The American Art Museum and the Internet: Public Digital Collections and Their Intersections of Discourse

Thesis

Presented in partial fulfillment of the requirements for the degree Master of Arts in the Graduate School of The Ohio State University

By

Amy Picknell, B.A.

Graduate Program in Comparative Studies

The Ohio State University

2013

Thesis Committee:

Philip Armstrong, Advisor

Kris Paulsen

Allison Fish
Abstract

Given the world is increasingly driven by technology, it should come as no shock that art museums are working to increase their online presence. Many museums have maintained websites since the earliest days of the World Wide Web, but recently these museums are seeking to digitize their collections in order to make them publicly available for Internet users. While smaller museums struggle to find the finances and expertise to commit to this task, larger institutions like The Metropolitan Museum of Art maintain the financial wherewithal to begin such massive undertakings. However, the question remains as to why any museum might wish to make their highly-prized collections publicly available online. The impetus behind museums’ “going online” results from the European histories of aristocracy and connoisseurship from which the museum emerged, and the struggle of American museums to make good on their missions to service “the people” in spite of such historical influence.

The Internet has been viewed both skeptically and liberally as a means to complete this mission, but the consequences of “going online” remain intertwined in the present formation of the public’s understanding of the Internet its liberal use of content. At best, it is currently possible to look at the previous trajectories of both these institutions, the museum and the Internet, in order to begin to tease apart some of the merging areas of discourse. At first glance, it may seem that the two are not so different,
which may in fact prove true, but even the most gentle investigation under the surface of these two institutions will show great dissimilarities in their discourse and methods of control. The Internet and the museum may in fact be at ideological odds with one another, and yet that has not prevented their inevitable merger.

The museum has traditionally functioned by leveraging controlled access to the content of its collections as legally manifested through copyright, while the Internet seems to incite near anarchistic access and use of its content as evidenced through “mash-up” culture. This results from the Internet’s method of control known as protocol, and the logic of possibilities it enables. Despite misrepresentations, the Internet is in practice a very controlled institution, but rather than controlling content, protocol controls the technology of the network. Ultimately, the publics of these two disparate discourses of control are unifying under the museum’s digital migration, but such a public remains a work-in-progress.
Vita

2004 .................. Gahanna Lincoln High School, Valedictorian

2008 .................. B.A. Art History, Valedictorian, The Art Academy of Cincinnati

2011 to present ........ M.A. Comparative Studies, The Ohio State University

Fields of Study

Major Fields: Comparative Studies
# Table of Contents

Abstract .......................................................................................................................... ii

Vita ................................................................................................................................ iv

1. Introduction: “Going Online” .................................................................................. 1

2. The Metropolitan Museum of Art: A Brief Narrative of an American Museum ...... 2

3. Concerning Digital Collections .............................................................................. 21

4. Intellectual Property and the Distributed Control of Protocol ............................. 30

5. Conclusion: The Public as Intersection of Discourse ......................................... 50

Works Cited .................................................................................................................... 53

References ...................................................................................................................... 57
1. Introduction: “Going Online”

Given the world is increasingly driven by technology, it should come as no shock that art museums are working to increase their online presence. Many museums have maintained websites since the earliest days of the World Wide Web, but recently these museums are seeking to digitize their collections in order to make them publicly available for Internet users. While smaller museums struggle to find the finances and expertise to commit to this task, larger institutions like The Metropolitan Museum of Art maintain the financial wherewithal to begin such massive undertakings. However, the question remains as to why any museum might wish to make their highly-prized collections publicly available online. The impetus behind museums’ “going online” results from the European histories of aristocracy and connoisseurship from which the museum emerged, and the struggle of American museums to make good on their missions to service “the people” in spite of such historical influence.

The Internet has been viewed both skeptically and liberally as a means to complete this mission, but the consequences of “going online” remain intertwined in the present formation of the public’s understanding of the Internet its liberal use of content. At best, it is currently possible to look at the previous trajectories of both these institutions, the museum and the Internet, in order to begin to tease apart some of the merging areas of discourse. At first glance, it may seem that the two are not so different,
which may in fact prove true, but even the most gentle investigation under the surface of these two institutions will show great dissimilarities in their discourse and methods of control. The Internet and the museum may in fact be at ideological odds with one another, and yet that has not prevented their inevitable merger.

The museum has traditionally functioned by leveraging controlled access to the content of its collections as legally manifested through copyright, while the Internet seems to incite near anarchistic access and use of its content as evidenced through “mash-up” culture. This results from the Internet’s method of control known as protocol, and the logic of possibilities it enables. Despite misrepresentations, the Internet is in practice a very controlled institution, but rather than controlling content, protocol controls the technology of the network. Ultimately, the publics of these two disparate discourses of control are unifying under the museum’s digital migration, but such a public remains a work-in-progress.
2. The Metropolitan Museum of Art: A Brief Narrative of an American Museum

According to Calvin Tomkins, author of The Metropolitan Museum of Art biography *Merchants and Masterpieces*, the concept of the American museum was to be as democratic as the new nation itself. The first three American museums were incorporated under city charter in 1870 in Washington D.C., Boston, and New York City,

---


Tomkins and *Merchants and Masterpieces* as a source:

“Tomkins was contacted by The Metropolitan Museum of Art in 1968 to write the history of the institution coincident with their centennial celebrations, and *Merchants and Masterpieces: The Story of The Metropolitan Museum of Art* (New York: Dutton) appeared in 1970. The first twenty-four folders in this subsersiy are in order of the book chapters to which they pertain and concern succeeding eras of the museum's history and key trustees, directors and curators. Materials include copious photocopies of museum documents such as letters and manuscript material from the museum archives as well as copies of museum bulletin articles, book chapters and other published material. Large quantities of handwritten and typewritten notes are present as well. Folders 25-33 contain correspondence concerning the book, financial summaries of gifts and acquisitions by the museum, and the contents of a series of binders dedicated, respectively, to trustees and benefactors, curatorial departments, and presidents, directors, and staff of the museum. Two additional folders contain photographs used in the book and pamphlets and gallery guides from across the museum's history. Folders 34-47 are research material and resources gathered after original publication, in many cases used for additions included in the 1989 reprint by Henry Holt. In these last files there is a particular focus on the "scandals" of the museum in the 1970s and Thomas Hoving's tenure as director.”

The book does not use specific citations and the archive does not include images of the papers but the archive index is organized by book chapter.
and each proclaimed two radically new ideas within the museum world: to service the public through education (Tomkins 21). Smaller art galleries had already opened along the eastern coast, but these were mostly the private collections of wealthy connoisseurs who opened their mansions to limited public engagement for a few hours each week (Tomkins 26-27).² Those collections that were bequeathed to municipalities or otherwise put in public care often proved too difficult to financially maintain.³ This lack of stable public galleries and prevalence of private collections mimicked the situation in Europe, “where centuries of royal patronage and plunder had set the prevailing tone of aristocratic connoisseurship” (Tomkins 21).

Henry Francis Taylor, fifth director of The Metropolitan Museum of Art and radical proponent of museum education, notes how these connoisseurs were often monarchies, noblemen, and high-ranking church officials, whose collections personified a taste for power:

The Habsburgs in Austria, the Netherlands, and Spain found themselves in open competition with the English Stuarts and the [French] Bourbons. It was obligatory for the Roi Soleil not only to shine in his own brilliance, but to reflect again his authority in the accumulations of the wonders of the past. This was the philosophy of collecting until the French Revolution, when the idea of the public institution - virtually the only one we know today - came into being.⁴

³ Tomkins, pp. 26-27: Wholesale grocery merchant Luman Reed converted the third floor of his Greenwich Street house into a gallery that he opened to the public once a week. When Reed died in 1841, his collection became the foundation of the New York Gallery of Fine Arts which closed in 1854 due to chronic debt.
Though Taylor’s criticisms may seem harsh at first glance, he is not without reason. Take for example The British Museum, established in 1753 by an Act of Parliament\(^5\) as the first museum of its kind, “belonging to neither church nor king, freely open to the public and aiming to collect everything.”\(^6\) The museum officially opened to the public in 1759, nearly thirty years before the Louvre debuted in 1793, but the ‘Statutes and Rules relating to the inspection and use of the British Museum’ “seem to have been expressly calculated to keep the general public out” (Hudson 9). ‘Studious and curious persons’ were first required to write an application to the Port providing credentials like name, occupation and address (Hudson 9). These credentials were then examined through an investigation that could last several months (Hudson 9) in order to ensure that the visitor-applicant qualified as a ‘gentleman’ (Tomkins 31). Once the application was approved, the visitor was then obligated to call on his tickets, which would only validate admission for the following day. No more than ten tickets were issued for each hour of operation, and a member of the staff chaperoned each group through the vast museum, ringing a bell to march the group from one gallery to another.

This was the experience of William Hutton, a Birmingham bookseller who managed to procure such a ticket in 1784. Despite his anticipation “to see what is nowhere else to be seen,” Hutton “came away completely disappointed” with his experience.\(^7\) As Hutton describes:

---

We assembled on the spot, about ten in number, all strangers to me, perhaps to each other. We began to move pretty fast, when I asked with some surprise, whether there were none to inform us what the curiosities were as we went on? A tall genteel young man in person, who seemed to be our conductor, replied with some warmth, ‘What! Would you have me tell you everything in the Museum? How is it possible? Besides, are not the names written upon many of them?’ (41)

It was precisely this attitude of elitism and prestige that the American museum would change through “education, moral uplift, and social betterment,” argues Tomkins (21). The founding charter of The Metropolitan Museum of Art, filed with the city of New York on 13 April, 1870, stated that this uniquely American museum was "[...] to be located in the City of New York, for the purpose of establishing and maintaining in said city a Museum and library of art, of encouraging and developing the study of the fine arts, and the application of arts to manufacture and practical life, of advancing the general knowledge of kindred subjects, and, to that end, of furnishing popular instruction and recreation’ (Charter of The Metropolitan Museum of Art, State of New York, Laws of 1870, Chapter 197, passed April 13, 1870 and amended L.1898, ch. 34; L. 1908, ch. 219.).”8 Yet despite the educational rhetoric of the founding charters of museums like The Metropolitan, the emerging American museum would wrestle for decades (centuries, even) with the challenges of integrating a new public education initiative with its aristocratic heritage.

Writing in 1917, John Cotton Dana addressed such contradictions in his pioneering essay, “The Gloom of the Museum,” citing museum location and architecture

as but a few of the ways in which the American museum, rather than serving its public, aimed to mimic its European counterparts. Dana notes how European royalty and nobility, privately collecting to possess rather than to use, influenced the eventual location and architectural design of public museums that sought to replicate the palatial style and removed nature of their private predecessors. “Distance from the center of population,” notes Dana, “and the difficulty most citizens would encounter did they attempt to see the museum’s contents were given no weight in comparison with the obvious advantages of display of the building’s outer charms” (18). Rather than locate a public museum near the public at city centers and areas of heavy foot-traffic, museum founders in Europe chose to build in remote locations, often near parks, in an effort to recreate the palatial gardens where such collections of taste had previously been housed.

Dana claims that despite the democratic ideology of emerging American politics, American museums continued to follow these aristocratic European ideals. Though he does not cite specific museums, Dana does mention that cities like Boston, New York, Buffalo, and Cincinnati, “could much better afford, in the long run, to move their museums into the centers of daily movement... than to go on paying large sums for their maintenance in relative idleness where they are now.”

Paul M. Rea summarized in 1930 the “three important functions” of a museum: “the acquisition and preservation of objects, the advancement of knowledge by the study of objects, and the diffusion of knowledge for the enrichment of life of the people,” but argues that the third function, enriching the lives of the people, goes largely ignored.

---

because the museum views the collection as its raison d’être - not the visitor. Dana understands this as an inherited value from the museum’s origins in the private connoisseur, claiming: “As the collections were of very great value - consisting usually of originals which no money could replace, which should therefore be guarded with the utmost care - the first thought in regard to them was their preservations; their utilization being a secondary and rather remote affair” (17). Museum education scholar Theodore Low agrees that museums have been fearful of attracting “the wrong kind” of people and have thus catered to the upper circles of intelligence and society, creating an American museum-going public differs very little from the European museum-going public that came before. Low argues that museum trustees were able to take conservative approaches to education, both financially and philosophically, “as long as the question of public of public support did not materially affect the financial status of the museum” (34).

The public’s financial support took some time materialize in the eyes of the museum. In fact, public education was primarily evoked by the founding members of The Metropolitan as a means of attracting the financial support of wealthy businessmen. It was claimed by the founding members that art museums were socially desirable as well as good business; museums would educate the general public, and in doing so, “improve the native artisan’s taste, design, and workmanship” thereby benefiting the profits of manufacturers and retailers alike (Tomkins 23). By the end of 1880, The Metropolitan’s

first year at the Central Park location, the museum had introduced two schools in rented downtown quarters for metalwork and woodwork (Tomkins 62). Classes in drawing and design, modeling and carving, carriage drafting, decorating in distemper (practical fresco work), and plumbing began the following year, aided by grant of Massachusetts squire Gideon F. T. Reed, but such educational initiatives seemed to inspire few wealthy contributors (Tomkins 62). The Metropolitan fundraising failed to compete with other emerging American museums like the Boston Museum of Fine Arts, which raised $300,000 in 1871, a year after its charter, or in Philadelphia, where $210,000 was raised by a mere twenty-one individuals (Tomkins 35-36). The Metropolitan’s first subscription drive failed to reach even half of its humble $250,000 goal and most of the large contributions came from the trustees themselves (Tomkins 35). Tomkins notes:

Not too surprisingly, the trustees’ lofty evaluation of their efforts and achievements was not shared by all sectors of the populace. To some, the rather patronizing statements about educational influence, moral uplift, and refinement of crude tastes did not appear to have much basis in fact, and the whole enterprise smacked annoyingly of noblesse oblige. (59)

This sentiment was echoed by Taylor a year before he was hired as Director of The Metropolitan Museum of Art in 1940, who wrote in his essay, “Museums in a Changing World,” that, “It has become the hallowed practice among all institutions to permit the educational department to be the legitimate tail to wag the rest of the dog. Thus, having paid a certain half-hearted tribute to the public welfare, they could turn to the more exciting pleasures of collecting and exposition” (791).
As Taylor took office, the financial support of the public could no longer be ignored. The Metropolitan’s municipal budgets had greatly decreased over three decades, two world wars, and a global economic depression – from $501,495 in 1930, to $369,592 in 1939 – despite the rising costs of its aging buildings in disrepair (Tomkins 265). Skylights leaked and climate control in the older structures was futile without air conditioning and humidifiers; many buildings still lacked hot water and adequate ventilation (Tomkins 265). The number of museums was also growing, and by Hudson’s count, “Three-quarters of the museums we have today were not there in 1945” (43). The increasing number and proportion of “independent museums” resulted in competition for financial support in every sector (45). In his essay, “The Ongoing Transformation of the American Museum,” Smithsonian scholar Stephen Weil explains the implications of this new competitive market:

> Because it is also part of the American not-for-profit sector, the nature of the public service it will be expected to provide can be defined in more specific terms - it is to be through demonstrably effective programs that make a positive difference in the quality of individual and communal lives. Recast in marketing terms, the demand is that the American museum provide some verifiable added value to the lives of those it serves in exchange for their continued support. 

Weil asserts that even the most privately funded museum still finds financial support through public services like tax exemptions and charity deductions (230) and is thus “under pressure to make public service its principal concern” (243). Weil explains that the museum is also privately funded through subscription services and corporate

---

sponsorship and that these sources of finance justify expenses by rendering a positive account of activities (240). But as Hudson and Weil both point out, how is it possible to measure the positive accountability of an institution like a museum, whose subtle and indirect effects leave the definition of success open to interpretation from the various involved parties? (Weil 252).³³

Hudson cites the instability caused in 1971 when the International Council of Museums (ICOM) redefined “a museum” to service “a community” rather than “a society” (43). “This soon ran into difficulties,” Hudson writes: “Who was to decide whether a museum is serving the community or not? What proportion of the community does it have to serve in order to justify its existence? What limits were to be set to such a vague concept as the community?” (43). Weil describes this as a shift from a selling ideology, in which “their efforts had been concentrated on convincing the public to ‘buy’ their traditional offerings,” to a marketing strategy in which, “their starting point instead is the public's own needs and interests, and their efforts are concentrated on first trying to discover and then attempting to satisfy those public needs and interests” (233). Museum marketing scholar Niall G. Caldwell asserts that the “arrival” of museum marketing “coincides with demands from the bodies who run these institutions that they be managed as if they were businesses.”⁴⁴ This management was not altogether unfamiliar to American museums who had grown accustomed to supporting their collection through various financial benefactors, both public and private, but the redirection of museum

policy in accordance with professional concerns and market competition helped materialize the financial impact of Rea’s third function: enriching the lives of the people. Both capitalist accountants and museum educators rallied to the same cry, ‘give the people what they want,’ as Hudson concludes:

The most fundamental change that has affected museums during the [past] half-century . . . is the now almost universal conviction that they exist in order to serve the public. The old-style museum felt itself under no such obligation. It existed, it had a building, it had collections and a staff to look after them. It was reasonably adequately financed, and its visitors, usually not numerous, came to look, to wonder and to admire what was set before them. They were in no sense partners in the enterprise. The museum's prime responsibility was to its collections, not its visitors. (43)

In his article for the *International Journal of Arts Management*, François Colbert notes that despite Weil’s insightful critique, “The fundamental concept in traditional marketing - meeting the needs of the consumer - does not apply in high art.” This is because, “The artistic product does not exist to fulfill a market need,” as Colbert explains: “Its raison d’être is independent of the market, which is what makes it particular marketing challenge” (31). High art is often a single object (with certain exceptions such as production mediums like printmaking, photography and moving images) and therefore cannot be distributed to the masses. With such a limited supply, there is limited demand from the masses willing to make the effort to visit specific high art locations like museums and galleries. In this way, high art cannot function as a typical product of

---

market research. According to Colbert, “Instead of seeking to meet consumers’ needs by offering them a product they desire, the arts manager seeks consumers who are attracted to the product” (31). As such, museum marketing has been charged with the task of making a product that is sought by more consumers, but “despite more than 40 years of public investment in the field of high art, with a clear aim of democratization,” museums of both private and municipal funding continue to attract a specific market: “the highly educated” (Colbert 34). Colbert notes that the typical high art consumer of industrialized countries is female and well educated, with a relatively high income (32). According to such research, it would seem that the average museum visitor has changed very little since the earliest years of The Metropolitan, when “[f]ashionably dressed ladies who had spent a dollar or more for a hired carriage would turn right around and drive off indignantly,” rather than pay the fifty-cent admission fee (Tomkins 61). This competition for consumer leisure time has continued into the present (Colbert 36-37),

and Colbert casts polarizing possibilities for broadening the demographics of museum visitors: either attract more of the targeted market or find a way to attract consumers from outside this market (38).

The Metropolitan has its own research, however, that would prove it is doing just that. During the spring and summer season of 2012, three temporary exhibitions were on display at The Metropolitan Museum of Art: Schiaparelli and Prada: Impossible Conversations; Tomás Saraceno on the Roof: Cloud City; and The Steins Collect:

---

Matisse, Picasso, and the Parisian Avant-Garde.\textsuperscript{17} Reports from this season found that of the 630 museum visitors surveyed, “80% of visitors traveled to the Museum this summer from outside the five boroughs of New York. Of these, 23% were from the Tri-State area, 30% were from other states, and 47% were international visitors” (“Metropolitan Museum’s Summer”). The purpose of the survey was to assess The Metropolitan’s economic impact for New York City (“Metropolitan Museum’s Summer”), no doubt to substantiate the “added value” of its municipal bottom line (Weil 233-234, Rea 266), and mentions that, “51% of the out-of-town visitors reported that their visit to The Met was a determining factor in their decision to visit New York” (“Metropolitan Museum’s Summer”). The Metropolitan has endeavored to cultivate itself as a tourist destination through the various initiatives of its Department of External Affairs such as Communications and Marketing, Multicultural Outreach, and the Visitor Services sector responsible for such surveys.\textsuperscript{18} Thus, the Department of External Affairs has fulfilled responsibility of “attracting, welcoming, retaining, and increasing visitors to the Metropolitan from around the city, state, country, and world,” but perhaps not on “all levels” it claims (“Department of External Affairs”). The 2102 survey does little to speak of the demographic statistics of those visitors, but its focus on economic impact does provide insight into the financial costs associated with a Metropolitan-inspired trip to New York City, which includes an average $775 budget for expenses (“Metropolitan Museum’s Summer”). The Metropolitan may be successful in attracting visitors from


various locations, but only visitors who are willing and able to afford a trip to an
difficult-to-manage city like New York.

The cost associated with visiting New York City may be beyond the control of
The Metropolitan, but the museum has continued to expand its museum programs aimed
at attracting the “outside consumer.” The Education Department at The Metropolitan
Museum of Art presents more than twenty thousand scheduled events each year, ranging
from “gallery talks, tours, short courses, studio workshops, lectures, symposia, concerts,
film screenings, and multigenerational drop-in drawing sessions” to audio guides, teen
art-making and writing classes, and family-related art activities and festivals. Interested
visitors can consult the Events calendar and find a dozen such programs available on any
given day. The fourteen events scheduled for Friday, May 17, 2013 include multiple
guided tours of various galleries, a free lecture on the earliest arts of the Arab
subcontinent, an artist’s talk by Phong Bui, a family storytime located in the Thomas J.
Watson Library, as well as a regularly scheduled children’s art class and a lighthouse
concert for the visually impaired.

Similar endeavors continue to be explored through The Metropolitan Museum of
Art website, metmuseum.org, which provides many opportunities for online visitors to
interact with the museum. The website was originally launched in 1996 under the
direction of Philippe de Montebello, who also helped forge one of the website’s lasting

---

21 “Metropolitan Museum Launches Expanded, Redesigned Website, Providing Unprecedented Access to
Collections, Programs, Research, and Visitor Information.” The Metropolitan Museum of Art. 26
interactive features, the *Heilbrunn Timeline of Art History.*\(^{22}\) The museum website describes the *Timeline* as “an invaluable reference, research, and teaching tool” for students and art history scholars, which “presents the Met’s collection via a chronological, geographical, and thematic exploration of global art history.”\(^{23}\) In addition to the 300 timelines available, users are able to search through world maps, 930 thematic essays, 7,000 works of art and a “robust index” of “chronology, geography, theme, and subject,” all authored by the many expert curators, conservators, scientists and educators staffing The Metropolitan (“About the Heilbrunn”). Such facilities were further enhanced with the recent relaunch of *metmuseum.org* in 2011, which “expanded and redesigned” the website for “unprecedented” and “comprehensive access” to the more than 340,000 works of art on display at The Metropolitan (“Metropolitan Museum Launches”). New, high-resolution images with zooming features allow Internet users to explore in detail, while links to the *Timeline* provide greater context to individual works of art (“Metropolitan Museum Launches”). The over 400 galleries at The Metropolitan have also been photographed and organized online, with references to important works within each gallery and links to related content made available, as well as interactive maps suggesting possible itineraries (“Metropolitan Museum Launches”). Erin Coburn, the Museum’s Chief Officer of Digital Media, remarks: “This relaunch represents a complete overhaul in how we support the Museum’s online presence and positions the Met to be more responsive to the everchanging needs of the digital environment, while presenting


the collections and scholarly resources in myriad new ways to foster learning and exploration” (“Metropolitan Museum Launches”).

The Metropolitan’s digital response has been of great concern for the museum’s current director, Thomas P. Campbell, who views “the museum’s next frontier to be less physical than philosophical and virtual.” Campbell’s directorial predecessor, Philippe de Montebello, saw to the physical expansion and reorganization of the museum space as a way to increase the accessibility of high art, and under his direction The Metropolitan physically doubled in size (“After Three Decades”). Campbell believes that The Metropolitan can truly be made more open and understandable by rethinking its use of technology, which he believes the museum has been slow to embrace (Kennedy). Along with the website relaunch in 2011, Campbell premiered a new online series of expert talks by The Metropolitan staff called Connections (Kennedy). The personal perspectives offered by each contributor “range from the authoritative to the highly subjective, and touch upon any number of themes and concepts,” such Bad Hair, The Ideal Man, and Lincoln and The Civil War. This was followed up in 2013 by a similar online series, 82nd & Fifth, in which one hundred curators each discuss one work of art


and its transformative capacity.\textsuperscript{27} To support the museum’s growing online presence, Campbell also initiated the wiring the entire museum for WiFi, a daunting and expensive task considering the museum’s compound-like structure and numerous concrete walls (Kennedy). The goal is to further integrate the museum experience with mobile technologies like exhibit-specific apps (Kennedy) and corporate innovations such as Google Goggles,\textsuperscript{28} the earliest rendition of Google’s new Image Search function.\textsuperscript{29} Coburn explains:

This continuation of our broad efforts to enhance visitors’ experience through digital media builds upon the recent launch of the mobile-optimized version of the Met’s new website. Now, using Goggles, visitors can simply take a picture of a work of art with their mobile device and then link to the mobile version of metmuseum.org to learn more about the work. It is a totally integrated experience. (‘Metropolitan Museum Enhances’)

The possible danger of such integration is that museum visitors will be looking at mobile screens rather than art, but Campbell sees the benefit of being able to reach every patron, from the first-time visitor to the seasoned scholar, as far outweighing such risks.

“Anyone with a smartphone who is interested in learning more about a work of art from the Metropolitan Museum will be able to do so easily and directly,” says Campbell, “This represents a milestone in our efforts to provide greater access to the Museum’s holdings for a global audience” (‘Metropolitan Museum Enhances’). By some estimates, 40% of Metropolitan visitors have perused metmuseum.org before visiting the museum, and


\textsuperscript{29} Google images. Google. n.d. 13 Mar. 2013. Web: Google images users are now able to “Search by Image” by either pasting an image URL or uploading an image file (dragging functions enabled).
attendance continues to break records (Kennedy). During the 2012 fiscal year, 6.28 million people came to The Metropolitan, and if the statistics from the 2012 survey are any indication, large percentages of attendees continue to travel both nationally and internationally to make the visit.

The question remains whether The Metropolitan can continue to be all things that all people want in a museum. It has been described as too big, “too vast, too confusing, too full of paintings and objects and categories, and too full of people” (Tomkins 260), even before the massive expansions from de Montebello’s career. The Metropolitan, however, has seemingly embraced its physically behemoth nature, billing itself as “the largest museum in the Western Hemisphere, and the world's most encyclopedic art museum under one roof” (“After Three Decades”). Weil questions whether such an approach is sacrificing depth for breadth (250), reminding museums that “the public is not a monolith;” it is a collection of unique and individual persons who maintain unique and distinct relationships with institutions like museums (254). The marketing ideology for which Weil advocates has helped museums better understand the motives of their visitors, as well as what keeps visitors away, but such strategies still rely on the grouping of individuals into larger categories such as national, international, frequent, and first-time. Through the capacities of digital and online marketing, the museum may for the first time be able to truly respond to the individual demands of each visitor, but it may also find itself redefining its relationship to its collection, treating it ever more as a

---

resource than its raison d’être. This changing relationship has not gone unnoticed by what Paul Conway calls ‘the cultural heritage community’; libraries, archives, and museums have all been debating the benefits and disadvantages involved with “going digital.” In his article, “Preservation in the Age of Google: Digitization, Digital Preservation, and Dilemmas,” Conway remarks: “The recognition of digitization as preservation strategy is a relatively new and still-controversial concept within the cultural heritage community, which has generally viewed digitization activities as a form of copying for easier and broader access” (65). Despite such uncertainties, The Metropolitan’s current Director Campbell solidified his commitment to digital expansion with an early mandate: creating a digital record for each of the more than 1.6 million objects in the museum’s collection (Kennedy).

---

3. Concerning Digital Collections

In order to contextualize the benefits, disadvantages, and resources of such an undertaking one need only look to earlier digital collections, such as The Rossetti Archive\textsuperscript{33} and William Blake Archive.\textsuperscript{34} While both archives represented academic efforts to utilize the new, networked connectivity of the Internet in order to digitally archive and share specific analog collections, the rate of change of technology proved to be too rapid. The Rossetti Archive homepage provides an idea of the time involved in creating such a resource, stating that the project was “completed in 2008 to the plan laid out in 1993” (Rossetti). During those fifteen years, the appearance and ergonomics of the application layer (the content of the Internet) changed extensively. George P. Landow of Brown University was one of the earliest hypertheorists to describe the exciting new facilities of the computer in his 1992 publication, \textit{Hypertext: The Convergence of Contemporary Critical Theory and Technology}.\textsuperscript{35} Things now considered second nature, such as using a mouse or a drop down menu, had to be described in detail before explaining the marvelous possibilities of going “online.” As Landow notes in the 2006 re-edition of this ongoing project, titled \textit{Hypertext 3.0: Critical Theory and New Media in}

an Era of Globalization: “Such is no longer necessary, and such is no longer adequate. It is not simply a matter that many of you have become skillful users of e-mail, discussion lists, Google, and the World Wide Web. Equally important, you have experienced numerous digital applications, genres, and media that do not take the specific form of hypertext.” Hypertext has been largely defined as: “A program that provides multiple pathways through text, enabling the user to follow existing hyperlinks, to link related items of text together, or retrieve linked cross-references, in a non-linear and ‘random-access’ manner,” while hypermedia is, “A communications medium created by the convergence of computer and video technologies.” In accordance with the laws of Moore and Grove, which assert that processing speeds double at a rate much faster than bandwidth, the variety of media that could be presented within each digital object, like a webpage, was bound by the rate at which is could be transferred. The gradual increase in bandwidth, from dial-up to cable, DSL and T3 connections, reduced the limits on the amount of data that could be transferred and thus began to blur the distinction between hypertext and hypermedia. Landow writes of these changes:

Some of these, such as Weblogs, show an important relation to hypermedia, but others, like computer games, have only a few points of convergence with it. Still others of increasing economic, educational, and cultural importance, such as animated text, text presented in PDF (portable document format) format, and streaming sound and video, go in very different directions, often producing effects that fundamentally differ from hypermedia. (xiii)

The “fundamentally different effects” to which Landow refers have become commonplace practices, implemented most notably by social networking sites. These sites present the evolution of hypertext and hypermedia by incorporating the hypertextual exposition of a message board or chatroom and the performative element of hypermedia by allowing anything from websites, photos, and video to be uploaded instantaneously. Since Landow’s 2006 re-edition, sites like YouTube, Facebook, and Twitter have been launched and become embedded into the forefront of our daily minutiae. Unlike the Rossetti or William Blake Archives, which existed as a digital platform of preexisting analog content, sites like YouTube, Facebook, and Twitter exist as a platform for user-uploaded content – which is in part what makes them so attractive to online users – but it how such content can be handled, experienced, and engaged in new and exciting ways that makes these new social media sites successful, not the content itself. Yes, users want access to content, be it preexisting analog collections or digitally-born user-based media, but access itself is no longer a novel experience and the experience of access has needed to evolve in order to compete for user attention. Clicking through the endless hyperlinked indexes of the William Blake Archive is tedious and boring compared to a YouTube video page, which not only allows users to watch a video, but post comments, search through related videos, and add to their own personal library—all from the same page.

The Rossetti and Blake Archives serve as examples of how old methods of cataloguing and searching, based in structure and hierarchy, do not map neatly onto a digital apparatus that operates through association. In 1945, Vannevar Bush became the first individual to address the hierarchical organization of knowledge as contradictory to
the associative operations of the human brain, proposing that this problem could be addressed through technology. His article, “As We May Think,” describes a fictitious machine, the MEMEX, which would not only serve as an index of useful materials such as publications, photos, and videos, but would allow the user to build useful connections between indexed objects which would then aid in future referencing. The machine was intended for individual use, however, as it was thought that too many contributors would result in too many associative trails, resulting in unusable chaos (Schröter 335-336). Yet, this is precisely the experience that online collections endeavor to provide, sans chaos.

The cultural heritage communities are not only competing with physical leisure activities, such as movies, theme parks, or zoos, but they are also competing for the digital attention of Internet users as well. To compete with sites like YouTube, Facebook and Twitter, a digital collection must present itself as more than just an index and must allow for users to freely associate as they desire.

The Metropolitan has explored many ways to make their digital offerings more associative, as with the Heilbrunn Timeline, Connections, and the digital gallery views, but each of these initiatives requires a new set of skills and techniques that are uncommon amongst trained museum professionals. The digital professionalization of museum workers is but one change museums must make if they are to succeed in “going digital”; digital librarians, digital archivists, program writers, and online editors are but part of the digital army that must be raised in order to develop, maintain, and evolve a

digital collection (Conway 73). A museum already demands a wide range of skills—curators of specialized time periods, mediums, and specific artists; restorationists with a split degree in art history and the chemical sciences; public relations specialists; fundraisers; tour guides; and the often overlooked army of maintenance crews that are needed to care for the building itself. The Metropolitan today boasts a staff of 500 curators and managers, conservators, educators, and librarians, and 2,300 administrative staff working full and part time to manage operations, construction, development, marketing, finance, visitor services, systems and technology, human resources, and merchandising (“After Three Decades”). In addition to the some 1,100 volunteers (“After Three Decades”), The Metropolitan’s army of skilled professionals is one of the largest in the world, and includes a department specifically allocated to the “the creation, production, presentation, and dissemination of multimedia.”

According to The Metropolitan website:

The Digital Media Department . . . is responsible for managing electronic documentation and digital assets associated with the Met's collections, publishing the collections information to a variety of platforms, and ensuring greater access to the Met's digital resources. It also supports and develops public-facing technologies and is responsible for the Museum's presence and participation in the online environment, including www.metmuseum.org. (“Digital Media Department”)

Though the Internet is often heralded as a great “free” technology, it still requires paid resources like talented and trained professionals. The majority of smaller museums scattered across smaller cities do not have The Metropolitan’s operations budget, which

---

is approaching $1 (“After Three Decades,”), and where The Metropolitan can afford to expand and experiment with newer innovations, these smaller museums cannot. This has led to collaborations between smaller museums and larger digital companies who have a wealth of highly skilled, technically trained, digital specialists who have experience in creating and managing digital collections.

ARTStor is a scholarly initiative, with over 1.4 million objects from international museums and archives that are meticulously indexed but presented with newer engaging technologies. ARTStor provides users both the excitement of the experience as well as the credibility of research, but it does little by the way of broadening the demographic of the average museum visitor (highly educated individuals) by limiting it access to scholarly associates (users must login through associated schools and universities). On the opposite spectrum, Artsy users can gain access through private invites and social media, like Facebook and Twitter. Artsy lacks the serious scholarship of ARTStor and instead focuses on networking art and Artsy users through a Tumblr-like application. It is doubtful whether Artsy or ARTStor really provides any additional support for the bottom line of any collaborating museum—one is too intellectual while the other too superficial. Google Art Project, however, seems to walk this line quite well, endeavoring to be “a museum of museums” on the web.

Google launched Google Art Project (GAP) on February 1, 2011, the same year in which The Metropolitan relaunched its own website. Originally working in

---

collaboration with 17 international museums (now in approaching 150), Google Art Project acts as a platform for high-resolution digital images and the museums in which they are located. While some of these digital images are contributed by the participating museums themselves, Google also used its own giga-pixel (1 billion pixels) technology, previously used for Google Earth, to raise the bar on high-resolution. Though metmuseum.org contains its own high-resolution images, Google Art Project enables users to zoom in on select works to levels previously unavailable, bringing into focus craqueleur and brushstrokes to which only museum restorationists had previously been privy. “Photography at this level of quality is neither easy nor cheap,” notes journalist Nancy Proctor, “Museums are unlikely to digitize large percentages of their collections in this way in the near term.”43 Google also mounted its Street View camera to bicycles and captured “Museum Views” of the participating institutions, not unlike the gallery views available at metmuseum.org.

However, unlike The Metropolitan website, which is dedicated to the specific collection of one museum, relationships with each of the museums on Google Art Project becomes more complex with regards to copyright and accessibility. Especially with regard to the “Museum Views,” Proctor notes that, “Creating these interior scenes involved sorting out complex copyright issues. In progressing through the galleries, Google’s cameras had to avoid capturing works with copyright restrictions, or were obliged to blur them out in the final product” (217). In certain instances, as with the Toledo Museum, images have been removed due to issues of who holds the current

copyright, while others, like the Picasso estate, have concluded that the right to produce an image is not sufficient for Google. Lauryn Guttenplan, Associate General Counsel at the Smithsonian, and Jane Burton, creative director of Tate Media, are among the few who note that Google Art Project may be presenting a limited example of art’s history, considering many of the great modern works will be absent due to copyright laws (Lufkin 20). Though Guttenplan maintains that any legal questions regarding Google Art Project can be resolved through copyright, others maintain that it is unlikely fair use exceptions will prevail due to the “unlikely” transformative nature of the Art Project (Lufkin 20).

Such insight comes on the heels of recent court rulings which declared that Google’s Book initiative did not fall under fair use exceptions and ordered the company to pay $125 million for the copying and distribution of copyright material.

Such complications are not new within the museum world, where artworks were often acquired through what would now be considered unlawful means. As recently as 2006, The Metropolitan Director de Montebello negotiated an agreement with the Italian government in order to end disputes over the legal ownership of several works in the Greek and Roman Art Department (“After Three Decades”). However, debates over digital ownership are new, as Guttenplan ultimately concludes: “This is Google’s project, not yours. Why risk alienating donors or artists, who may object if they own the copyright without checking all the details?” (Lufkin 20). As Jason Brush, executive Vice

---

President of user experience at Schematic, the company Google worked with to develop GAP, notes: “Powered by a broad, connected suite of Google technologies, Art Project is a Java-based Google App Engine Web application. The site exists entirely on Google’s infrastructure and was built using Google’s APIs.” Google may not own the right to display certain works by Picasso or the Toledo Museum, but the site exists . . . and the technologies behind that site are entirely owned by Google.

4. Intellectual Property and the Distributed Control of Protocol

In his text, *The Public Domain: Enclosing the Commons of the Mind*, James Boyle notes that property was seen as a solution to the waste of vital resources.\(^{48}\) Within what Boyle calls the First Enclosure Movement, common lands were privatized (44). Farmers, herders, and foragers could no longer utilize the common resources of these newly enclosed properties, but as Boyle notes:

The big point about the enclosure movement is that it worked; this innovation in property systems allowed an unparalleled expansion of productive possibilities. By transferring inefficiently managed common land into the hands of a single owner, enclosure escaped the aptly named ‘tragedy of the commons.’ It gave incentives for large-scale investment, allowed control over exploitation, and in general ensured that resources could be put to their most efficient use. Before the enclosure movement, the feudal lord would not invest in drainage systems, sheep purchases, or crop rotation that might increase yields from the common - he knew all too well that the fruits of his labor could be appropriated by others. The strong private property rights and single-entity control that were introduced in the enclosure movement avoid the tragedies of overuse and underinvestment: more grain will be grown, more sheep raised, consumers will benefit, and fewer people will starve in the long run. (44)

Fewer people died of starvation, but the price of this social gain was a concentration, and ultimate centralization, of economic and social powers in accordance with the mutually

exclusive limitations of physical property (Boyle 44-45). The finite nature of landed property does not, however, apply to the infinite nature of intellectual property. Whereas the First Enclosure Movement achieved control through a reductive process of limited resources, the Second Enclosure Movement attempts to implement the same sort of control through an additive process, which creates new exclusions through the use of limited monopolies known as copyright (Boyle 48). This follows the logic that an un-owned social resource, a free resource, “automatically conjures the idea that it is being wasted” (Boyle 47). However, the “tragedy of the commons”—overuse, misuse, inefficiency, and so on—are not a problem of the intellectual commons (Boyle 48).

Rather, market stasis was the primary catalyst behind burgeoning intellectual property laws. A market in which everything could be free demands no competition; without competition, the market would stall, and economies would fail to grow. As such, intellectual property laws were originally utilized by content industries—publishers, movie theaters, distributors, and manufacturers—as a means of undercutting potential exploitation from industry competitors (Boyle 50-51). Boyle explains:

In practice, if not theory, the law was predominantly a form of horizontal industry regulation of unfair competition—made by the people in the affected industries for the people in the affected industries. The latter point is worth stressing. Congress would, and still does, literally hand over the lawmaking process to the industries involved, telling them to draft their intra-industry contract in the form of a law, and then to return to Congress to have it enacted. The public was not at the table, needless to say, and the assumption was that to the extent there was a public interest involved in intellectual property law, it was in making sure that the industries involved got their act together, so that the flow of new books and drugs and movies would continue. Members of the public, in
other words, were generally thought of as passive consumers of finished products produced under a form of intra-industry regulation that rarely implicated any act that an ordinary person would want, or be able, to engage in. (50-51)

This position is not dissimilar to that of the earliest museums in Europe and the United States, as Hudson asserts:

The new museums may have been provided for the benefit of the public at large, and financed from public funds, but they were very much the creations of their directors, who took the decisions as to how the buildings were to be designed, what systems of display was to be adopted, what material was to be shown and what excluded. Consumer research was altogether foreign to the way in which the heads of most nineteenth-century museums thought about their task. (6)

Both the content industries and cultural heritage institutions claim to exist in order to provide some service to a public, and yet both have traditionally leveraged control of their collections rather than control of their publics in order to compete within the market. The public, as Boyle so explains, was largely considered a passive group of consumers that could be tapped through control of content. Traditionally, this control has been the realm of the limited monopoly known as copyright. Both the content industries and the museum engage copyright through different means, but the reason is always the same: to control production, access, and distribution of content like a movie or a unique piece of art. The Internet disrupts this control by relinquishing a certain amount of that control to the previously passive public through the distribution of protocols.
The Internet has often been characterized as a truly egalitarian free-for-all, and at first glance, this is not unfair. The Internet collapses any lasting notions of “long distance;” people across the world are able to instantaneously communicate in newer ways, as technology-based companies like Skype and the video chat function of Google+ continue build upon the humble beginnings of instant messaging. The Internet also collapses certain hierarchies by allowing anyone to host information and by making every packet of information equally important. This is precisely why search engines like Google have become so necessarily ubiquitous – they essentially return a structure of hierarchy to the Internet in order to expedite the sorting and locating of information. These search engines have been able to make meaning from this seeming boundless freedom, which is exactly what the early hypertext and hypermedia theorists endeavored to do from a more humanistic standpoint. In her essay “Repeating the Rhizome,” author and hyper-theorist Alice van der Klei delineates the theoretical connections between the Internet and the rhizome as conceived by Gilles Deleuze and Félix Guattari in their seminal 1980 publication, *A Thousand Plateaus*.\(^4^9\) Van der Klei states:

> The simultaneous presence of heterogeneous space means that there is no hierarchized distance between one element and another; they are in the same territory, grafting ideas across continents irrespective of national boundaries. The rhizome, like Deleuze and Guattari’s "book-machine," connects and assembles in movement, without necessarily losing or gaining anything and without giving more importance to one element over another.\(^5^0\)


As users click and connect various lines of flight, the Internet always and only provides the dimensions necessary for a particular search or experience; the exterior constituting the entirety of the Internet remains dormant potential. However, the act of “surfing” enabled by the rhizomatic nature of the Internet encourages endless potential for connecting to the dormant exterior. Sites like Wikipedia are especially adept at enabling flight between various concepts by creating a closed system of self-referencing hyperlinks which continuously connect various elements like key people, places, and topics within its online encyclopedic repository. The apparent freedom of such an experience, which seems to need no appeal to any higher power or knowledge, led to the idea that the Internet was a truly egalitarian space without hierarchy or structure—in other words, a free-for-all.

It is this Internet free-for-all that the content industries have attempted to control through copyright, resulting in what Boyle names the Internet Threat. Simply put, Boyle’s Internet Threat states that as the cost of copying decreases, the control over copying must respectively increase (53, 60, 66). At a time when manuscripts were transcribed and copied by hand, no real control was needed in order to protect their content, but as the printing press made copying cheaper, measures like the Statute of Anne (perhaps the first copyright statute) were put into law (Boyle 60-61). “The heart of the story is beguilingly simple,” states Boyle, “The Internet makes copying cheaper and does so on an unparalleled global scale. Therefore we must meet the greater danger of illicit copying with more expansive rights, harsher penalties, and expanded protections” (60). The belief by content industries that “as copying costs approach zero, intellectual
property rights must approach perfect control” (Boyle 61) may appear beguilingly simple, but its legal interpretation has created far more complex relationship between the two previously distinct intellectual property rights: copyright and patents. “We do not normally think of rights over expression (the realm of copyright) threatening to sweep within their ambit an entire new technological invention (the realm of patent),” claims Boyle (70). However, as technological innovations decrease the cost of copying, these two previously distinct legal sectors have become increasingly interrelated with regard to intellectual property. Boyle describes the Supreme Court ruling regarding Sony, the content industry, and the Betamax video recorder, a technological innovation which allowed individual users to circumvent the movie theater by recording television broadcasts on video cassette tapes (64-65, 71). As Boyle explains, the court resolved that copyright law did not give copyright holders the right to veto new technologies based on the notion that such technologies enable contributory infringement of copyrights (70-72). The Sony case declared that contributory infringement in copyright law could not be used to suppress entire technologies—the patent and the copyright maintained distinct legal functions. However, this distinction was revisited and reinterpreted with regard to the ubiquitous availability of cheap (sometimes free) copying enabled by networked peer-to-peer file sharing systems such as Napster.

As Boyle points out, there were many who believed that the case against Napster could have, and should have, mapped nicely onto the legal framework previously established by the Sony case (73-75). Instead, the courts revisited and reinterpreted the definitions of several key legal terms that had previously upheld the rights of free use and
the legal distinction between copyright and patent. Whereas videorecording had been declared a private use for noncommercial purposes, the file-sharing system of Napster, with its some 54 million users, was not interpreted as private, despite the fact that individual users accessed the system from the privacy of their homes and personal computers (Boyle 75). The so-rulled non-private nature of Napster also informed the court’s interpretation of file-sharing’s “commercial” intent. Boyle explains: “Instead of focusing on the fact that the person making the copy is not making money out of it—think of a professor making electronic copies of articles for his students to download—it focuses on the presumptively dirty hands of those who are ‘getting something for nothing” (75). Though the same could have been said of the Betamax capabilities, which allowed individuals to copy television broadcasts for relatively no cost, the courts claimed that Napster had no ulterior purpose (Betamax was at least intended to play video cassettes sold by the content industries) and was aware that its primary function was to allow users to freely circulate copyrighted material (73-74). Boyle argues: “[O]ne goal of copyright is to limit the monopoly given to the copyright owner so that he or she cannot force citizens to pay for every single type of use . . . When ‘getting something for free’ comes to equal ‘commercial’ in the analysis of fair use, things are dangerously out of balance” (76). The result has been, in accordance with the Internet Threat, a greater system of regulations and control governing copyrighted content available online. “[I]t makes our communications architecture a little bit more tightly controlled,” Boyle remarks, “reducing but not removing the availability of methods of mass distribution that are entirely outside centralized public or private control. It is another—relatively small—
step toward an Internet that is more like cable TV or iTunes, a one-way flow of approved content,” which would seem to suggest that any innovation that allows for content sharing, such as the Betamax or the Internet, “is either controlled or illegal” (80).

Alexander R. Galloway explicitly argues against this ongoing misrepresentation of the Internet in his text, Protocol: How Control Exists After Decentralization. To a certain extent, Galloway agrees that “the Web seems to mirror several of the key characteristics of the rhizome: the ability of any node to be connected to any other node, the rule of multiplicity, the ability to splinter off or graft on at any point, the rejection of a 'deep structure,' and so forth.” However, Galloway is quick to assert: “[T]he rhizome is clearly not the absence of structure. It is the privileging of a certain kind of structure, the horizontal network, over another structure, the tree” (61). Galloway argues that the misunderstanding and misrepresentation of the Internet as uncontrolled results from the distributed nature of such structures, which nonetheless maintain protocological control despite the lack of any centralized or even decentralized command center(s). “[P]rotocol is a technique for achieving voluntary regulation within a contingent environment,” explains Galloway:

Prior to its usage in computing, protocol referred to any type of correct or proper behavior within a specific system of conventions. It is an important concept in the area of social etiquette as well as in the fields of diplomacy and international relations. Etymologically it refers to a fly-leaf glued to the beginning of a document, but in familiar usage the word came to mean any introductory paper summarizing the key points of diplomatic agreement or treaty… Now, protocols refer specifically to standards governing the implementation of specific

technologies. Like their diplomatic predecessors, computer protocols establish the essential points necessary to enact an agreed-upon standard of action. (7)

Today, the term protocol is mostly understood in a military context, “as a method of correct behavior under a given chain of command,” but Galloway remarks how these previous understandings of the term must be viewed through the distributed nature of a network like the Internet (29).

Computer protocol is implemented through codes, which “govern how specific technologies are agreed to, adopted, implemented, and ultimately used by people around the world” (Galloway 7). "Without a shared protocol,” Galloway asserts, “there is no network” (12). Galloway evokes the highway system as an effective visual heuristic, noting that traffic cannot flow if certain protocols like signs, speed limits, and driving on a certain side of the road are not agreed upon by the highway users (7). Similarly, in order for the information highway to flow without incident, each computer within the network must implement an agreed-upon set of standards by using the same coding language. Numeric codes structure this language, and in contrast to the astructural Internet conceived by hypertheorists, Galloway explains how the various “layers” of protocol code provide a very real, if not tactile, structure (39).

Though there are various interpretations of how many layers should be considered (Galloway 39-41), Galloway relies on the four layers as described by the RFC on “Requirement for Internet Hosts:”\footnote{Braden, Robert. "Requirements for Internet Hosts." RFC 1122, Oct. 1989. Web. 21 Mar 2013. pp. 6-7.} the application layer (the content, the semantic layer, i.e. email or webpage), the transport layer (TCP), the Internet layer (IP), and the link
layer (hardware, i.e. ethernet or wifi) (Galloway 39). Each layer is nested within the previous layer; information must pass through each successive layer and the subsequent coded protocols before reaching the individual user (Galloway 10-11). Digital content, the application layer, is encoded by a Hypertext Markup Language (HTML), which represents digital objects through a series of commands written in HTML code (Galloway 10-11). A simple example can be explained by common textual functions such as bold, underline, and italicize. In order to make a computer represent the typed words as italicized, the computer runs the HTML protocol written as <i>italicized</i>, thus rendering the word italicized. Every digital object—every letter, word, hyperlink, image, movie, etc.—contains such markups which allow the HTML codes (markups) to be hosted by the network of Hypertext Transfer Protocol (HTTP) (Galloway 10-11).

Transmission Control Protocol (TCP) then ensures that these encapsulated and hosted objects make it from one computer to another by creating an imaginary circuit (Galloway 43, Postel “Transmission” 1). TCP does not control the HTML content, nor does it actually move the data—it simply makes sure that the information reaches its destination and is responsible for resending any data which might fail to do so or becomes corrupted (Galloway 43, Postel “Transmission” 1). Internet Protocol (IP) acts as the engine of this process; it cannot control direction or speed, but it actually moves the information from one location to another through a process of fragmentation and

---

53 Berners-Lee, Tim. *Weaving the Web*. New York: HarperCollins, 1999. Print: HTML was an innovation of the World Wide Web Consortium (W3C) that helped enable successful communication between HTTP client and WWW servers. As will be discussed further, individual networks hosted across the Internet may implement different markup protocols, but HTML has been given priority as all networked information within this discussion is hosted on the WWW.


routing (Galloway 44, Postel “Internet” 1). Fragmentation, or “packet switching,” is what initially made the Internet network possible (Galloway 4-5). Fragmentation breaks information into smaller data packets known today as datagrams, which are then transferred and reassembled into the original HTML object at their destination (Galloway 45, Postel “Internet” 1). The acceptable size of the packet varies according to the threshold of the networks the information must pass through, just as freeways and backroads differ in the volume of traffic they can accommodate (Galloway 46). And just as a driver may take any number of routes to a destination, so too may a datagram, but there is no fixity in IP routes as there is with physical roads; datagrams must create a new route for each transmission by hopping from computer to computer within the network (Galloway 44-45). This is known as routing, and it is the second function of the Internet Protocol (Galloway 41). Unlike HTML, which is specific to the WWW network, “TCP and IP are the leading protocols for the actual transmission of data from one computer to another.” This results in a network in which any computer can talk to any other computer via "a nonhierarchical, peer-to-peer relationship" (Galloway 8). All computers across all Internet networks must follow TCP/IP suite in order communicate, but the communication itself is “cheap and ubiquitous” (Galloway 6) and has created an Internet that is both reliable (datagrams rarely fail to reach their destinations) and robust (anything and anyone can be hosted through the TCP/IP suite).

The TCP/IP suite allows for information to be located anywhere at anytime, but in order for users to be able to access this information, they must have a point of reference, somewhere that they know they can locate the desired information. As Bush first noted
in 1945, humans and computers prefer different methods for locating information. Humans tend to more easily recognize and remember associative information, and thus network hosts have been identified across the Internet by domain names such as www.metmuseum.org. The computer, which began its career as a glorified number-crunching calculator, prefers to locate datagrams through IP addresses that are represented as a long series of numbers and periods, such as 206.252.131.211. This translation, from written domain name into numerical IP address, used to be contained on a single computer in Menlo Park within a single text file known as HOSTS.TXT. This file only contained two columns: one for IP and one for domain (Galloway 47). Network users were able to request a copy of the file, which could be processed by their individual machines in order to access the information located across the network. The Domain Name System (DNS), invented by Paul Mockapetris, simultaneously decentralized and hierarchized this file (Galloway 5, 48-49).

Much like the previously discussed protocols, the domains of Mockapetris’ system are nested within one another, but unlike the TCP/IP suite, which facilitates peer-to-peer communication without intermediary buffering (Galloway 46), the DNS operates through a hierarchized process of servers that maintain authority over the domains below. The DNS decentralizes the earlier HOSTS.TXT file across various domains demarcated by “.” Beginning with the Top-Level Domains (TLD), which come at the end of the domain name (.org, .edu, .com, .gov, etc.), the website name, metmuseum for example, is housed within the TLD .org, and in order to get to metmuseum, the computer must first appeal and gain access to .org. Finally, the specific network, such as the World Wide
Web (WWW), is housed within the website domain. Each period of the domain name, www.metmuseum.org, represents a different level of access and corresponds to the periods of the numeric IP address, 206.252.131.211. The process of accessing these various domains in order to “translate” the written domain into the numerical IP address and back again is known as resolution. Galloway elaborates:

In DNS, each name server can reply only with authoritative information about the zone immediately below it. This is why the system is hierarchical. But each name server can only know authoritative information about the zone immediately below it. The second, or third, or even fourth segment down the branch has been delegated to other name servers. This is why the system is decentralized . . . The more central name servers that are closer to the root of the tree cannot tell you authoritative information about the computers at the ends of the branches, but they can tell you who they have delegated such information to and where to find the delegates. (49-50)

Tim Berners-Lee, innovator of the World Wide Web, argues that the control root servers exert over the existence (but not necessarily the content) of each lesser domain “should shatter our image of the Internet as a vast, uncontrollable meshwork” (10). As Galloway notes, "Ironically, then, nearly all Web traffic must submit to a hierarchical structure (DNS) to gain access to the anarchic and radically horizontal structure of the Internet" (12). The dozen or so root servers located worldwide in the U.S., Japan, and Europe, exert control over access to lesser networks like the World Wide Web. Despite the fact that the Internet is able to directly connect any machine hosted on its network, root servers are able to shut off communication to any subsequent branches (Galloway 9),

56 Effectually resulting in what some claim to be censorship: Chung, Jongpil. “Comparing Online Activities in China and South Korea: The Internet and the Political Regime.” Asian Survey. Vol.
resulting in a system of access that is still highly regulated, highly hierarchized, and highly restricted.

Galloway remarks that the DNS, which acts a single, exhaustive index for all things, mimics the structuralism of language as first conceived by Ferdinand de Saussure: “DNS is not simply a translation language, it is language,” asserts Galloway; “It governs meaning by mandating that anything meaningful must register and appear somewhere in the system.” (50). However, neither DNS nor TCP/IP govern the content of meaning; they are wrappers, they are structures. As Galloway notes, “protocological objects never contain their own protocol;” they are always nested, housed, or encapsulated within another protocol (52). As Marshall McLuhan once remarked: “The medium is the message,” to which Galloway adds: “[T]he content of every new protocol is always another protocol” (12). “Protocol is a circuit, not a sentence” (53), and as such, “it means that protological analysis must focus not on the sciences of meaning (representation/interpretation/reading), but rather on the sciences of possibility (physics or logic)” (52).

Yet, so many possibilities exist on the Internet that anything seems possible, and it is such thinking which no doubt contributes to Boyle’s Internet Threat. Content industries and museums have both managed to carve out a market niche based on controlling the content of their collections – the application layer, the representations, interpretations, and readings thereof – which, according to Galloway, is of little concern.
to the Internet which concerns itself with making content possible, not plausible. What is possible is the “mash-up culture” of the Internet, which threatens the previous copyright control of content industries and cultural heritage institutions. Is it illegal for a person to upload a home video to YouTube with a copyrighted song playing in the background? Is it illegal for a person to post a picture on Facebook of a copyright image? Are GIFs of funny scenes from a television show circulating around Tumblr illegal? Is it illegal to Google-search a copyright image, like a painting, and then use that found image for another purpose? Answers may vary, but Boyle insists: “One cannot start from the presumption that the rights holder has absolute rights over all possible uses” (66).

Copyright is, after all, a limited monopoly based on the exceptions of fair use, “uses that were never within the copyright holder’s power to prohibit” (Boyle 66). It would seem that Boyle’s argument in conjunction with the structural framework of the Internet, as so explained by Galloway, inevitably points to this: there will be certain new possibilities


Notwithstanding the provisions of sections 106 and 106A, the fair use of copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include –

1. the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
2. the nature of the copyrighted work;
3. the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
4. the effect of the use upon the potential market for or value of the copyrighted work.
The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.
provided by the Internet that copyright cannot prohibit, either legally or protocologically. Certain possibilities may fall under the realm of fair use, while others might be enabled by the robust and freely available TCP/IP protocols. However, even these possibilities, and the content industries and their copyrights, are subject to the dozen-or-so worldwide root servers and the hierarchical DNS structures that enable access to the networks of the Internet. Content industries may battle with other Internet users over how fair use and copyright will play out online, but inevitably such arguments will remain a sub-clause of protocological control (DNS, root servers, etc).

It would seem, under such logic, that the surest method of control would be abstinence – don’t put anything on the Internet that you need to control. Individual users are slowly learning this lesson as employers increasingly scour social media sites like Facebook and Twitter to inform hirings and firings, but the content industries and cultural heritage communities cannot adopt such an isolationist position; they rely on their communities as proof of service for their financial and philosophical bottom line, and therefore cannot deny such communities what they clearly desire: online access. When speaking of the possibilities accessed by Google Art Project, Proctor reflects: “The connectedness of the Web makes it increasingly difficult for museums to justify limiting the educational scope of their online presentations to what can be discovered within their own institution’s walls” (220). Proctor writes of how “mash-up culture” is meeting curatorial culture through GAP’s “Create a Collection” feature (now known as “My Galleries”), which allows any GAP user registered with Google to curate their own assemblage of artworks. While these personal collections [read: mash-ups] can be used
for educational benefits in the classroom and for self-exploration, they also make curators of the common prosumer. The hierarchical structure of taste – formed by centuries of European collecting, which influenced the formation of museums in Europe and the United States – has seemingly collapsed under the infinite possibilities offered by the Internet.

However, as Galloway so remarked, this is not the absence of a structure, but the favoring of one structure over another. The histories of taste, connoisseurship, and the sciences of meaning and the control each exercised through museums, the content industries, and copyright law, have been made equal with, if not replaced by, the sciences of what is possible, the structures of the Internet, and the millions of average prosumers and their mash-ups. As Proctor notes, what this means for museums is that they can no longer leverage their bottom line solely on the content of their collections, whose online presence they are unable to perfectly control, according to Boyle. Digital collections and their online presence, therefore, do little to further the museum’s mission to its collection while providing a great service to their public, the third museum function that Rea and so many other museum education proponents argued was going largely unattended. With all of the interactive features offered by websites like The Metropolitan, this public is certainly being tended, but in an age where Google is competing with private museums through initiatives like Google Art Project, a new word might describe the museum’s public: underutilized. We have entered the age of data consumption, as anyone with a smartphone data-plan can attest or those who still remember paying for America Online by-the-minute. Every website visited, every Google search, every online feature utilizes
the system of control offered by protocol to ensure the robust and reliable consumption of
data hosted on the Internet. This system also allows consumers to produce new sets of
data, either by creating a new website, contributing to an existing message board,
curating a personal gallery, or uploading information to a social media site like Facebook
or Twitter. These prosumers are creating new sets of data – data that may be consumed
by other Internet users who have the capacity to mine this data for meaningful
interpretations – otherwise known as metadata.

Metadata is literally defined as bits about bits and contextualizes otherwise large
and unwieldy data sets. There are different functions of metadata which help analyze
the structure of data and its fragmentation, its descriptive uses within the application
layer, and its administrative uses (Wactlar and Christel 81). Structural metadata aids in
the fragmentation and compression of data, as when a digital photo is transformed from a
NEF or RAW file, which are large and contain several megabytes, into a JPEG or TIFF,
which are much smaller and enable faster transmission across limited bandwidth.
Descriptive metadata enables the selective search capacity of larger data sets by
highlighting or “tagging” certain keywords, people, places, ideas, etc. Together,
structural and descriptive metadata help to expedite the process of data consumption,
while administrative metadata informs on how such data is being consumed, by whom,
and from where. Milad Doueih, author of Digital Cultures, writes: “To some degree,
this is one of the defining characteristics of the digital environment: every transaction,

every search request or Web site visit, everything related to online presence can be tracked, recorded, and stored and ultimately searched and mined.\(^{59}\)

While sometimes the collection of such information remains covert, other projects like Google’s Web History blatantly foreground the result of such data mining. Once logged into a Google account and having accepted the legal terms of agreement, Web History provides “a personal historical narrative for the digital identity” (Doueihi 126) that not only allows users more intimate access to their browser history, but also predicts future online activity. There is probably no better example of metadata’s administrative power than the programs which “autocomplete” user activity such as auto-correct texting. In the case of Web History, Google is able not only to autotext what it predicts will be the searched term, but to present the search results in order from most to least relevant, not according to the *populist* user activity, but according *that specific digital identity’s activity* . . . all before the user finishes typing the word. Seemingly banal minutia, a Tweet here, Facebook post there, Google search now and then, accumulates over time into a collection of data that represents a user’s online activity, in its entirety, which can then be analyzed, interpreted, and used to inform which projects companies like Google will pursue in the future.

Google Art Project is but one pursuit, and Proctor provokes what this could mean to museums:

> Could the Google Art Project give rise, directly or indirectly, to a technology solution that makes content “‘phone home?’” *This would enable museums to track traffic to their assets accurately, wherever their content is used online.*

metrics could then continue to record the impact of educational and sponsorship-funded initiatives and encourage museums to tap into audiences beyond the walled gardens of their own websites. (220, emphasis added)

Museums (and content industries) may relinquish control over how their content is used and by whom, but through administrative metadata, they may be able to accurately track where this content is used, by whom, and how often. This can be viewed as a digital marketing ideology, originally put forward by Weil, but Weil and others have also remarked that such administrative digital capacities require new digital skill sets, new technologies, and new museum professionalization that many smaller museums cannot afford. Larger museum institutions, like The Metropolitan, are no doubt headed in this direction, if not independently then in collaboration with companies like Google and their ongoing innovations like Google Goggles, tracking the use of their collection both by digital users and physical visitors, hinting once more that the content of the collection and its interpretation is becoming ever subservient to the museum’s public.
5. Conclusion: The Public as Intersection of Discourse

As Michael Warner states in his text *Publics and Counterpublics*, there is a difference between “the public” as a social totality of people in general and the discrete audience of “a public” which exists by virtue of being addressed through discourse. For Warner, a public is made as much as it is found, functioning in ways similar to the concept of interpellation theorized by Louis Althusser. “Could anyone speak publicly without addressing a public?” asks Warner. “But how can this public exist before being addressed?” (67). The reflexive reality of a public means that it will always remain a dormant potential, which “might be real and efficacious,” but only as it is “conjured into being in order to enable the very discourse that gives it existence” (67). This discourse may be addressed through external frameworks, like the bureaucracies of government, but it may also be addressed through publics which self-organize independently of such formal structures (68-70). Warner asks his readers:

> Imagine how powerless people would feel if their commonality and participation were simply defined by pre-given frameworks, by institutions and laws, as in other social contexts . . . What would the world look like if all ways of being public were more like applying for a driver’s license or subscribing to a professionally group—if, that is, formally organized mediations replaced the self-organized public as the image of belonging and common activity? (69)

---

Thus, a public garners powerful potential in its ability to self-organize through any given discourse being addressed, but that potential is as much a responsibility as it is a liberty in a world where “our lives are minutely administered and recorded, to a degree unprecedented in history” (Warner 69). Thus, any self-organizing public that might emerge from museum or Internet discourse will simultaneously be restricted through the control each seeks to employ over its discourse, whether it be through elitism, copyright or protocol. The American museum began as an idea to bring art and art education to the public, and yet has struggled over its long history to truly embrace the public its charter rhetoric seemed to imply.

Rather, the histories of European aristocracy continued to inform expectations of the museum-going public as something refined and tasteful as reflected by the art of the collection, and as that reflection, the collection took priority. As the museum came to understand its dependence on its public, the reflection began to fundamentally change from a curated selection of people to anyone who might substantiate the financial and philosophical viability of the institution. This ever-broadening reflection continues to echo in the museum’s burgeoning online presence of its collections, seeking to cater to both the first-time visitor and the scholarly professional, “the rapidly evolving field of what museum administrators call ‘visitor engagement’” (Kennedy). However, the museum has now cast its net so broadly as to hope to attract members of the Internet-using public who have become accustomed to the Internet’s liberal control of content. The seemingly infinite possibilities afforded Internet prosumers seems to directly clash with the histories of refined taste and connoisseurship which helped form the museum,
and yet, this is exactly the audience the museum claims to be interested in attracting by “going online.” If it is truly visitors that the museum needs, the Internet would be the largest source of untapped visitors available, but the museum may sacrifice control of how its online collection is used. However, if the museum cares to listen, it may also gain understanding of how its public wants to use its collection. Companies like Google have moved into cultural prominence by doing exactly that – discovering what it is its users want by analyzing metadata. Museums could do the same, but what if what the public wants is not a museum, but something else? An institution like the museum, with its elite history, still maintains certain values as intrinsic, values which seem to conflict with the populist yet highly individualized nature of the Internet – that collection of digital objects all networked via the anarchistic and seemingly hierarchized structure of protocol. As the conflicting discourses of the museum and the Internet unite seemingly conflicting publics, the museum as an institution will no doubt continue to change. Yet, for perhaps the first time in its history, these changes may actually be directed by the museum-going, Internet-using public and how it sees fit to unite these discourses.
Works Cited


References


