come to speak of 'biopower' and 'biopolitics'. Kleemann et al. implicitly acknowledges this as they say that 'in place of the “long arm of the job”, which reaches deep into the personal lives of the employees, we may get two long arms: the arm of the job and the arm of consumer work.' ((2008) p. 9).} It is also interesting to note how Kleemann, perhaps due to this excessive focus on a setting where, arguably, financial remuneration or lack thereof is the chief parameter to assess exploitation, does not explicitly mention the many ways in which crowdsourcer 'benefit' from the activity: namely, the subjectification, legitimisation and affectivity gain that I have discussed previously.

As a matter of fact, by browsing the substantial existing research on the dynamics of crowdsourcing, one can notice that little focus has been spent on detailing the affective and 'feel good' aspect that, according to the crowdsourcing-as-affective-labour model, is ingrained as a chief motivational too to engage the public; what attempts have been done do not seem to relate this aspect to the larger context of immaterial and affective labour. Again Brabham, building on research by Lakhani et al., performed in 2008 an empirical analysis of the motivations that might encourage people in engaging with crowdsourcing activities.\footnote{Brabham (2008b).}\footnote{Another interesting discussions for motivations to share online, in particular in the context of social tagging, is Zollers (2007).} Brabham's results seem to undermine our assumptions so far: he states that the subjects of his case study, crowdsourced stock archive iStockphoto, 'is motivated by money and the opportunity to develop individual creative skills, not necessarily by the desire for peer recognition or the opportunity to build a network of friends or creative professionals.'\footnote{Brabham (2008b).} One should wonder, however, how widely applicable such observations
are. IStockphoto is a paying platform, which is not the case with most crowdsourcing initiatives: some of the most successful involvement-wise, such as Folding@Home, don't pay money at all, but rather, by positioning their productive activity within a game-like system of teams, ‘pay off’ in that valuable immaterial currency that is recognition and networking opportunities. Brabham's observations, are valid only if one adopts the restricting vision that only certain kinds of projects qualify as 'crowdsourcing proper': hardly the case, given the wide array of not-for-profit explicitly crowdsourced activities on the Web, and the growing association of crowdsourcing with open access and open media.

In short, to arrive at a holistic understanding of what crowdsourcing is, and how it fits within a larger milieu of capital expansion and colonisation of the individual (regardless wage being involved or not), one should not construct theories that subdivide instances, in order to generate sweeping discriminations that, unavoidably, foreclose possible alternative discourses. Rather, it should be acknowledged how the systems of immaterial and affective labour, of which crowdsourcing is but a manifestation, deeply permeate all aspects of the 'digital human”s life, well beyond waged and unwaged labour; or, in the case of museums, above and beyond labour itself, blending with free time, education and entertainment. Crowdsourcing, in the framework of contemporary labour practices, is neither fully labour, nor fully leisure, but a novel and productive mixing of the two, with opportunities and conundrums for all parties involved.

Playbour – Games as Immaterial and Affective Labour

As mentioned previously, one of the characteristics of immaterial and affective labour, in the intersecting contexts of the digital and advanced global capitalism, is its practically ubiquitous

529 As of mid-2013, folding@home is used on over 330,000 machines worldwide (http://folding.stanford.edu/home/). It is also a social enterprise to an extent, since it has become common for groups of users to create teams, with ladders and fora.
presence. No sector of production, public or private life is left untouched: given the pervasive use of
digital technology, but also digitally shaped modes of thinking, even activities that at first would
seem unrelated to the system of immaterial and affective labour can be easily co-opted to generate
subjectivity (and the reverse of this medal, low or unpaid exploitation) for the employed, and
various types of gain for those who direct such activities.\textsuperscript{530}

In a 2005 issue of \textit{Fibreculture Journal} (a digital media theory publication) dedicated to the
theme 'precarious labour', Julian Kucklich of the University of Ulster addressed the conflation of
gaming and immaterial / affective labour in his article 'Precarious Playbour: Modders and the
Digital Games Industry'. The article takes as a point of departure a specific practice of gaming,
which is 'modding' – the creation, by non-professional but technology-savy players, of modification
of a commercially available game.\textsuperscript{531} These game modifications, only some times sanctioned by the
game's developers and publishers, in the past were often circulated among gamers as illegal
downloads on IRC channels, Usenet and, more recently, torrent trackers. In general, games modding
can be said to be part of a larger culture of hacking /warez/overclocking that found impetus with the
advent of the Internet, and many observations in one instance apply to the others.

Yet, Kucklich detects, in more recent years (since around 1999) a novel tendency within games,
ignited by the successful commercialisation of mods such as \textit{Counterstrike} and, later on, \textit{Team
Fortress}: the progressive tendency toward a deeper interpenetration between commercial products
and non-commercial elements produced by consumers. This interpenetration has tangible benefits
for games developers: the renown of a mod among gamers makes it marketable with little to no
advertising; mods extend the shelf life of the product, and introduce innovations that the company
could not have thought of; and, most important of all, mods increase customer loyalty by generating
a community around a developer.\textsuperscript{532,533} Essentially, a chain of affects is generated by this new

\textsuperscript{530} See again Hardt (1999).
\textsuperscript{531} Among the most famous examples would be: the creation of WAD (map files) for Doom, Doom 2 and Quake. For
more on the topic, see Kushner (2003).
\textsuperscript{532} Which, therefore, fully qualifies modding as a crowdsourcing endeavour.
\textsuperscript{533} Kucklich (2005).
inclusion of the user within the production process: the modder has created relationships through her free, unwaged labour that the game company can appropriate and deploy, in turn generating affects directed at themselves, by essentially 'piggybacking' on the modder's work.

This exchange is often, of course, not equally benefiting for both sides: 'the modders' leisure is being commodified by the game industry.'\textsuperscript{534} Kucklich argues that, since 'gaming' and all game-related activities (in virtue of the very fact of being game-like) have been conceptualised as non productive work, they are far more exposed to exploitation than more widely accepted practices of digital tinkering 'as work', such as open software development: 'the perception of modding as play is the basis for the exploitative relationship between modders and the game industry.'\textsuperscript{535} In other words, game modding, and game-like activities in general, have become yet another accepted avenue by which immaterial and affective labour can be exploited at little or no cost, co-opting the non-work time of people for activities that, while variously branded as pastimes or 'hobbies', do in fact constitute labour – they have long entered the flow of capital, both as immaterial labouring activities, and as factories of affects, through the logics of crowdsourcing.

It remains to be seen if Kucklich's observations can be generalised to other kinds of game-like productive activities, including ones with fewer ties to commercialisation and monetisation than game publishers. While the link between crowdsourcing and the industry's exploitation of modders should be quite self-evident at this point, modding as an exploitable activity might seem, at first, to have very little relationship with museum activities – or, more generally, with public engagement in the cultural, not-for-profit sector. Buying into such a stance would be, however, an error that blinds us to the all-encompassing nature of immaterial and affective labour's exploitation in our contemporaneity: while there might be no perfect coincidence between modding a first-person shooter, and tagging gallery artworks online (in fact there are, as we will see, key divergences), the political, cultural and economic dynamics underlying these two endeavours share

\textsuperscript{534} Kucklich (2005).
\textsuperscript{535} Kucklich (2005).
the colonisation of traditionally not work-related times and tasks, which are co-opted for the
generation of material and immaterial capital. The 'missing link', in my opinion, is a kind of game
that, more closely than Kucklich's modding, resembles they type of public engagement traditionally
sought by museums: that is to say, casual gaming.

Jason Lipshin, in his 2011 article 'Casual Labour: how Farmville Converges Production,
Consumption and Play', further than Kucklich positions the whole of gaming firmly within the cogs
of contemporary capitalist production.\textsuperscript{536} Supported by Steven Shaviro's 2007 essay 'Money for
Nothing: Virtual Worlds and Virtual Economies', as well as Alexander Galloway's book \textit{Gaming:
Essays in Algorithmic Culture}, Lipshin states that 'the broad transformation from Fordist to post-
Fordist economies in late capitalist societies has transformed labour from an activity restricted to
the enclosed space of the factory, to a multiplication of activities expanding into numerous spheres
of ambient life – often under the auspice of play.'\textsuperscript{537} Therefore, not only the digital activity of
gaming 'proper', but gaming as a paradigm of interaction, creation and consumption has been
subsumed by capital in order to create new areas of exploitation.

Lipshin sees a clear political trajectory in such appropriation, an argument that should
resonate with our discussion in the course of the chapter so far: 'it is by co-opting the smooth veneer
and slippery signifiers of “play” that contemporary labour can hide under playfulness, and play can
become more laborious, allowing Julian Kucklich to coin the neologism “play-bour.”'\textsuperscript{538} The crux of
the matter is that the ideology of gaming and leisure time as grounds for exploitation that Lipshin
and the others articulate is ubiquitous throughout society's productive apparatus: it limits not itself
to industry, but colonises culture, psychology and politics; sometimes it does not even require a
proper game-like activity in order to be deployed. Lipshin's 'convergence of work and play' thrives
on activities that possess selected traits of a game, even when not being games proper.\textsuperscript{539} This can

\textsuperscript{536} \textit{Farmville}, a social/casual game by Zynga, puts the player as the hypothetical manager of a farm: she raises crops,
livestock, and vies with other players for the largest, most luxurious farm. Results can be shared on social media
platforms such as Facebook.

\textsuperscript{537} Lipshin (2011) p. 3. See the article as well for the full citation of Shaviro and Galloway.

\textsuperscript{538} Lipshin (2011) p. 4.

\textsuperscript{539} Lipshin (2011) p. 3.
go in both directions: an activity can present itself as a game, while actually being labour of some kind; and a traditionally non-game task can be made acceptable and engaging with the inclusion of game-like traits (ladders; rewards at fixed points reminiscent of 'levels'; encouragement toward friendly competitiveness; and so on).

An example of such activities, sitting between work and play – or, rather, constituting quasi-work disguised as play – is so called 'social gaming.' Lipshin follows his critique of the convergence of production, consumption and play by closely looking at one of the most popular online social games, the Facebook app Farmville. Through this fictional farming game, which consists both of an activity (the 'farming') and a display (showing your friends on Facebook the results of your gaming sessions), 'It [Farmville] is able to use rewards as a cheerful veneer to what is in fact an interface which inherently devalues the act of play into labour.'540 While the raising of cute, starry-eyed animals might seem galaxies away from the Fordist worker's endless pulling of a lever in a car factory, according to Lipshin the two activities have much in common: the mechanical, repetitive play-style that social games like Farmville (but also Angry Birds, or Bejeweled) promote more or less an analogous attitude toward toiling: one endlessly reproduces the same action for the same, incremental but qualitatively constant outcome in exchange for 'a fantasy of individual empowerment'.541,542 Essentially, the repetitive, labour-like task that lies behind the game's rhetoric pays for time investment in subjectification and legitimisation of a personal, and digitally social nature; also, the rearrangement of in-game items in a compulsive, cumulative fashion suggests that part of the game's affect also relies on the elaboration of identity through – in this case, digital – artefacts: 'players act as bricoleurs of their own identity, appropriating and recontextualising virtual consumer items as signifiers of their varied lifestyles and ideologies.'543

To speak of exploitation there must be, however, a disproportion at play: those who provide

542 Other popular online social games. One of them, Angry Birds, has even crossed into the realm of the physical commodity, being features in an array of paraphernalia such as shirts, gadgets and toys.
the game must, in turn, gain something that is of some value – often, larger value than what the user gets. In *Farmville*, such exploitation is multifarious: cute characters within the game gather key statistical data on user's habits and preferences under the guise of friendly dialogue, and personal data is consistently mined behind the scenes, with minimal clues and control given to the user: all this in the name of 'provid[ing] you with an idea of “you” which is totally custom made – perfectly tailored to the idea of commodities that you must want.' The company or, more widely, the immaterial labour providers contribute rhetorically and actively to the user's process of subjectification by labour, a process that is then exploited for material and monetary gain.

This interpenetration of game-like activities ('quasi-games') and 'wealth cum identity production' labour needs some further elucidation. While we have seen that game-like activities can be deployed for labour, how much of a game are such activities? I would argue that between labour activity and gaming exists, rather than a either/or, a spectrum, of which the two are extremes: furthermore, if what immaterial / affective labour scholars, and game theory as interpreted so far said holds true, in the context of the global immaterial and affective production of capital there are nearly no instances of activities, in late Western capitalism, that belong fully to one extreme or the other. The point is not irrelevant: as we will see when our discussion moves toward the museum setting, the 'amount of gaming' inherent in the activity has a tangible impact on the outcome and usefulness for all parties involved. Essential to the analysis of the aforementioned spectrum are two key terms, both of them at the intersection between gaming, education and labour: 'serious games' and 'gamification'. I will now offer a brief analysis of the history, key ideas and relevance of both

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544 In other words, a disproportionate amount of capital surplus must be generated. See, to that regard, Fuchs 2010 (previously cited).
545 Lipshin (2011) p. 16.
546 This point I feel is particularly important, and relies of course on the expanded definition of 'game' I have provided previously. Some activities still do not require sitting down in front of a computer; moreover, most activities do not require catering to fictional animals, or shooting down enemy jets: yet, if as Hardt (1999) suggests, in late capitalism that is based on immaterial labour, the digital mode of operation (even in the absence of hardware) is virtually omnipresent, nearly all activities feature a partial game-like structure, or refer to skills that can be learned through game-like activities. Hence, the recent surge in the use of games as corporate training (what to reference?); or discussions of friend-based (which is to say, points based) social settings such as Myspace as training grounds for immaterial labour (see Coté and Pybus, 2007). For an analysis of the explicit connection between Empire and gaming, see also the previously cited Dyer-Witheford and Coté (2009).
terms – informed by the discussions around digital immaterial labour and games created so far; and geared toward deployment in the museum context.

'Serious games', or 'games with a purpose' have been variously defined, often time according to the importance given to different aspects of the phenomenon they purport to represent. According to cognition researcher Tarja Susi, most definitions agree on a core meaning: 'serious games are (digital) games used for purposes other than mere entertainment.' With an eye toward further contextualisation within the museum paradigm, however, I prefer the expanded, more detailed definition provided by games researcher M. Zyda in 2005:

'Serious game: a mental contest, played with a computer in accordance with specific rules, that uses entertainment to further government or corporate training, education, health, public policy and strategic communication objectives.'

Not all elements are equally present in all serious games; yet, the basic carrying dynamic – the game as a vehicle for productive activity – is invariably present, which arguably stands behind the alternative nomenclature of 'games with a purpose'. Also noteworthy, if we accept Zyda's definition, is the resonance with the Autonomist analysis of late capitalism as a dynamic that renders productive and laborious formerly unorganised zones of free time and entertainment in the age of immaterial and affective labour: serious games can help organisations in harnessing the lure of entertainment for the development of new areas of 'serious work'.

In 'serious games', the qualifying factor is that 'fun' is not the spurring element in the design of the game itself: it has a role, but it is not the end. In the summarising table provided by Susi et al., we can see the consequences that this assumption has on the game's design: 'serious games'

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547 The two terms seem to be generally used as interchangeable. Both of them are, however, precarious terminologies that tend to semantically twist the inherent element of 'seriousness' and 'purpose' that can be detected in most if not all games. For some of the problems raised by this terminology, see for example Rockwell and Lee (2011).
550 See previous discussion in section 1.
focus on solving a problem, rather than providing a rich experience; they substitute learning for fun; tend to reflect the complexities of real-world situation, rather than artificially erase them for the sake of gameplay; they reflect natural communication, unlike the tendency in 'non-serious' games to erase communication difficulties in order to facilitate entertainment. These four elements are useful for positioning and discussing 'serious games' within the aforementioned labour-play continuum, but often by contrast rather than agreement: as we will see through the illustrative cases in the second half of the chapter, at least in the context of the museum no game activity fits neatly on one side of the divide, and very serious games often entice the user by presenting themselves coated in a veneer (more or less thick) of 'fun'.

Necessary to understand the emergence, and growing importance of 'serious games' is, finally, one further term, 'gamification'. Defined by cultural heritage technologist Mia Ridge as the tangible danger of a 'resort to cheap gimmicks', and chastised by Robertson of *Hide&Seek* as 'taking the thing that is least essential to games and representing it as the core of the experience', gamification describes the process of 'using game design elements in non-game contexts to motivate and increase user attention and retention': it indicates the addition, upon such non-game activities, of game elements such as a point system; scoreboards or leaderboards; badges and levels. The phenomenon has been hotly debated and contested among culture professionals in the last four years or so, and has met a considerable amount of resistance. Game scholar Ian Bogost, in particular, criticises the widespread use of gamification in contemporary activities as making 'applying that medium to any given purpose seem facile and automatic'; it offers 'generic [solutions], ideas that can be repeated without much thought from brand to brand'; he eventually proposes the alternative term 'exploitationware', which 'allows us to situate gamification within a larger set of pernicious practices in the high-tech marketplace'. While Bogost's assault is evidently

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552 Bhutta (2011).
553 Robertson (2010).
555 All following quotes in the paragraph come from Bogost (2011).
partisan, he underlines an important point, that again resonates with our discursive thread so far: the inextricability of games as immaterial labour from wider mechanisms of wealth production and exploitation, seen in the progressive 'mechanisation' of play into repetitive, assembly-line style progression.

Throughout the chapter so far, we have retraced a complex system of interlocking dynamics within the contemporary milieu. We set off from autonomist notions of 'immaterial' and 'affective' labour, new typologies of pervasive labour / exploitation as enabled by global capitalism and the emergence of the digital as an all-encompassing framework. We then moved to the context of the digital and Web.20, the staging area for one of the most radical ways in which the logics of immaterial and affective labour have colonised the subject outside of work hours: crowdsourcing, and the exploitation of 'free time' for the institution and the subject's mutual yet unequal gain. Then, we looked at the way in which digital exploitation is allowed to colonise free time and non work activities by 'posing', so to speak, as free time and non-work, under the guise of game and game-like experiences.

'Serious Games' in the Museum as Digital Labour

While there is abundant technical and professional writing on the deployment and rates of success for serious games and other similar products in the contemporary museum, little effort has been done so far in positioning such products and efforts within a larger cultural trend, be it dynamics of labour, or game theory. My analysis will outline the contradictory place that 'serious games', crowdsourcing games in particular, occupy in the museum economy: with reference to the 'serious games to crowdsourcing' spectrum I suggested above, most museum 'games' feature only some aspects of games, or some aspects of labour: almost all defy, in some way, easy categorisation.
into one extreme or the other.

The adoption by museums of the aforementioned structures of play-like labour in a digital context, seems to be largely facilitated by two conditions that are inherent in the contemporary museum: on one hand the progressive move, in the last fifteen years or so, toward a new paradigm of museum-visitor interaction, which among other names has also been called the 'constructivist museum'; on the other hand, the still ongoing downsizing of financial support, both from the public and the private sector, for arts and heritage has pushed many institutions to look for alternative, cheaper and volunteering-oriented means of fulfilling their daily tasks – essentially, substitutes to traditionally costly managerial, professional and labour mechanisms.\(^{556}\)

The interplay of these two conditions has spurred a great deal of experiments, attempts and discussion of various possible recombinations and deployments of 'serious games' and crowdsourcing in the museum context, as means of reorganising the museums' informational economy. There are, however, difficulties in tracing a precise genealogy of this burgeoning phenomenon. Part of this might be due to the largely unorganised nature of such attempts, a trait shared with most advances in digital structures and content; also, while a great deal of attention has been paid toward instances of design and deployment, in the form of 'case studies' (often described and presented by the same teams that designed them), most such studies are empirical, qualitative and statistical in nature.\(^{557,558}\) There has been little to no attempt to situate such efforts within a larger theoretical paradigm of digital content production and consumption; where such attempts were made, they have largely disguised dynamics of labour and exploitation, rather working on the supposedly solid assumption that there is a demand for such activities in spite of possible drawbacks.

\(^{556}\) Hein (1999).

\(^{557}\) In fact, one could say that such 'lack of organisation' in the digital realm is both cause and consequence of the 'new Web' that Web 2.0 purportedly stands for: as the Web and the digital becomes more and more cloud-structured, resembling organic growth rather than an apparatus of linked machines, we find more and more that innovation happens on a micro, or microtopian level, as well as according to the idea of a 'perpetual beta' (O'Reilly, 2005).

\(^{558}\) An observation that can be gathered by simple first-hand perusal of typical outlets for such literature, such as 'Museum and the Web', ICHIM, TED and the conferences of various national and international museum associations. See also footnote 6.
The idea of the 'constructivist museum' can be credited, at least in its complete and conscious formulation, to education theorist George E. Hein. Setting off from a larger surge, in the mid-Nineties, of interest and literature on constructivism and education, Hein adapts and applies a four-axes, two-continuum system of possible education strategies for the museum context. As a consequence, he argues for four possible 'macro-types' of museums, each one associated with one educational paradigm: one among them is the constructivist museum proper, which incorporates both knowledge and learning schemata as essentially constructed by the individual through the learning process itself, sometimes without but more often with external facilitation. While Hein clearly singles out the constructivist museum as more timely and relevant compared to the three remaining macro-models, he doesn't exactly prefigure how a constructivist museum might look like – or, more precisely, what exact strategies or tools might need to be deployed in order to make such museum model a successful reality. Even if he did so, however, it is doubtful that strategies that would have seemed acceptable in 1995 could still be efficiently deployed in 2012, as key instruments for the development of the museum as a constructivist educator – the digital and the Web – was still far from widespread or easily accessible at that time.

A few more recent analyses seek to put the constructivist paradigm in relation to new instruments and instances of sociability within the digital realm. Museum researcher Hellin Hobbs' 2001 article 'The constructivist museum and the web' directly addresses the Constructivist Museum as the dominant museum paradigm in the context of the museum and the Web. As she sets out to discover whether electronically delivered user-generated content [is] allowing museums to fulfil George Hein's vision of the Constructivist Museum on the Web', she touches upon the chief motivation for museum to enter the Web, and in particular the Social Web and Web 2.0 arena, while she also enumerates the dangers and ambiguities with which this venture is fraught. She states

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559 In particular the essays collected in Hein (2013).
560 Hein suggests that the constructivist museum would afford the 'opportunity for the visitor to make connections with familiar concepts and objects' as well as 'encourage comparison between the unfamiliar and the new.' (Hein, 1995. p. 6)
that 'The advent of the World Wide Web, and in particular the technology known as Web 2.0 has altered the balance of power in the realm of museum visiting': her argument following this key remark is not extensively developed, yet implicit is a parallelism between the participation and prosumer-generated interactivity typical of the Web 2.0 paradigm, and the individual's activation that is necessary in order for a constructivist mode of learning, and therefore a constructivist museum, to function.\textsuperscript{563\textdagger\textsterling564}

Hellin-Hobbs, when it comes to discussion of the digitally specific aspect of the 'constructivist-Web 2.0' museum, refers back mostly to a 2003 paper by Gail Durbin, a detailed analysis of the digital approach of the Victoria and Albert Museum.\textsuperscript{565} Overall, this source particularly stresses, as key to understanding of the museum's possibilities in a Web context, the balance that the museum has to struck between interaction, contribution and expertise coming from the 'constructivist' public, side by side with established modes of operation that are internal to the museum system: 'it is useful [in developing our website] to think of interactivity and participation as falling somewhere along a continuum that runs from the museum as expert to the visitor as expert'.\textsuperscript{566} Therefore, participation is not merely an add-on, but an integral part of how the visitor enters the economy of the digital museum, and the museum in general; a potentially fruitful, yet also potentially destabilising element that might radically change, if successful, the museum organisation as a whole. The article is also relevant as Durbin introduces play, games and gaming as essential to the visitor's entrance within the participatory museum: she enumerates a variety of playful activities in which the V&A's public has been involved with success, and with varying degrees of institutional control, most of which included the digital element as well (for example, a project in which visitors took pictures in the galleries, and use them collage-style to assemble a

\textsuperscript{563} Hellin-Hobbs (2010) p. 73.
\textsuperscript{564} For an extremely detailed analysis of the pedagogical affordances, and constructivist learning methods as they are specifically empowered by Web 2.0 applications, or 'social software', see McLoughlin and Lee (2007). Their discussion is too lengthy to be addressed here, and does not directly address museums.
\textsuperscript{565} This reference is even more vital, as Victoria and Albert Museum will also be one of my case studies in the second section of the chapter.
\textsuperscript{566} Durbin (2003). Page unnumbered.
poster for the V&A). She summarises thus:

'increased degrees of participation have been made possible where gallery events have been
developed in combination with a web element... it is part of the mission of the V&A that visitors should
derive enjoyment from the collections and should be encouraged to develop their own creativity. Observation
shows people who involve themselves and make a commitment are more likely to return or follow up their
interest later.\footnote{Durbin (2003). Page unnumbered.}

Therefore, game-like activities seem an ideal avenue for museum to introduce the visitor
into the museum's economy – which is to say, involve them in playful labour that generates affect
and a sense of involvement in the visitor; and returning visits and web site accesses for the museum.
The activities that Durbin talks about possess many of the traits shared by social games: they
engage the user in simple, immediately rewarding, repetitive tasks from which users gain
enjoyment, affect and subjectification, and from which the museum gains legitimacy, success and,
potentially, revenue. Such playful instances might not be articulated as overtly exploitative – which
is to say, they sit close to the 'play' end of the play-labour continuum described previously – yet they
surely belong to the discourse of immaterial and affective labour as it applies to the museum. As
further clues, one could also include the mass of immaterial goods that these visitors produce
(pictures; artefacts; feedback), and that the museum has then full rights to employ; or, in the other
end of the spectrum, the rare instances in which visitors garner also tangible wealth from the
museum activity.\footnote{For example – in relation to the V&A activity Things and You, Durbin mentions a girl taking over 150 pictures of
herself: 'perhaps she was set on a modelling career and was using the opportunity to develop her portfolio... the girl
who took 150 pictures of herself used the museum for her own career development.' (Durbin (2003)) While such
cases might be exceptions, there is still room for clever exploitation by users of given platforms.}

Various levels of exchange, symbolic but also material, do happen on both
sides.

Durbin was writing perhaps too early to fully appreciate another way in which museums
involve their visitors within the formal museum economy – that is, through crowdsourcing. It is in 2005 that Jennifer Trant and her team kickstarted what has become one of the earliest and, arguably, the archetype of museums attempts to crowdsourcing public intelligence through the digital: the IMLS research grant *steve.museum* project. The software implementation itself will be looked closely at in the 'illustrative cases' section of the chapter; nonetheless, a variety of documents have been produced in connection with the project, and one of them in particular, 'Exploring the Potential for Social Tagging and Folksonomy in Art Museums: Proof of Concept' offer a good overview of the concerns that brought to the fore, in the museum context, not only *steve.museum*; but also, more widely, existing documentation, implementations and discussions of folksonomies and crowdsourcing in the museum context. The introduction for the *steve.museum* proof of concept could be considered the manifesto for the crowdsourcing museum:

'Documentation of art museum collections has been traditionally written by and for art historians. To make art museum collections broadly accessible, and to enable art museums to engage their communities, means of access need to reflect the perspectives of other groups and communities. Social Tagging (the collective assignment of keywords to resources) and its resulting Folksonomy (the assemblage of concepts expressed in such a cooperatively developed system of classification) offer ways for art museums to engage with their communities and to understand what users of on-line museum collections see as important.'

The statement of intent identifies sharply the interest that museums have in deploying crowdsourcing: inclusion of the visitor's perspective into the museum's informational apparatus, and system of production. Social tagging and folksonomies (which are, essentially, methodologies for crowdsourcing) are defined, and the aim to 'engage with communities' explicitly stated. It is

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569 The project has its own web site, [http://www.steve.museum/](http://www.steve.museum/), which also links to a blog (last updated December 2010), and a link to the downloadable code for the steve.museum software itself.

570 Trant (2006). A full bibliography of the publication material connected to steve.museum can be found at [http://www.archimuse.com/research/steve.html](http://www.archimuse.com/research/steve.html).


572 For further discussion on the specifics of folksonomies, see Nordbotten (2010).
difficult not to see, in this desire for engagement, the mechanism of affect generation in the user through the user's own labour – in this case, production of social tags and folksonomies. In *steve.museum*'s proof of concept there is, paradoxically yet not entirely unexpected, virtually no reference to these practices as part of a wider context of labour; or, even more generally, an acknowledgement of them being labour at all. Also, any play or game-like aspect that such activities might have is left to speculation – in spite of the pervasive presence of involvement, affect, and the fact that the dynamics themselves of *steve.museum*'s actual deployment have more than a few elements in common with 'serious games' in the museum.\(^{573}\) The accent, in this and other material related to *steve.museum*, is squarely on the technicalities and the quantitative aspects of museum crowdsourcing and folksonomies, with the bare minimum of contextualisation and macro-framing that is necessary to scaffold the project's aims: this, in my opinion, often ends up as preaching the good of crowdsourcing to the converted; and provides only part of the picture of the complexities of harnessing collective intelligence in the museum, and in the cultural sector at large.\(^ {574}\)

*steve.museum* can be said to be one of the most celebrated efforts in a surge of interest in the capabilities of the Web to harness collective knowledge for the museum, in the form of tags and folksonomies, which began somewhere around 2006. As literature on the topic (with the biases and caveats listed above\(^ {575}\)) is extensive, I will limit myself to describing two cases that hold, for a reason or the other, particular relevance or interest to the overarching issues that I am concerned with – labour, and gaming.

Information Science researcher Martha Kellogg Smith, in her 2006 essay on user-generated museum tags, raises a few further points that should be considered. She attempts to investigated the linguistic and interpretative factor in including within the museum tags generated by users for artwork. As she describes possible reasons behind museums' adoption of crowdsourced tags, she

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\(^{573}\) The term 'game' appears twice in the whole document, and both times as an item in a list, without being elaborated further upon.

\(^{574}\) See, in particular, the final summing-up document produced by Trant (2009).

\(^{575}\) As in: nearly the totality of discussions of museum folksonomies follow the same formula of *steve.museum*'s: vast quantitative analysis that is circumscribed to the museum context, with little attempt to locate the use of folksonomies within larger cultural trends and theories.
distinguishes two main factors: on the museum side, the possibility to 'generate keywords for image and object records in museums retrieval systems in a cost-effective way'; mutually, 'to engage online visitors... by inviting visitors to express themselves and share their descriptions of artworks.\footnote{Both quotes from Kellogg Smith (2006) p. 1.}

The first possible motivator, although not developed any further by Kellogg Smith, seems to point at the 'hidden' service that crowdsourcing, in the end, provides to the institution: financially 'free' labour services, completing tasks that would take time, staff and structures for the museum to complete on its own. From this point of view, the existing literature's enthusiasm toward the validity and usefulness of user-generated data (and the avoidance of relating crowdsourcing to labour proper) is pragmatically justified: the fruits of the crowdsourcee's labour must be legitimised as, quality-wise, fit to fulfil the museum's traditionally highbrow agenda. The inherent exploitative aspect of crowdsourcing is not addressed as part of the equation – or at least, not directly. As for the user side of the equation, when Kellogg – Smith mentions as further rationale for crowdsourcing 'engagement' and 'expression of self', she indirectly addresses the actual remuneration that the activity affords: affect, construction of subjectivity (furthermore, a 'culturally legitimised' subjectivity) and entertainment.\footnote{Of course, it remains open the issue if whether or not payment in 'affect' is de facto exploitative, as subjectivity becomes more and more important in our cultural context. However, from a labour perspective, the impossibility to measure labour and affective return, and the absence of an explicit social contract render the activity, in my opinion, at least partially exploitative in all cases.} Without mentioning once the term 'labour' or 'affect', Kellogg Smith's thesis implicitly posits museum crowdsourcing squarely within a system of immaterial and affective labour.

For discussions of museum and 'serious games', the current figure of reference is probably digital researcher Mia Ridge.\footnote{Her blog can be reached at \url{http://www.miaridge.com/}} Dubbing serious games as 'participation engines' she argues that, by taking advantage of the flow and entertainment provided by the 'magic circle' inherent in games (essentially, the ability for games to encourage immersion into a 'different reality'), the museum can 'demolish barrier to participation', 'drive on-going participation', and 'provide feedback' for both
In addition, games in the museum help bridging the 'semantic gap' (the difference in lexicon and language between the museum institution and the visitor) by creating a common ground that is not constructed according to the esoteric language of the museum and its internal components. Ridge also warns museums of the potential dangers, already discussed previously in this chapter, of 'gamification': 'emphasis on shallow, non-interesting tasks' that 'decreases motivation for interesting tasks that might be intrinsically motivated.'

As we can see, there are a wealth of guidelines available that are specific to the deployment of games, serious games, and crowdsourcing within the museum. I will seek now to apply to a number of select cases another perspective, which incorporates more narrowly museum-based perspectives but also contextualises museum efforts further, within the paradigms of capital, labour and games as expression of social, cultural and economic relationships. The illustrative cases have been selected for their timeliness; relevance; and documentary richness: they include enterprises that have been analysed in the past by others, in some measure; as well as very recent efforts, upon which little to no scholarship is available.

**Illustrative Case 1: Steve: the Museum Social Tagging Project (steve.museum) and Steve Tagger**

Location: [http://www.steve.museum/](http://www.steve.museum/)

Typology: GNU lesser general public license social tagging / folksonomy crowdsourcing tools for image collections.

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579 For the canonical definition, and more background, see Castronova (2005).
582 Ridge (2011b).
For the first illustrative case I will focus on the tagging tools suite developed by the research group behind the previously cited steve.museum: I will first review the history, development and documentation produced in concomitance with the project; then I will apply direct observation of the Steve Tagger tool proper, through the theoretical perspective developed in the first half of the chapter. Overall, I will try to show that steve.museum, more than many other crowdsourcing initiatives pushed forward by museums, makes visible the technological, informational and iterative process that underlies such initiatives; in this sense, it displays paradigmatic strengths of crowdsourcing as a tool, but also suggests that, at least in a museum context, platforms that mediate between rigorous data-gathering and more educational and socially interactive aspects require a balance that is often hard to strike.

The steve.museum project was conceived in 2005, by a team of digital researchers and personnel from various museums (full listing is available on website), as a possible answer to a pressing issue: the difficulty, for the ever increasing number of online museum visitors, to navigate digital collections. As co-founder Susan Chun puts it in an 2005 early proposal / workshop at Museum and the Web, 'catalogue data rarely contains information about the subject of a work of art: the people, places, ideas, emotions and events depicted or represented.'

The team identifies, as a key obstacle to navigation of digital collections, the so called 'semantic gap': which is to say, the difference between the descriptive language employed by museum staff – especially when trained and knowledgeable about art – and the 'vernacular language used by the general public for searching.' In order to bridge this semantic gap the group proposes to initiate a social tagging initiative, that will collect non-specialist lexicon related to visual materials and artworks, which then can be employed to develop search tools that respond positively to audience vernaculars.

The steve.museum project has been articulated in two general 'phases'. In the first phase, which lasted until December 2008, emphasis was put on covering background and the necessary

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583 Chun and Jenkins (2005)
584 Steve.museum (2005) 'FAQ' section.
theoretical research within the framework of the IMLS Leadership Grant 'Researching Social Tagging and Folksonomies in the Art Museum'. According to the group, the research project's results 'validate [our] key hypothesis: that social tagging can enhance access to museums collections by adding useful terms to existing museum documentation.' The 'project analysis and result', penned by Principal Investigator Jennifer Trant, elaborates further by supporting the conclusion through analysis of the gathered folksonomies in the research study: overall, the high rate of usefulness (ultimately assessed by the researchers) of the gathered tags, and the low level of overlap between existing authored tags and audiences' vernaculars suggests that gathered terms can be successfully deployed to bridge the semantic gap. The second part of the steve.museum project consisted in the development of an application that can perform this 'vernacular collections' task. The resulting product is the Steve Tagger: a GNU licensed suite of tools (which includes the tagger itself, a term review tool, and a reporting tool) that can be downloaded and applied in a Pachyderm environment. After its initial development and testing, a further grant from IMLS has been used to further develop the Steve Tagger, through the project 'Steve in Action: Social Tagging Tools and Methods Applied.' According to the 'Steve in Action' project roadmap, the development tasks were scheduled to end in early 2011. While the project therefore seems, for all intents and purposes, concluded, all documentation can be found clustered around the web site proper; the already cited blog; and at the dedicated Archive and Museum Informatics page.

In the course of the project's near six-year span, during which a wealth of research and written material has been produced, most aspects of museum crowdsourcing and folksonomies have been explored to some extent: nonetheless, some haven't been touched upon at all. Specifically very

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587 All relevant reports, as well as a .zip archive of the gathered data, can be downloaded at the project's web site, under the 'research' tab.
588 While the steve.museum project has been officially wrapped up, the tools are still downloadable under the 'software' tab of the web site.
589 This project has its own blog at the New Media Consortium: [http://steve.nmc.org/](http://steve.nmc.org/) The blog has been updated last on December 2010.
little attention has been paid as to how a project such as *steve.museum* presents features of a 'serious game', in the kind of contextual discourse initiated by Mia Ridge and others.\(^{591}\) Also, as diagnosed before in other instances, the great attention to the deployment of *steve.tagger* – generated folksonomies pushed aside concerns about the larger economies of information of which a project such as *steve.museum* would become a part of once deployed. It seems sufficient for the authors to pragmatically establish the usefulness of the project, without digging further into its politics and economies – which, as I have suggested up to now, do exist and must be acknowledged since they constitute an essential element of crowdsourcing as a practice, rather than merely a by-product.

While a 'digital tools development' approach might suffice in the design stage, crowdsourcing in the museum is no longer a new, unheard-of practice: now that *steve.museum* has run its course I think it necessary to position it within a larger discursive frame. The best place to start such positioning, given the accompanying literature's features that I have enumerated, is the crowdsourcing software itself; seen not merely as a tool or a technology, but instead as a platform for mediated social interactions.

![Fig 1: *steve.tagger* tagging interface, displaying the interface for a typical artwork.](image)

\(^{591}\) Some lexical reference to tagging tools as games appears in Trant (2009): such references are not, however, incorporated in the ensuing discussion.
Steve Tagger is available at [http://tagger.steve.museum/](http://tagger.steve.museum/), requiring either registration in the site, or login through Google, Yahoo or OpenID in order to interact with the software. Set up in a visual style similar to the project's main web site and blog, the splash page features a short blurb about the aims and outcomes of the tagger; a bar with a few statistics on the project, including the total amount of images; the total amount of terms generated; the number of registered users; and a list of the seventeen institutions that have provided images of artworks. Through four tabs and a search bar, the images are searchable in three main ways: by browsing them; by selecting a previously assigned term (including some from a 'top 100' and a 'top 1000' list); by museum of origin.592

Once an artwork is selected, we are taken to that artwork's specific page. Here, basic archival records are provided (title, origin, period, institution) along with a zoomable image. Above those, one can find a field in which to enter a tag. The full list of tags for the item up to that moment can be found in a tab under the main field, along with more specific metadata, a link to the grouping (collection) the item is part of, and links to similar items.593 On the side, one can add the image to a set, link it on Facebook or Twitter, or email the Steve Tagger staff. Added tags appear immediately in the appropriate tab under the image. Finally, one can click on an appropriate thumbnail in order to move to the next image.

At first, the activity proposed might seem to have little to do with serious games, or with play in general. Upon repeated use, one of the emerging characteristics of the type of labour Steve Tagger requires is its repetitiveness: there is no tangible sign of a 'conclusion' to the game, or any indication of a change of flow in the activity at any point in time. The performative aspect is limited to inserting tags, then moving on to the next image: interim exploration is made unwieldy by the lack of an intuitive way to return to the main activity where one left off, after exploration is

592 The terms lists also seem to suggest the relatively low level of activity on the web site: from a total pool of 548,761 provided terms, a single instance of me inserting a term made it into the top 100.

593 Similarity of an item to the other does not seem to be correlated to similar tags being given.
concluded.\textsuperscript{594} Also, images appear in no discernible logic, jumping far and wide in location, period and provenance.

Yet, while the activity can hardly be classified as a 'game' proper, there is more than one element that points at gamification as the key reward mechanism for what would seem, upon first experience, hardly an inherently rewarding activity for non museum-inclined people. First, the choice to display top 1000 and top 100 terms, with the user's own terms standing out in colour, could be construed as an instance of 'gamification'- specifically, the appearance of the user's own picked terms on the front page of the project affectively rewards the participant in multiple ways, as it bridges the 'distance' that exists between the individual and the institution, legitimising the former's choice of descriptive terms, and allowing a metaphorical 'embracing' of the user by the latter; it connects the single user to a larger network of participants with whom, albeit anonymously, it can potentially enter in competition, in an instance of 'networked playfulness' that heavily echoes the individual activity / collaborative framework typical of much casual social gaming, and social media platforms in general; it provides a reward and a mean to quantify one's participation and progression within the structured activity of \textit{Steve Tagger}, therefore generating a game-like 'goal' to the otherwise droll activity of churning out terms, one picture after another.\textsuperscript{595} Finally, the possibility to create sets of items, and then save them for future reference, doubles as an information gathering tool for the software, as well as a way for the user to increase accomplishment by generating a kind of 'trophy gallery', which acts also as an incentive to return for further tagging.

Aligned with the \textit{steve.museum} project's explicit aims of improving collections access, searchability, and fostering interest in museum collections, the \textit{Steve Tagger} application can be read in the context of digital labour practices, affective labour, and 'gamification' of quasi-labour activities. The quick, repetitive task that \textit{Steve Tagger}'s 'no-frills' interface encourages deploys the

\textsuperscript{594} It seems intuitively likely that, since the tags are added in a form that reloads the page, at least some users would be reluctant to use the browser's 'back' button in order to backtrack.

\textsuperscript{595} For specifics on this dynamic, refer back to previous discussion of social gaming, and in particular to Lipshin (2009); and Cotè and Pybus (2007).
user-as-digital-labourer effectively, maximising the production of terms per amount of time spent. The activity's potential for alienation (through obvious free labour exploitation) is mitigated on various levels, by game and non game-related elements, such as: visual cues that encourage and guarantee legitimisation and inclusion of the user and her products within the cultural paradigm that the museum / cultural world stands for; immediate affect generation by display of real-time rewards for amount of effort, which are also visible to other users; the possibility to generate a 'body of work' by repeatedly saving searches, and therefore creating subgroups that respond to the individual's effort and interests.596 The labour relationship is, therefore, to a certain level mutually beneficial: an hypothetical museum team adopting Steve Tagger can generate with little expenditure and within a reasonably short amount of time, a wealth of metadata which will not only corroborate existing museum expertise, but also will increase visitor access, return rates and revenues by bridging the 'semantic gap' and, more generally, humanising the museum. At the same time the user, for their freely provided labour, get a sense of accomplishment and belonging to the socially acceptable intellectual paradigm that the museum, art and culture are part of - which is to say, the user gets building blocks for social, cultural and political subjectification.597

Illustrative Case 2: Victoria & Albert Beta Crowdsourcing

Location: http://collections.vam.ac.uk/crowdsourcing/

Typology: Beta visual crowdsourcing tool for the Victoria & Albert collections.

Unlike Steve Tagger, the Victoria & Albert's Beta Crowdsourcing is a tool designed to serve

596 Somewhat lessened by anonymity; yet, a level of 'personal satisfaction' remains.
597 A further aspect that I do not have the space to discuss here is the gain that the researchers behind steve.museum get from the free labour of the Steve Tagger: given the wide circulation of the project materials in prestigious academic venues, the funding the project attracted, and the publishing credits for related material, one could argue that the researchers themselves gained 'surplus value' from the user's toil and labouring.
a specific collection, the 'Search the Collection' online repository of the V&A itself. As the
introductory paragraph on the web page remarks, 'The new version of Search the Collections
contains over 140,000 images. The images are selected automatically and as a result some of them
might not be the best view of the object to display on the homepage of Search the Collections. We
are using crowdsourcing to help us find the best crops (or views). The crowdsourcing tool is,
therefore, proprietary; ancillary to an existing database; and can already count on the name of a
publicly prestigious institution to support it. When compared to the Steve Tagger, the V&A Beta
Crowdsourcing presents various similarities, but also a number of key differences; most of them
imputable to the project being intended to provide institutionally usable results, rather than being
exploratory and experimental in nature. Compared to Steve Tagger, there is also less secondary data
and information available on the project's design and history, so analysis of intentions has to rely
more on direct observation and guesswork.

The 'Search the Collections' gallery, which as of 2012 actually features 265,000 item images,
consists of a search tool, which can be tailored to search only for records with images or otherwise;
as well as a 'showcase' style splash page, which displays random items from the collection, from
which exploration can begin. All items are divided and grouped according to temporal, thematic
and metadata categories: access to an artwork provides an image, sometimes downloadable in HQ
and for free for non commercial purposes (if logged in as a user), as well as basic museum records,
which can be blown up to include publications in which the object has appeared, accession data and
so on. While the data available for most items is extensive, it seems that no metadata from
folksonomies or other social sources has been deployed.

Often times, each record will possess more than one associated image. In the case of this
Boulton teapot, for example, two images are available: one is a properly cropped and well-lit image

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598 Introductory note. http://collections.vam.ac.uk/crowdsourcing/
599 Considering, however, the establishment of steve.museum as the precedent in the field of museum crowdsourcing, it is somewhat safe to assume that the development cycle must have been, if not identical, at least analogous to that of the Steve Tagger.
600 See 'About' tab on the Collections page: http://www.vam.ac.uk/content/articles/s/search-the-collections-about-the-database/
of the item; while the other is badly lit, somewhat faded, and includes the pins that keep the picture background in place.\footnote{http://collections.vam.ac.uk/item/O78484/teapot-boulton-matthew/} As the paragraph I cited above, from V&A Beta Crowdsourcing, candidly attests, it is to solve the issue of image selection that the V&A has resorted to crowdsourcing.

In the project's main page, one more interesting short paragraph is included.\footnote{V&A (2013).} Here, crowdsourcing is defined as 'a way of using a lot of people to complete a task or solve a problem on the web. By working with the group, or crowd, the Museum gains insight into its users' views and preferences.'\footnote{V&A (2013).} According to the definitions we have outlined in a previous section of the chapter, this quote describes (albeit in rather non-technical language) crowdsourcing quite well; nonetheless, it also discloses the rhetoric that the V&A adopts in order to capture the user within the process of crowdsourcing, and to justify the deployment itself of crowdsourcing tools. The activity gathering data is presented as something of a concerted effort between public and the institution: the museum provides the means, and the user the manpower to accomplish the goal. The two actors are presented as equally invested and equally necessary with regard to the outcome of the project, an assumption that is bound to be correct only partially if at all, since intuitively the museum is likely to be far more invested in the project than most audience members. Nonetheless, the rhetoric itself of the project's underpinning encourages temporary inclusion of the user within the museum system, a deciding factor in fostering affect, and therefore participation. At the same time, it should be noted that the wording used to describe the process proper, 'using a lot of people to complete a task...', also locates the necessary labour within a logic of inclusivity, in spite of the implication that users are, in fact, 'being used'.

Upon registration, the user can access the crowdsourcing tool proper, whose interface does not differ radically from Steve Tagger; the material that the user is asked to crowdsource is, however, quite different.
The user is presented with a selection of two or more digital reproductions of an artwork, of typically wildly varying quality: usually one will have part of the actual object cropped out of the frame; others might be off-centre: often, the image will be a raw archival picture, with poor lighting and colour bars on the sides. Since the picture frame on an object’s official records page has to be square, and feature only the best quality images, the crowdsourcing element consists of performing the relatively simple task of picking the ‘best’ image to be featured on the object’s record page. While the meaning of what ‘best’ might mean is left somewhat to the user’s speculation, this still wouldn’t prove to be a significant difficulty, as usually we’re not shown more than three images per object, and at least one will be of such evidently poor quality that it will be ruled out almost instantly.\textsuperscript{604}

The task V&A's Beta Crowdsourcing asks of its ‘crowdsourcers’ is, therefore, quite straightforward. This has an important consequence: the V&A’s task is distinguished, compared to

\textsuperscript{604} The V&A crowdsourcing page cites, as criteria for selection, ‘a useful crop showing the whole object’, that might ‘display more interesting details.’
Steve Tagger or the Brooklyn Museum’s Tag! You’re It!, by its radical and only thinly disguised labour-like mechanics; and its utter divorcing of the crowdsourcing process from the museum’s cultural and social economy proper. The platform and resulting labour possess nearly no significant game-like elements – resembling, at best, the repetitive drudgery of Farmville’s least game-like ‘radically laborious’ tasks. Essentially, it could be said that the V&A’s Beta Crowdsourcing is probably as close a crowdsourcing activity can get to labour proper; or, alternatively, to unremunerated labour.

My basis for defining V&A’s crowdsourcing tool as more ‘laborious’ than other similar Web activities, verges chiefly on the typology of task that the user is asked to perform. While the image selection screen provides basic archival information, concerning what the object is, its date, provenance and so on, this information is absolutely irrelevant to the task the user is asked to perform: that a marble be a Greek antique or a Roman copy has no bearing on the simple task of selecting the image in which the sculpture is not underexposed – and, even if it was, the interface makes no effort to suggest so. Moreover, in nearly all cases the images don’t actually show the object from a more or less ‘informationally meaningful’ angle – for example, a statue photographed from behind rather than the front: the images vary in quality, but the subject and the object’s representation remain almost entirely the same. Therefore, what the object actually is, what it represents, and its history and politics are mostly irrelevant in the context of the demanded task: all the user is expected to do is choose the most visually compelling crop, one object after another, moving on to another and completely unrelated object once a micro-task is done. Overall, the activity bears a striking resemblance, in more than one extent, to the simple tasks required from the worker of an hypothetical assembly line: performing an extremely simple job, one instance after the other, with no apparent diversion from a perpetually undifferentiated, static stream of labour.

The crowdsourcing activity the V&A requires lays bare the fundamentally laborious nature

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605 Which should not be understood as a comment on the difficulty or performative complexity of the task. Rather, ‘laborious’ as ‘possessing marked attributes of labour.’
of digital crowdsourcing activities, their belonging to the sphere of ‘immaterial labour’. What of affective labour? Is it possible for a crowdsourcing activity of this variety to foster affect, a sense of cultural and social belonging, relationships and subjectivity? This would seem to be hardly the case, and not only for the relative dearth of ‘reward indicators’ compared to most museum crowdsourcing sites. The issue, it would seem, is rather on the depersonalisation and decontextualisation of the task that is required, and the distancing effect from the museum as ‘affect machine’ that it has on the user. As we have seen in the previous illustrative case, as well as through the latter part of our theoretical discussion, a key dynamic that encourages involvement in museum crowdsourcing is the possibility for subjectification and cultural legitimation that it offers, progressively constructed through labour that has (or, at least, seems to have) a tangible impact on the museum and its cultural economy. In other words, commitment is built by ‘incorporation’ of the user within the museum’s inner workings through useful tasks.

Yet, an useful activity in and for itself is not enough. It seems to me that, as a crowdsourcing task, language tags generation offers a motivational element that the V&A’s image selection task cannot replicate: content generation. One of the features that make verbal tag generation more demanding for the user – and, therefore, more precious for the museum – is the level of difficulty and choice that they require. Unlike mere selection of a better looking picture among a group, an exercise in which many are likely to be already apt based on daily personal experience with digital media, assigning tags to a foreign object requires a degree of independent thinking, balanced by a necessity to have the tag make sense in the context of the object, and other tags assigned. Essentially, when the crowdsourcee is asked to assign verbal tags, she is asked to generate semi-independent content. Such a task requires concentration, awareness and knowledge: it is, in many ways, prototypical of a game-like activity even when a formal game structure is not in place – and, as the previously constructed discourse on the affective nature of game-like activities and ‘feel

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606 Only one element: The front page of V&A Crowdsourcing displays a (often buggy) meter indicating how many works had an image selected. As of December 2012, roughly half of the collection has been worked upon.
607 Refer back to Ridge (2011) for a reminder on the importance of motivation through participation.
good’ tasks in general suggests, this sense of a two-way contribution, that benefits the museum but also provides encouragement and subjectifies the user, is likely to result in greater returns and more loyalty to the task.608

Illustrative Case 3: Brooklyn Museum: Tag! You're It – Freeze Tag – Posse

Location: http://www.brooklynmuseum.org/opencollection/tag_game/start.php
Typology: Social crowdsourced tagging 'serious game' with social platform element.

If one were to refer back to the ‘labour-game’ continuum I have previously suggested – without forgetting that the two are not exemplary extremes, but rather variably compenetrating and often coexisting options – on the specular side of where V&A’s Beta Crowdsourcing lies we would find the crowdsourcing activities of the Brooklyn Museum. First opened to the public in July – August 2008, this multi-branching project, which actually consists of two distinct crowdsourcing tools - which are in turn part of a larger social 'serious game' main frame - effectively disguises its nonetheless still laborious basic tasks under a logic that involves and harnesses not only games and play; but also social media, and other forms of Web-based sociality.609 Compared to V&A Beta Crowdsourcing, the multi-project at Brooklyn Museum has received somewhat greater attention in the museum sector, and raw analysis of the web sites proper can be corroborated with secondary literature, both from the museum's own staff, and other parties within the museum sector.

The project fits within an ongoing effort by the Brooklyn museum to meaningfully deploy social media and Web-based interaction since the latter part of the last decade: in 2004, the museum was the first to adopt a Creative Commons license; in 2008 it was the third institution to join the

608 See, to this regard, Simon (2008) ‘Two Tagging Projects that Make Sense’.
609 Main page for the project is http://www.brooklynmuseum.org/opencollection/tag_game/start.php
Flickr Commons, a repository of high-resolution images with no non-commercial copyright restrictions; in 2010 it allowed for non-commercial remixing as well of the images it provides. At the core of this string of project seems to be, at least according to comments by Stacy Oborn and Mark Ellis, ‘innovating rapidly, encouraging a “just do it” attitude, and most importantly, engaging wholly with a totally committed tribe of users.’ The choice of the term 'tribe', in order to describe the organisational logic that the Brooklyn museum encourages on the Web, is not fortuitous: not only the term has a long established connection with social media, but it also echoes by association the 'social invention' that forms the backbone of the Brooklyn Museum's crowdsourcing effort – the Posse.

In the context of the Brooklyn Museum's crowdsourcing games, the Posse is the collective of registered users that have participated into tagging activities. Unlike Steve Tagger and V&A's Beta Crowdsourcing, where registration served the rather mundane function of, respectively, successfully gather statistical data and prevent the same image from being shown twice, in the case of the Brooklyn Museum the registration process has an added layer of significance. Being assigned a public profile as well as an optional picture, the newly registered user enters the collective of the museum's 'crowdsourcers' as a distinct entity – a member of the Posse. In a social networking sense, the user becomes a subject of a museum-sanctioned group of volunteers that interact through their own social micro-platform. What is more, the registered member's identity within the Posse also functions as a game avatar of sorts – members of the Posse are pitted against each other in a collection-encompassing crowdsourcing game, in which they vie for first place in a friendly competition, reminiscent of competitions between teams in the various '@home' distributed computing initiatives.

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610 Melber (2010).
611 Ellis (2009).
612 As an example, see the endurance of small, tight-knit social networking site tribe.it; or, for a more rigorous perspective, see Godin (2008).
613 Brooklyn Museum's Posse page: http://www.brooklynmuseum.org/community/posse/
614 Within projects such as folding@home, teams compete both without, against other teams, and among themselves for number of hours logged, and relative ranking. Sometimes these groups become quite cohesive, featuring banners, dedicated sites or fora and so on.
Upon registered log in, the new Posse member is presented with a humorous video of museum staff playing a tongue-in-cheek 'tagging game' using flashcards. The short video performs multiple functions: not only it introduces the new member to the basic task that the two subsequent games will require; it also presents the 'friendly face' of the museum, closing the gap within museum and user that the mediated nature of the digital task entails, and it also humanises the task required, locating it within the context of similar tasks performed everyday by museum staff 'in the flesh'.

Once the actual activity starts, the Posse member is taken to the page for the first artwork. The user has the option to switch between two different and independent crowdsourcing games: Tag! You're It! centres around assigning tags to objects; while Freeze Tag! requires the user to approve or veto challenged tags. I will first concentrate on Tag! You're It, and then move on to Freeze Tag!

![Fig 3: Brooklyn Museum's Tag! You're It! Interface, showing artwork to be tagged, tagging tools, and tagger rank relative to closest tagger, and best tagger.](http://www.brooklynmuseum.org/opencollection/tag_game/start.php)
The layout for Tag! You're It is relatively simple. On the left, an artwork image and basic archival records are provided: in addition, the user can make the item her Posse icon; additional object records can be displayed; and the artwork can be saved on a 'favourites' list. A middle column provides formatting guidelines for entering tags (they can be separated by spaces, or strung together by double quotes) as well as an option to skip the current artwork. On the right side of the screen, the tagging stats of the user appear: number of total tags, and number of objects tagged; a 'Tag-o-meter' that displays how many tags you need to overcome the closest Posse member, and the current total of the highest scoring Posse member; and an option to complete the current session, which will also display terms matching with other members. The graphics are minimalist, relying on few basic colours.

In a blog post from August 2008, right when the project was unveiled for public participation, Chief of Technology Shelley Bernstein gives a description of the impetus that led to the development of Tag! You're It.\textsuperscript{616} Citing Google's Image Labeler\textsuperscript{617} as a precedent, she highlights the mutual advantage in having the public perform tagging upon the, back then, just released online collection: in a phrase, 'a simple and fun activity for the Posse which, in turn, establishes better relevance for the visitor trying to search our collection. Sweet!'\textsuperscript{618} Therefore, at least in intention, the Brooklyn Museum's crowdsourcing activity does not seem to differ much from the precedent established by Steve Tagger: mutual gain for the museum and the public, as the former can transfer a hefty workload (classifying, archiving, updating of metadata) on the latter, who in turn is rewarded by better museum information, as well as a healthy does of 'fun'. Where Tag! You're It goes beyond Steve Tagger's, and certainly V&A Beta Crowdsourcing's approach, is in the deployment of the most engaging aspects of the 'serious game' format in order to justify and naturalise the free labour that it requires from its public. Also, more than both previous illustrative  

\textsuperscript{616} Bernstein (2008).  
\textsuperscript{617} A former application of Google, in which two randomly matched players would tag items at the same time, while unable to see the tags assigned by the opponent: the aim was to improve Google's intelligence in image retrieval. The application was noted for its various iterations in an attempt to keep up with player abuse, and ran from 2006 to 2011.  
\textsuperscript{618} Bernstein (2008).
cases, the Brooklyn Museum's project relies on subjectification and affectivity in order to foster loyalty to crowdsourcing's laborious task.

A distinctive trait not only of Bernstein's blog post, but also of the application itself is the highly informal language it employs. The abundant use of exclamation marks, all the way into the applications' own names, generates impact but also implies a rhetoric of friendliness and inclusion, the enthusiasm one would use with a friend – or a Posse member - sharing a passion. In the Tag! You're It! application, the user does not click on 'skip to next image', but rather clicks on 'Nah, skip this one'; ending the section requires to select the statement 'That's it, I'm done for this session. Now let me see matches and standings!', as if one was to directly address the application as a peer, or a buddy.619 The rhetoric is one of impact, immediacy, friendliness and engagement on a first-name basis: coupled with the names of the two crowdsourcing activities themselves, the language the project deploys is that of playfulness and lively interaction that is typical of games.620 The applications' structure only serves to reinforce this, and make the connection between the required activity and play even stronger: of all the cases I looked at so far, the Brooklyn Museum's is the one that most closely resembles a game, the most 'gamified'. After every session, a tally point is given, and compared to other players', in a quest to become a 'super-tagger' of sorts; also, the highest scoring taggers are prominently displayed on the front page of the Posse's sub-site. This short-session format, after which a tally is given in order to beat a score (be it your own or somebody else's) is heavily reminiscent of the flow one would associate with an arcade game like Super Mario: relatively short 'levels', along with a count-up that gives the user a clear sense of her relative standing – feeding further the drive to achieve, and at the same time providing tangible proof of impact.621 It is not difficult to ascertain that, behind the game-like aspects, the labour required is not dissimilar from Steve Tagger's – a sequence of items for which a folksonomy needs to be produced,

620 The names of the activities clearly referencing the popular children's games of Tag and Freeze.
621 Particularly important this one last point, as it is often difficult for the 'player' to gain immediate feedback on the importance of their work – tags have to undergo a lengthy process of institutional approval with associated sifting.
one after another: yet, the heavily 'gamified' and playful nature under which the repetitive task is disguised effectively makes this 'grindy' immaterial labour also an affective labour, which generates (at least for the duration of the task) a degree of engagement, flow, identification with the *Posse* by way of rivalry and contention. It comes as no surprise, therefore, that *Posse* members in total provided over 58,000 terms, with some members providing as many as 8,323, and that the quality of the terms was deemed by the museum to be quite high.\(^{622}\) Such a mass of high quality work (of which, it should be noted, *Tag! You're It* was just the first step) would have been difficult to achieve without an activity and context that encouraged affect.

![Freeze Tag!](image)

*Fig. 4: Freeze!Tag* interface, showing description of object with interface to veto or approve tags.

*Freeze Tag!* follows similar coordinates as *Tag! You're It!*, yet is altogether a slightly different type of activity. The crowdsourcing task consists not of assigning tags, but rather of confirming or refuting the validity of already given tags. Along with the image, the *Posse* member is provided with often extensive information on the artwork, as well as multiple pictures: this seems to be necessary, as challenging a tag might require additional in-depth information other than mere

\(^{622}\) Bernstein (2009). According to the blog report, up to 99% of Posse tags have been retained by the gatekeeping staff.
archival metadata. As in *Tag! You're It*, the user can also save the item in a favourites list, or make it her profile picture. In the central column, a series of challenged tags is given (number varies), with three options for each: a red button to reject the tag, a green one to keep it, and a yellow one in case of indecision. To the right, a column shows the total tags that the current *Posse* user has judged, tallied as a score: the user gets additional points if her decision agrees with other *Posse* members'. Once a set amount of points has been accrued, the user is 'rewarded' with a humorous art-related video (for example, after twenty points one might be rewarded with a ten minute snippet from a Salvador Dali interview). The process of tag approval comes to resemble, therefore, a consensus-driven application of the 'collective intelligence' O'Reilly spoke about.\footnote{O'Reilly (2005).}

The task *Freeze Tag!* requires seems to belong to a higher level of difficulty compared to *Tag! You're It*: it is a step up, as it requires greater awareness of what the object is, what its history is, and often some degree of knowledge – at the tagging stage, one is restricted only by personal knowledge, yet what options does an average user have when having to assess if the 'Edo' tag is appropriate to the content of a certain woodblock print? The greater wealth of information provided during the activity reinforces this conjecture. The different nature, and order of difficulty of the task is recognised also in the *Freeze!Tag* introductory blog post: lengthier and more theoretically thick than the *Tag! You're It!* activity's, it details the success of *Tag! You're It*, as well as the difficulty in dealing with the large volume and dubious quality of anonymous or computer generated tags: the entry also invokes O'Reilly's 'wisdom of crowds' as key in the decision of assign the task of sifting dubious tags to the *Posse* members.\footnote{A minority compared to Posse's tags: see Bernstein (2010).} \footnote{See once again O’Reilly (2005).} Overall, *Freeze! Tag* gears itself to those who are already *Posse* members, have already contributed to the Brooklyn museum's information economy, and are therefore already affectively invested.\footnote{The blog also includes a specific encouragement and plea toward Posse members: see last two paragraphs of Bernstein (2009).} This is not to say that *Freeze! Tag* forsakes the affective appeal and potential for inclusivity that a gamified activity, or a 'serious game' affords: the

\footnote{623 O'Reilly (2005).}  
\footnote{624 A minority compared to Posse's tags: see Bernstein (2010).}  
\footnote{625 See once again O’Reilly (2005).}  
\footnote{626 The blog also includes a specific encouragement and plea toward Posse members: see last two paragraphs of Bernstein (2009).}
mechanical activity of choosing between color-coded options clearly evokes the feel and play style of a quiz game; the unequivocal offering of a reward (the videos) as an incentive plays on the reward-for-effort scheme that is the basis of any playful, game-like activity. Yet, we can easily see the qualitatively different level of investment and effort it requires compared to, for example, the V&A's simple image-picking exercise: and we can hypothesise a greater affective return correlated to the increased difficulty of the task.

Overall, the Brooklyn Museum's Posse, Tag! You're It, and Freeze! Tag 'network' of activities still consists, essentially, of free labour done by the public for the museum: the kind of 'painstaking and often monotonous work' that Oborn chronicles referring to Brooklyn Museum's digitalisation and copyright-clearing tasks, but that certainly also applies to the necessary work of metadata generation as well – a work that the public does for no wage, and gladly so. The explicitly and unapologetically 'serious game' that the Brooklyn Museum's activities constitute makes the task digestible by offering cumulative creation of a tangible (aka score-based) contribution; it plays upon the drive of competition and teamwork by locating the single player within a larger 'family' of invested participants, collectively working toward a common task; it offers immaterial rewards such as standing within the aforementioned group, a metaphorical 'sense of place' within the no longer unfriendly museum, and even actual immaterial rewards (such as Freeze! Tag's videos).

**Conclusion**

This chapter has looked at a common practice within the contemporary digital museum, 'crowdsourcing', from a different angle than other existing literature. Resorting to Autonomist

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627 Oborn (2010).
628 Interesting to this regard, as a side note, is the comment by Miraz Jordan (2010) that compares metaphorically the 'unfriendliness' of the Brooklyn Museum's daunting physical presence, with the friendliness and inclusiveness of its digital activities.
critiques of contemporary labour as immaterial and affective in nature; as well as the concept, borrowed from game studies, of 'playbour' as the compenetration of play and labour in our current context; I have suggested that museum crowdsourcing can, and should be read as the employment, by museums, of the public's 'collective intelligence' in order to complete laborious tasks at little or no cost in the context of a veiled, yet very tangible immaterial and affective labour framework. In the process, these potentially exploited publics earn cultural legitimisation, subjectivity, and metaphorical inclusion into the museum's social and cultural apparatus in place of a wage.

By looking at three specific examples of crowdsourcing – Steve Tagger; the V&A's Beta Crowdsourcing; and the Brooklyn Museum's Tag! You're It!, Freeze!Tag and Posse – I have shown that the contemporary digital museum employs crowdsourcing tools that mediate in different measure 'labour' and 'play', ranging from very laborious activities with little subjectification, to veritable 'online games' with a labour component. The variable compenetration of the two realms can, potentially, have an impact on the level of affect and involvement into the museum's cause that the activity elicits. More generally, crowdsourcing constitutes, much like digital planning and digital-beings, yet another avenue by which the contemporary digital museum encounters its audiences in a context other than the physical gallery; involving and getting involved into a process that is radically reshaping both museums and audiences.
Conclusion, Limits and Future Developments

This conclusion provides clear restatement of the main research questions that motivated the undertaking of the dissertation itself; it succinctly retraces the topics, key thinking and illustrative examples that I have explored in order to address such main research question; and it summarises my main findings, and my position with regards to the issues my research arises. Also, I will describe the inevitable limits to my research, both internal and external; and, consequently, provide a brief discussion of the many directions in which the discussion presented in this dissertation could be expanded in the future, both in scope and in depth. I will outline as one of the key strengths of the dissertation itself the new angle for interpretation that it provides, and the potential for further exploration that such new approach opens up within the field of digital museum studies.

The Research Question and Rationale Behind the Research

Throughout the various chapters of the dissertation I set out to explore aspects of one central
question: can our understanding of the contemporary museum's stance toward the digital, in all its
eexpressions and specificities, be further understood by integrating professional and informal
discourses with highly relevant, yet seldom evoked theoretical paradigms, borrowed from
disciplines other than museum studies? Furthermore, I explored this overarching research question
according to a variety of angles, primary sources, and paradigms, each one carrying its own set of
research sub-questions: is there a rhetorical element to the contemporary museum's embracing of
the Web 2.0 paradigm when it comes to its online presence, and can such rhetoric be read within the
lines of certain typologies of museum documentation, such as media strategies? Are interfaces for
displaying online museum artworks implicated in the museum's own acceptance of new regimens of
sensorial apprehending, in part due to the philosophy of interaction and mediation brought forward
by the Web? Are the new channels for collaboration between museum and public that the Web
affords, such as crowdsourcing, completely new or can they be read according to established
theories of labour and play?

These questions found their genesis in a lack I diagnosed in the existing literature. As I
suggested at various points throughout the dissertation, there exists a bewildering amount of
literature on the digital museum that I would consider either markedly 'professional' and/or
'informal'. In the first case, typically we encounter a write-up of an oral presentation, usually given
at conferences or at symposia, in which a successful case of deployment of a certain project is
advocated for or through, and the argument is backed up to some extent by quantitative and
statistical analysis.629 In the second case, the typical form is a semi-long blog entry, in which a
professional presents and argues for or against a salient point of contemporary digital museum
practice, employing salient examples and usually ending by advocating better practice and policy by
museum practitioners.630 There is, of course, a high level of interaction between the two, as social

629 To this first 'typology' would belong most of the presentations given at conferences such as ICHIM, Museum and the
Web and MuseumNext.
630 To this second category I would ascribe well-visited and often shared museum blogs such as Nina Simon's Museum
2.0; the Museum Association blogs; and MuseumMinute.
media often makes long-form presentations as easily and quickly shareable as blog posts.

While some of these characteristics make such kinds of discourse vital and necessary to the museum ecology, they also limit the comprehensiveness of that same discourse; and marginalise other possible approaches to talking, and writing about museum theory and practice. The strong advocacy slant that dominates professional debate downplays more nuanced approaches that, rather than pushing for better practice through single outstanding examples, seeks to draw more solid connections between instances, looking at the 'bigger picture'. Also, it seems important to me that we articulate emerging practices, dynamics and discourses not as necessarily specific to the museum context, but also as part of culture-wide trends – in a meaningful way that, at least in part, looks beyond the digital, into long-established cultural and social dynamics. In a nutshell, existing literature largely ignores the often hidden impact that historical and theoretical frameworks have both on the digital, and on the museum in our contemporary times. My analysis throughout the dissertation seeks to re-mediate, in part, this lack.

**Review of the Dissertation Structure**

In Chapter One, I attempted to expand, and re-fit for the digital context, two parallel discourses: on one hand, the ideology of utopia and its many variations, as developed by thinkers such as Levitas, Bourriaud, Hetland and Bolter / Grusin; on the other hand, the evolution of the contemporary, digital museum as a privileged context for constructivist education, amelioration of the citizen, and re-mediation of reality that tends toward an utopian ideal. I have argued that the museum's long-standing involvement in utopia-making, through dynamics of amelioration and re-mediation, has been revitalised by its meeting the digital, and the Web especially; in its 'Web 2.0' version, with its rhetorical emphasis on democracy, collaboration, grass roots praxis and techno-utopian approach, the Web has proved to be consonant with the contemporary museum's strive
toward constructivist learning, public involvement and exchange, and more generally a sort of 'emancipatory utopia' of the museum visitor, in which the limits of reach and depth inherent in the museum's physical presence are resolved by digital integration. By looking at museum digital strategies, a group of texts that (to my knowledge) has not been substantially explored before, I have argued that the museum and the Web are implicated in a mutual project of utopia-making, which is actively articulated within such documents as a technologically-enabled process of negotiation between institution and public over authorship, authority and management of digital museum content. By applying to the digital museum the theoretical framework of utopia, I have shown that the contemporary constructivist museum's drive for social utopia, apparent in professional literature, is not an isolate, but runs in parallel with a culture-wide trend in the same ideological direction: the museum responds to a larger social ideology of which both the museum and Web 2.0 are catalysts and expressions.

In Chapter Two, I explored another 'hot topic' within museum practice: digital reproductions of artworks, and their inherent advantages and limits. As the museum makes available with greater frequency high-quality reproductions of its collections, both on its own and through partnerships such as Europeana, Flickr Commons and Google Art Project, a complex and varied discourse has been built around issues of image quality; ownership; and feasibility for mass-dissemination. On the other hand, there has been little assessment of such digital reproductions as 'beings' per se, of their epistemological relationship to physical collections and various typologies of hybrid physical-digital items. Exploration of such aspects is necessary since digital audiences, who visit museum collections through screens and peripherals, interact chiefly (and sometimes exclusively) with, and through such digital reproductions and the interfaces that frame them. By articulating such digital reproductions as digital-beings - ontological and epistemological beings that share some features and qualities (not necessarily indexicality) with physical beings, yet present other, digitally-specific

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631 As a reminder, this connection was explored also by Hein (2006).
632 For example, the Europeana digitisation projects; or the Rijksmuseum's offering of high-quality downloadable reproductions at no cost (Siegal (2013)).
attributes - we can configure a new way of apprehending; interfacing; interacting with; and, essentially, understanding these new classes of museum materials, avoiding the double *impasse* of seeing these museum object as either radically disruptive to the museum's established educational, cultural and social mission; or, conversely, as nothing more than degraded 'copies' of the real thing, even more ontologically disposable and distant from 'real experience'. Gauging museum reactions to digital-beings, and platforms for their display, also allows us to better understand the lengthy process, well-explored in other areas of media and public culture, by which new technologies are 'domesticated' and, eventually, embraced or rejected.\(^{633}\)

Chapter Three explored a digitally-based practice that has been employed by museums already for a while, although with little self-reflection or theoretical exploration. More and more, museums rely on their digital public for completion of large, repetitive tasks that were, traditionally, the precinct of specialised institutional staff, or unpaid interns: through crowdsourcing platforms, audiences are called to participate and invest their free time in helping museums classify artworks; tag them with relevant keywords; sort framing and reproduction qualities; and, sometimes, even provide historical and archival information where the museum can't. This harnessing of the digital public's 'collective intelligence' is variously argued by museums, and subsequently presented to the public, as a meaningful volunteer activity; an occasion to participate in the traditionally not very porous world of museum up-keeping and day-to-day working; or as a fun, casual game that allows one to explore collections in a more entertaining way.\(^{634}\)

There has been however, especially within professional museum discourse, little attempt to actually look at crowdsourcing as what it actually seems to be: a labour practice, albeit usually not retributed with money and, in many ways, different from what would be typically recognised as labour by the public itself. In Chapter Three I have resorted to Autonomist discussions of immaterial and affective labour, as well as definitions of 'playbour' borrowed from game studies, in

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\(^{634}\) O'Reilly (2005).

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order to explore museum crowdsourcing not as an outstanding, innovative and disruptive practice; but, rather, as a methodology of gathering affectively retributed labour that perfectly fits within a contemporary, culture-wide shift from material, monetarily retributed labour toward toil that is paid in 'well-being', and that produces information rather than a physical product.635636 Adopting this array of concepts as a theoretical underpinning in analysing crowdsourcing can lead to a number of conceptual advantages: we demonstrate that contemporary museum practices do have a rhetorical and ideological element to them, one that has to be investigated and made explicit; our understanding of crowdsourcing in general is made more nuanced, going beyond the dominant view (once again, enforced by the dominant Web ideology of 'Web 2.0') that it is a practice invariably ethical and beneficial; the specificities of museum crowdsourcing are conceptualised not as isolates, but as fitting within larger, widespread standards of practice in a variety of cultural contexts.637

All in all, we can see how my seemingly disparate explorations of different aspects of contemporary digital museum practice do possess certain unifying characteristics, and display a cohesive intent: that of understanding such museum practices not as outliers, aberrations or special cases; but, rather, as fitting within ideologies and paradigms that encompass more than one cultural precinct, and that can be examined in a more theoretical and multidisciplinary way.

**Limits of Research**

While I do believe that my research expands our understanding of the contemporary digital museum, both methodologically and contextually, it does contend with certain unavoidable limitations. One first difficulty is dictated by the macro-context within which my subjects and research practice are located. Deploying effectively theoretical paradigms that were developed over the course of various decades to a contemporary context, a practice that my dissertation heavily

635 Hardt and Negri (2000).
637 See, for rationale, Jafari et al (2013) p. 3.
relies upon, ideally requires some discursive persistence of the object of study: a characteristic that the Web eminently lacks. One of the features of the Web and the Internet, respectively as a social context and the array of technologies that such a context is based upon, is the constant state of flux and morphing upon which they are not only based, but predicated: the constant churning of new protocols, new platforms, new digital social contexts, new ways of interfacing and interacting, and new 'versions' of the Web is one of the reasons that makes this realm pervasive in all aspects of public and private life.

It therefore becomes very difficult, if not impossible, to pin down what the Web is actually about: as one assumes as factual a certain iteration of the Web, as I have done (though not without reservations) with Web 2.0 throughout the dissertation, it is likely that a new iteration is already under way, often both on a macro and a micro level.638 As the museum world comes to terms with the new paradigms and tools Web 2.0 enforces, online discourse is transitioning toward a new iteration, 'Web 3.0' or the 'semantic Web': an expansion of the emphasis on interaction, responsiveness and interfacing that we saw as key to Web 2.0, that comes to include not only people, but the machines and platforms through which people interact.639 In an hypothetical Web 3.0 scenario, digital platforms and their physical counterparts (i.e. machinery) that we use for disparate activities, from health to work to entertainment, would be able to communicate and exchange meaningful data about us with each other, synergically improving responsiveness and provision of timely, relevant feedback above and beyond what is possible with current services – which still require us to 'connect the dots' between our activities. For now, it is left to the imagination what kind of impact this new Web paradigm (and the new epistemology and digital-beings it will undoubtedly shape) could have on the development of the digital museum: it forces us, however, to acknowledge that any discussion that takes as its context the Web is bound to be provisional, incomplete and in need of reiteration at relatively brief intervals.

638 See Meeker and Wu (2013), in particular with regard to the speeding up of the development cycle in software.
639 Berners – Lee et al. (2001).
Another related limitation, of a more technical and scholarly order, is constituted by the inherent difficulties that some of the material and sources used throughout the dissertation presented, with particular regard to retrievability; permanence; and iterations. Unlike well-archived print media, which has been long recognised as ephemeral yet important, and is therefore often digitised or otherwise archived for later retrieval, on the Web much information simply disappears without warning once obsolete, in order to make room for newer data. In some instances, the difficulty in keeping up with successive 'versions' of a source or an analysis' object determined the very choice of material included in the dissertation: this was the case with 'Tate Online Strategy 2010-2012', which was meant to be the main object of analysis for Chapter One; and the substantial reworking that Google Art Project's many platform improvements over 2012 demanded. More often, developments in existing discourses, possible examples and relevant sources proved to appear at a rate too fast for scholarly-style work, based upon lengthy planning and iterative writing practice, to keep up.

Finally, another possible limitation of this dissertation stems from its inherent structure. As discussed at length in the introduction, I opted to fashion each chapter as, to an extent, self-conclusive; this decision, dictated by my desire to discuss in depth a range of materials and issues, was counterbalanced by the necessity of providing a common theme, if not necessarily a common topic, to the whole dissertation. This structural choice has the limitation of keeping the linkages between each chapter's content somewhat implicit, opting for a 'modular' structure over a structured narrative: as a result, at a glance the dissertation might seem as if lacking a common thread, rather cobbling together three disparate sub-topics. On the other hand, close reading of the dissertation will show that, in the end, these three sub-topics are facets of one larger macro-issue, the new relationships between the museum and its public that the digital affords: a macro-issue that emerges...
frequently in the dissertation, and is articulated quite thoroughly and explicitly.\footnote{More explicitly, I would argue that, in the context of the contemporary digital museum, the relationship between the digital museum and its digital public is sufficiently described within the coordinates of: ideological bases for adoption of the Web as a context (Chapter 1); digital platforms and their affordances (Chapter 2); and the direct involvement of the visitor through digital platforms and according to ideological bases (Chapter 3).}

Additionally, the illustrative cases I discuss throughout the dissertation, while running the gamut from textual to digital platforms, share the commonality of being digitally-native in the way they present themselves to an hypothetical online visitor: in this sense, their contextual commonalities help grounding the dissertation's chapters into the common \textit{humus} of the museum's online digital development and engagement, providing an additional – albeit implicit – common theme to the discourse I build in the course of the dissertation.

\section*{Further Research Directions}

These very elements that constitute limiting factors to the scope, depth and endurance of my dissertation research could also be argued as potential catalysts with regards to content (further topics that could be explored); and practice (different kinds of research processes that would better reflect the Web and digital \textit{milieux}). In the first case, one avenue for expansion would be to look at the many examples of digital museum practices that, for reasons of cohesiveness of argument and space, I did not address: for example, I have not attempted to trace museum use of social media proper, even though I suspect that our understanding of it would benefit from the same theorisation process I have applied to crowdsourcing platforms.\footnote{In the case of social media usage, professional and praxis-oriented literature is vast: there has been, however, little work that connects well-developed social theories of the Web and online interaction; and the use that museums and museum visitors do of social media. Among available discussions, see Russo et al. (2006) and Proctor (2010).} Similarly one could fruitfully explore, setting off from the conceptualisation of 'digital-beings' as iconic offered in Chapter Two, the recent resurgence of interest in 3D objects, virtual environments and mapping within and without the museum's building.\footnote{ Literature abounds. See, for example, D'Alba et al. (2012).} Finally, I have chosen not to address the impact, upon both research and
practice, that the current trend toward Big Data gathering and analysis could have on the museum: the study of large data assets regarding visitors, collections policies could very well lead to a transformation of what 'engagement' and education mean in a museum context.644

Methodologically, the peculiar challenges that I encountered in progressing my research from a practical point of view also imply the possibility of achieving a type of research practice that is more inclusive and responsive of the kinds of materials that the Web offers – often ephemeral, hard to trace and of difficult attribution; yet culturally and ideologically too significant to ignore. A research of a scope similar to mine would benefit from a shorter 'development cycle', that more closely reflects the speed by which ideologies and paradigms evolve on the Web: through blogging and scholarly media platforms, the online context itself could provide a solution to this conundrum, allowing for integration of traditional dissertation-style presentation, and more agile, Web-native ways of conceptualising and writing – reflecting, to an extent, the Web context in form and practice as well as in sources and content.

In conclusion, the results of my doctoral research reinforce and confirm my central thesis: the contemporary digital museum's array of emerging Web-based practices can and should be understood not only through existing professional and technological discourse centred around quick deployment and results, but also in light of more theoretically grounded structures and paradigms, of which utopia, digital epistemology and labour are but a possible few. Adopting this new stance radically recontextualises the digital museum, showing us not only its substantial yet sometimes hidden ideological underpinnings; but, also meaningfully reintroduces the museum institution within the wider (and increasingly digital) cultural context, allowing us to see the former's new digital aspects not as antithetic or divorced from the traditionally physical, but as integral and inseparable from the museum as an ever-relevant social and cultural agent.

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- Unless otherwise noted, all screen shots taken by Cristiano Agostino in 2013.