

# REPROGRAM

TECHNOLOGY, INNOVATION  
AND CULTURE IN A  
NEW ERA OF MUSEUMS

LUIS MARCELO MENDES [ORG.]

# REPROGRAM

TECHNOLOGY, INNOVATION  
AND CULTURE IN A  
NEW ERA OF MUSEUMS

A selection of essays,  
articles and blog posts  
on new museum  
management practices

**LUIS MARCELO MENDES [ORG.]**

**REPROGRAM IS AN INDEPENDENT, CROWDFUNDED INITIATIVE,  
MADE POSSIBLE BY THE SUPPORT OF OUR COMMUNITY.**

**Very special thanks to:**

Adriana Rattes, Alexandre Fernandes, Anna Chiaretta Lavatelli, Armando e Ilana Strozemberg, Clarice Magalhães, Fernanda Assunção, João Vergara, Juca Worcman, Luiz Alberto Oliveira, Luiza Pinheiro, Magui Kampf, Marcos Ferreira, Maria Ignez Mantovani, Michael Peter Edson, Renata Motta, Ricardo Oria, Rosana Lanzelotte, Sônia Barreto, Silvana Andrade and Susan Chun.

**Thank you very much for your support:**

Adriana Lins, Alejandro Tapia, Amalia Giacomini, Ana Angélica Costa, Ana Cunha, Ana Grossman, Ana Linnemann, Bárbara Giacomet de Aguiar, Batman Zavareze, Bebel Abreu, Beth Pessoa, Billy Bacon, Bruna Costa Queiroz da Cruz, Bruna Helena Pereira Soares, Bruno Porto, Carla Branco, Carmen Ferreira, Carolina Bordallo, Catarina Faria, Chico Dub, Chris Lima, Christina Lima, Clara Azevedo, Cláudia Porto, Dana Mitroff Silvers, Daniela Alfonsi, Daniela Chindler, Danielle Linzer, Danielle Machado, Deca Farroco, Dino Siwek, Eduardo Ramos, Enrique Pessoa, Fábio Prata, Fabiano Maciel, Fernanda Bellinaso, Flávia Nalon, Flavio da Costa, Gabriela Alevato, Gabriela Agustini, Gabriela Moulin, Gabriela Werneck, Henrique de Vasconcelos Cruz, Hugo Sukman, Humberto Baranek, Isabela Arruda, Itala Maduell, Ivana Barradas Figueiredo, João Bonelli, Joao Doria, Jorane Castro, Joy Chih-Ning Hsin, Juliana Gonçalves, Juliana Tinoco, Kátia de Marco, Larissa Graça, Leo Eyer, Léo Feijó, Leonardo Menezes, Liana Schipper, Lidia Vales, Liliana Magalhães, Livia Razente,

Luciana Araujo Lumyx, Lucimara Letelier, Manu Fantinato, Manuel Thedim, Mar Dixon, Marcelo Pereira, Márcia Guimarães, Marcos Oliveira, Maria Camargo, Maria de Oliveira, Maria Raquel Fernandes, Maria Tornaghi, Mariana Varzea, Marina Sartori de Toledo, Rafaela Zanete, Regina Miranda, Renata Salles, Renato Cardilli, Renato Salgado, Rosa Lavelberg, Rosane Carvalho, Rubens Ramos Ferreira, Sâmia Batista, Silvia Finguerut, Suzane Queiroz, Tatiana Levy, Theo Carvalho, Tiago Cacique, Valéria Boelter, Vera Lanari, Vera Saboya and Wilson Barancelli.

Edition made possible through support from:

**curta!**

**EXPOMUS**



# CONTENTS

## INTRO

**The Great Museum  
Unbundling**  
Koven J. Smith  
6

**What makes  
MoMA great?**  
Luis Marcelo Mendes  
12

## PART ONE: OPENING

**Dark Matter**  
Michael Peter Edson  
26

**The Moon Belongs  
to Everyone**  
Mike Murawski  
48

**The Virtues  
of Promiscuity**  
Ed Rodley  
62

**GLAM and the Free World**  
Cory Doctorow  
77

**This belongs to you**  
Merete Sanderhoff  
96

**Democratising the  
Rijksmuseum**  
Joris Pekel  
128

## PART TWO: DIGITAL

**A think piece on digital**  
Jane Finnis  
145

**Museum making: Creating with  
emerging technologies in art  
museums**  
Desi Gonzalez  
157

## PART THREE: CHANGE

**Towards the sociocratic museum**  
Bridget McKenzie  
182

**What have we got  
to do with this?**  
Maria Vlachou  
194

**Building community:  
who/how/why**  
Nina Simon  
202

**Museums...So what?**  
Robert Stein  
211

# **THE GREAT MUSEUM UNBUNDLING**

**KOVEN J. SMITH**

**THE BLANTON MUSEUM OF ART**

*“Often, a key characteristic of large incumbents in any industry is, they have a bundle that is accumulated over time, for...reasons that made total sense at the time. So, we...basically say, “Well, you know, gee, if you were to sit down today with a clean sheet of paper, and you knew that the technology was changing, then what would be the proper form of the product, if you were starting from scratch?”<sup>1</sup>*

Marc Andreessen

Welcome to the second volume of Reprogram. In the pages that follow, you will find essays on technology, innovation, and culture in museums by the brightest thinkers inside and outside the museum sector. You will not find a better summation of *Where Museums Are At Now* than this one. Whether it be Michael Edson radically re-defining what museum audiences could/should be [p.26], Merete Sanderhoff describing how sharing and openness facilitates better community interactions [p.96], or Robert Stein discussing new models for visitor engagement [p.211], these essays all help to address this one fundamental question: what is the *ideal and proper* form of the museum in the early 21st Century? That is to say, if museums didn't already exist and we were to start today with a clean sheet of paper, as Andreessen suggests above, what forms would the services provided by museums take? How much would those forms resemble activities we associate with museums today?

Andreessen's Netscape co-founder Jim Barksdale has been quoted many times as saying, "There's only two ways to make money in business: One is to bundle; the other is to unbundle."<sup>2</sup> What Barksdale means is that one can think of any product (say, a newspaper) as a single "bundle" of services. Newspapers made money in the 20th Century by bundling more and more services into this single bundle: investigative journalism, sports reporting, classified ads, op-eds, TV schedules, advertising, etc. So when one looks at the direction newspapers have taken in the last ten years, this is fundamentally a process of "unbundling": pulling apart those services and having them be handled separately and often more efficiently as discrete entities. So now instead of going to your local newspaper for classified listings, you go to Craigslist. Instead of going to your local newspaper for sports scores, you go to espn.com. Instead of doing the crossword in your paper, you subscribe to the *New York Times* daily crossword app on your tablet. None of the activities of The Newspaper have necessarily gone away, but the form of The Newspaper as a single bundle has less and less meaning as the days wear on.

This is what Harvard Business School Professor Clayton Christensen, in *The Innovator's Solution*, refers as the movement from *interdependent architecture* to *modular architecture*. As Christensen describes it, organizations working in what he calls a "not-good-enough world" derive significant tactical advantages from interdependent, vertically-aligned architecture. In the early days of computing, the companies with integrated hardware, software,

1. Fox, Justin. "How to Succeed in Business by Bundling – and Unbundling." Harvard Business Review. Accessed August 29, 2015. <https://hbr.org/2014/06/how-to-succeed-in-business-by-bundling-and-unbundling>.

2. Ibid.

and peripherals came out on top because performance could be improved across the entire machine. Once computers became ubiquitous, consumers' demand for better performance flipped to a desire for lower cost and increased flexibility<sup>3</sup>.

When I read the essays contained in this book, I find it hard not to think that what we are witnessing are the beginnings of a massive unbundling of the museum. The single, interdependent bundle we came to call "the museum" evolved during a time when cultural information was scarce. Museums bundled critical services (collections, education, conservation, etc.) together to deliver cultural information in the most reliable manner possible. Much of museums' so-called "authority" is derived from exactly this reliability. But we no longer live in an information-scarce world, and we are finding that our patrons are increasingly willing to trade authority and reliability for increased responsiveness and speed. It makes less and less sense to respond to patron need by creating a new department and staffing it. We can become more responsive by making the gradual move towards modularization that the essays in this book detail.

This movement, this unbundling, has already begun. I think back to 2009, when the Brooklyn Museum encouraged outside developers to make mobile apps using freely-available collections data<sup>4</sup>. Instead of owning app development from end-to-end, Brooklyn published their collections data with an API, and outside developers created an interface to it. This is the kind of quick response

3. Christensen, Clayton M., and Michael E. Raynor. *The Innovator's Solution: Creating and Sustaining Successful Growth*. Boston, Mass: Harvard Business Review Press, 2013.

4. Bernstein, Shelley. "App Store Confusion Necessitates API Changes - BKM TECH." Accessed September 29, 2015. <https://www.brooklynmuseum.org/community/blogosphere/2010/12/01/app-store-confusion-necessitates-api-changes/>.

to market demands that the old, vertically-integrated museum has difficulty handling. It's a short leap from there to the Walters Museum's Art Bytes hackathon described by Mike Murawski in his essay *The Moon Belongs to Everyone* [p.48] or the in-house media labs detailed in Desi Gonzales' essay *Museum Making* [p.157].

But we shouldn't think of this unbundling just from a technology standpoint. As Merete Sanderhoff says, *sharing is caring*. Modularization enables more than a simple optimization of capacity; it means that we can be more emotionally responsive as well. Bridget McKenzie, in her essay [p.182], emphasizes the need for museums to provide conditions for what she calls "affective germination", in which visitors are encouraged to make more meaningful emotional and logical connections to places, things, and ideas. And yet many of the best manifestations of this idea, from the "Joint Statement From Museum Bloggers & Colleagues on Ferguson & Related Events"<sup>5</sup> to the Oakland Museum of California's work with "Community Advisory Task Forces" to create exhibitions<sup>6</sup>, are only partially contained within museums' physical walls. Another new bundle.

And those new bundles? They probably won't last for a century. They probably won't even last two years. Demands will keep shifting, but a modular architecture will mean that we don't necessarily have to change everything in order to change one thing. As Merete

5. Russell, Adrienne. "Joint Statement from Museum Bloggers & Colleagues on Ferguson & Related Events." Cabinet of Curiosities. Accessed September 25, 2015. <https://adrianerussell.wordpress.com/2014/12/11/joint-statement-from-museum-bloggers-colleagues-on-ferguson/>.

6. Oakland Museum of California. "Oakland Museum of California Presents Major Exhibition Focusing on Historic and Contemporary Pacific Cultures and Peoples," November 6, 2014. <http://museumca.org/press/oakland-museum-california-presents-major-exhibition-focusing-historic-and-contemporary-pacific>.

says, we have no idea what habits we will adopt in the future. But I do know that adapting to that future will probably not involve making a grand, sweeping change to the current museum bundle. It will involve creating a new bundle, with DRM-free assets, museum educators, and third-party software developers.

So is this “reprogramming” actually the beginning of a great unbundling? I think so. I also think this unbundling is helping us to find the “proper form” of the museum in the 21st Century. To me, that form looks more and more like an organization at the center of a whole ecosystem of activities, some of which might be coordinated directly by that museum, some of which might be bundled back into the museum itself, and some of which might merely take advantage of museum resources without ever interacting with the museum directly at all. As you read and think about the nature of “reprogramming,” think about how the component parts of that reprogramming described in the pages that follow describe exactly this new paradigm. Welcome to the Great Museum Unbundling.

# **WHAT MAKES MOMA GREAT?**

**LUIS MARCELO MENDES**

When revisiting the first volume of *Reprogram*, one of the articles that took my attention was an interview by the Belgian blogger and critic Régine Debatty with Julien Dorra, the creator of Orsay-Commons. This was a micro-community that protested against a ban established in 2010 by the Parisian Musée d'Orsay. The ban endeavored to prevent visitors from photographing inside the museum 'to preserve the comfort of visitors and the safety of the artworks.'

Through irreverent activism, the OrsayCommons group performed demonstrations organized through social media where visitors would meet in the museum, take photos within its walls and upload them on flickr, Twitter or Facebook, driving the security staff crazy:

*We'd love to see more people hacking their favorite museum: organizing pirate tours that the museum don't offer; printing alternative catalogs; offering better audioguides to download; and, of course, setting up photography workshop in museum that ban photography! And even better, we'd love to see museums openly embrace being hacked by their visitor – that's what we call the museum as an open platform.*

Now in 2015, not only is photography welcomed in the majority of museums, but we see the same open platform concept now turned into a lucrative business by the US company Museum Hack that offers a kind of subversive reinvention of the traditional museum tour in some of the leading institutions as the Metropolitan and the Museum of Natural History. And with the potential to offer their services to museums around the world.

They offer a new way of seeing the works, involving visitors with hilarious and unusual stories involving sex, scandal and debauchery in the art world for people who “don’t like museums”.

Comparing with the OrsayCommons experience, the huge difference is that now the museums themselves are looking for Museum Hack to have their collections ‘hacked’, as part of their audience development strategy.

This is just one example of the exciting changes that is representative of this era of global debate on the role of the museum in the world today and how institutions relate to the new demands of the society they serve.

## **Museums and brands: where are we?**

During the eighth annual *Communicating the Museum* conference, held in Venice, Italy, in 2008, Robert Jones informally surveyed approximately 100 managers and senior leaders from museums worldwide on strategic brand management.

As a director of Wolff Olins, one of the most respected brand consultancies, Jones could have simply displayed a dozen slides on the branding projects developed for Tate, Victoria & Albert Museum (V&A), and the New Museum in New York; however, he chose to listen to and feel the pulse of the audience.

This survey may lack a strong methodological rigor; however, it reveals, for the first time, why the concepts of museum and brand are immersed in a long story of love and hate in the cultural sector. According to Jones:

*If brand is what you stand for, then the truth is that there have always been museum brands. Institutions like the British Museum, the Met, and the Prado have always had a strong identity: a reputation, following, and clear expectations about what you'll find there. However, until recently, this tended to happen implicitly and organically; almost accidentally.... But behind the scenes, some curators remain suspicious. For many, brand is a dark force bringing control, conformity, corporatism, and crassness.*

This eye-opening survey and the accompanying text exposed me to a network of projects, ideas, and professionals that would transform museums and the understanding of how these institutions can develop new relationships with us — the people formerly known as the Audience.

This is a fertile and exciting conversation on questioning authority, co-creation, public value, and engagement. It motivated me to recreate Jones' experience in 2014, nearly six years after his pioneering survey; my objective was to determine any change in the value perception of strategic brand management among museum professionals. The following text compares Jones's and my exercises and analyzes how the results relate to the recent changes in the world of museums.

To enhance the comparability of the results, Jones' original survey script was adopted and a few crucial questions were added. The principal difference was the manner of administration: the original survey was a form delivered personally, whereas I used an online survey aimed at marketing, communications, audience

development, and digital media museum professionals worldwide. Thus, the 2014 results deal with a broader and more diverse set of individuals than did the 2008 survey.

With support from museum teams, national committees of the International Council of Museums, and digital media disseminators, the survey received 2,913 views and 220 complete responses, yielding a conversion rate of 7.5%. Many individuals started the survey but skipped the questions on brand management, revealing a remarkable reticence in addressing this subject.

To understand the professional backgrounds of the respondents, I reviewed their institutional affiliations and found that 84% worked in public museums, 60% worked in institutions established in the twentieth century and were mainly European professionals (31%), followed by North and South American (18% each), Middle Eastern (8%), Asian (9%), and Oceanian (3%) professionals. The remaining respondents (13%) felt that they were not represented by any of these regions.

Typologically, most respondents worked in art museums (31%), followed by museums dedicated to history (26%), science (11%), and cities/ heritage (5%); not surprisingly, the remaining 27% opted for "Other" (e.g., ethnology, earthquake museums, money museums etc).

## **New, bigger, and bolder**

In every major tourist areas or cities you go nowadays, you'll probably stumble upon a newly inaugurated museum, a tourist attraction museum under construction or under massive expansion. Like Tate Modern new development project to the south of the

existing building, an asymmetrical 11-floor pyramid designed to increase the museum's capacity by 60%; it not only has expanded exhibition areas but also an environment that favors community activities.

A similar expansion project is underway in the Museum of Modern Art (MoMA), the British Museum, the San Francisco Museum of Modern Art (SFMoMA), and the Metropolitan Museum of Art. The Whitney Museum in New York, headquartered in the Meatpacking District of Manhattan, has *doubled* its exhibition space and integrated itself with the High Line urban public park.

As the "premium league" institutions are thriving, other museums strongly feel that they can have a greater presence in the game. Unsurprisingly, in the 2008 survey, half of the respondents described the current position of their institutions in the world as "unknown, but with great potential." In the 2014 survey, this number dropped a bit to 41%, whereas 15% stated that their museums are evolving rapidly.

However, we should observe that this desire to play a more relevant role clashes with the fact that museums either do not have a well-defined brand (29%) or have never launched a conscious branding effort (16%). Even considering this response is an improvement over that in the original survey; a closer look at the museums that identified themselves as "unknown, but with great potential" reveals that in 60% of such museums, brand is neither well defined nor seriously worked upon.

## The amazing brands we admire

In the 2008 survey, Jones discovered that in many museums (65%), the term brand was understood as merely the graphic symbol or logo that identifies the institution, a tool that responds to the interest and modus operandi of marketing and communication departments.

Although significant changes are observed since the 2008 survey, a high percentage of the respondents still considered branding in 2014 as “a dirty word, too commercial” (23% in 2008 and 21% in 2014, evenly distributed among public and private museums).

Instilling a value perception of branding with these professionals is a main challenge because the term has been associated with the most aggressive and often unethical marketing practices, which are atypical of nonprofit organizations. Therefore, as the cultural sector requires a more appropriate name for strategic brand management, we should consider *rebranding branding*. Beyond this misunderstanding, we find a growing value recognition and respect for museum professionals who efficiently manage their brands.

Both the surveys sought to identify the most admired museums brands. The exercise was not to characterize the most popular museums but to define a set of prevalent brands from the perspective of museum professionals. In the 2008 survey, Jones used a free-response field (i.e., any number of options can be selected); the respondents appointed Tate (55 citations), MoMA (19), V&A (17), the Louvre (12) and the Guggenheim (9).

For the 2014 survey, a slightly different method was used; the respondents could place distinct museum brands in three slots,

thus yielding not only the total number of citations but also the ranking of these brands, which facilitates measurement (or speculation, to be precise) of value hierarchy and the top brands.

In this survey, MoMA was the most cited brand in both the first and second slots, meaning that whenever a respondent reported another museum as the first choice, MoMA was usually the next most cited.

A similar trend was observed for Tate, the second most mentioned brand in the first and second slots . The V&A was the third most recalled museum brand.

The virtual tie for the fourth place between the Metropolitan Museum of Art in New York and the Rijksmuseum in Amsterdam was remarkable, more so because the Rijksmuseum had just reopened in 2013 after remaining closed for a decade. Evidence suggests that these two museums have earned a strong sense of value from the quality of services offered to visitors and to the substantial work executed in digital media. In particular, the Rijks Studio, an online platform of Rijksmuseum cited by several authors of this book, where you can view hi-res images, download, remix the works, and create various products, including commercial products.

Despite the informality of the 2008 and 2014 surveys, the consistency in the results obtained six years apart qualifies the data set and is conducive to an interesting conversation on branding and museums.

The objectives of my survey and the quest for data are to answer the following questions: if we admire the realm of brands and what they represent, why do almost half of the museums worldwide consciously opt out of branding their institutions? Disregarding

the concerns associated with the terminology, why is there such a resistance to branding?

## Changes

What is behind the successful brands of MoMA, Tate, and other premium league institutions? What is that makes MoMA great? How does it create a clear and consistent perceived value in the hearts of museum professionals worldwide? Considering that these elite premium league institutions represent only 1% of the approximately 55,000 museums in the world, whether the 99% can be engaged in branding is worth investigating.

Disregarding the obvious factors (e.g., investment capacity, blockbuster exhibitions, and their brilliant visual identity systems), and analyzing the behavior of these institutions, a set of common practices for these museums is discovered.

These brands have demonstrated that they are valuable to individuals and other brands (brands communicate with brands) as they constantly produce meaning to us in their everyday activities. (MoMA's communications manager Kim Mitchell regards "crafting the brand" as her permanent job).

These institutions apply the brilliant definition of the American museum administrator Stephen Weil:

*What can we identify as the attributes of a good museum? A clearly defined mission and set of shared long-term goals and underlying values.*

Whether in New York, London, or Amsterdam, these museums foreground the relationship with and between visitors by their initiatives, programs, and activities. The game is neither about the museum nor its content. *It's about us.*

This decentralizing exercise is particularly challenging considering the classic role that museums reserve for themselves: to preserve, interpret, and promote the natural and cultural inheritance of humanity.

Without the careful work of museums and their dedicated teams, perhaps much of the historical and artistic heritage of mankind would have already been, intentionally or by mere negligence, reduced to smithereens.

The changing world questions how museums can evolve to share the preservation, embrace new interpretations, and open possibilities for promoting their collections through other entities, that is, to evolve from proprietary software holders to open coders.

That leads us to the second common factor between the successful practices of top museum brands: listening to the audience and deeply reviewing the notion of power and the meaning of authority with an open-authority perspective, as defined by digital media strategist Lori Byrd Phillips: "a mixing of institutional expertise with the discussions, experiences, and insights of broad audiences."

Moreover, these leading institutions have demonstrated a common willingness to take risks by opening their collections or searching for a deeper engagement with their communities.

Over the preceding four years, the American museum consultant Nina Simon, author of the reference book *The Participatory*

*Museum*, has been the head of a regional museum of art and history in the city of Santa Cruz, California. She states that her mantra of participation has been replaced by that of community—an approach that is all about taking risks, listening to the audience, and building the museum with them. Consequently, she managed a museum out of its financial crisis, growing it in terms of audience attendance and revenue.

## **Digital media and the advantages of promiscuity**

In the current culture of information openness cultural institutions must understand that value is not created by what is secured in a storage but by the data that is always available to the people.

On Trends Watch, Elizabeth Merritt, founding director of the Center for the Future of Museums, reports:

*Museums are deconstructing, piece by piece, the authoritarian model that presumes control of what people see, what they learn, and how they learn it. Open data vastly accelerates this trend, vaulting us into a world in which users bypass museum controls and filters and go straight to the source. That prospect can be pretty scary.*

Nevertheless, our sensitivity to the prospect is questionable. The path to embrace an open data approach is still distant to most institutions. In the 2014 survey, only 34% of the respondents indicated that their museums had intense online activity, 37% had a light

presence on social media (e.g., on Facebook and Twitter), and 21% were just initiating their online presence.

From the perspective of strategic brand management, the main problem is neither technology nor material resources but attitude. Content is king only when the audience has the opportunity to crown it king.

### **From the audience to the audience**

It is quite amazing to compare the level of consistency between those two surveys conducted at an interval of almost six years. Makes us realize that we have reached an interesting point on branding in museums that should be deepened and widely discussed. The signs of these changes were properly identified by Robert Jones in 2008:

*Brand, properly understood and properly used, is vital to museums. And, as both museums and branding are changing, the two are becoming allies, not enemies. In museums, three shifts are clearly under way. First, visitors who used just to partake (come and look) now want to take part (comment, contribute, create). Second, museums that used to work mostly on their own now want, nor need, to collaborate – with other institutions, with neighbors, with media businesses. And third, museums that tended to think in a western-centric way now want to show and investigate many cultures, many perspectives, many voices.*

During the 2014 annual conference of the UK Museums Association, a manifesto (*Museum Changes Lives*) was published with 10 key points urging museums to achieve their social objectives. The key points directed to one objective: relationship building with society as the essence of the business.

Among the key points were commitment, connection, participation, innovation, and risk taking. Moreover, museums should assume their moral responsibility to make a difference in people's lives.

This social change, perhaps, is the key to rebranding of branding for museums. Either way it is this concept that drives this edition of *Reprogram* based in three themes to examine museums today: (1) the pressure to open collections; (2) digital as a transformative engine; (3) change from a knowledge island to a social knowledge-sharing hub, where the museum not only embraces issues faced by society but also plays a role in activating communities.

This requires a considerable shift in attitude. The museum next door may be the starting point from where we can demand such change.

# **PART ONE: OPENING**

**“HOW CAN THE DIGITAL AND  
PHYSICAL WORK TOGETHER TO  
CREATE A CONVERSATION?  
MAKE THE DIGITAL PHYSICAL”**

SILVIA FILIPPINI FANTONI  
INDIANAPOLIS MUSEUM OF ART

# **DARK MATTER**

**MICHAEL PETER EDSON**

**SMITHSONIAN**

Michael Edson is a leading voice of digital transformation in the cultural sector. He has been involved in several award-winning projects, prestigious global forums and in virtually every aspect of technology for museums.

Edson is a digital strategist at the Smithsonian where he developed the first new media strategy for the institution, including the first blog and the first alternate reality game for a museum. He is also a Distinguished Presidential Fellow at the Council on Library and Information Services (USA), and a member of the Open GLAM advisory board at the Open Knowledge Foundation.

The following essay inaugurated the CODE | WORDS project in 2014, an experimental discursive publishing project that gathers a diverse group of thinkers and practitioners to explore emerging issues concerning the nature of museums in light of the dramatic and ongoing impact of digital technologies on society. Some data contained in this essay has been updated by the editor on August 2015.

Until the 1960s we thought we had a pretty good idea of what the universe was made of. You, me, the earth, the planets, the Milky Way, Renoir's *The Boating Party*, the pearly plastic of Elvis's guitar pick, the Great Pyramid of Giza, a finch's beak, the sound of Maria Callas' voice and everything else in the cosmos was believed to be made up of particles and energy that we could see, touch, smell, hear, or directly measure with the instruments of science.



But we were wrong. Not just a little wrong; wrong at a stupendous, almost unimaginable scale. And the way in which we were wrong tells us a lot about the way our memory institutions are using technology to accomplish their missions, and the beauty and power that exists now, just beyond their reach.

In 1967, American astronomer Vera Rubin, fresh out of graduate school and eager to begin her new career, started working on a comprehensive survey of the rotational characteristics of spiral galaxies. It was to be a long, grueling project: "A program no one would care about" as she herself described it — thousands of days and nights working in anonymity, gathering data to calculate the speed at which spiral galaxies spin around their dense central cores.

But on Vera Rubin's first night of observations she noticed something startling. Spiral galaxies are beautiful, enormous structures with flat, disk-like bodies that sometimes span millions of billions of kilometers and contain hundreds of billions or trillions of stars. But as marvelous as they are, they are supposed to obey the laws gravity like everything else in the cosmos; it was an article of faith that spiral galaxies would revolve around their axes like the planets in our solar system revolve around the sun, with planets

closer to the center of the system spinning faster than those that are far away.

But that is not what Vera Rubin found. She discovered on that night, and in every measurement that she or any other astronomer has taken since, that the outer regions of every spiral galaxy in the universe spun just as fast as their corresponding inner regions, regardless of whether the areas being measured were near the galactic axis or a hundred million billion kilometers away.

It could not be so. These galaxies were spinning so fast that Newton's laws of gravity dictated that they should have flown apart. In one galaxy, Triangulum, the outer regions were moving so quickly that it was as if there were 39 billion invisible suns —seven times the observable mass of the galaxy — quietly pulling the long, graceful arms of the system forward.

Where was the missing mass? Where was the energy and the gravity coming from? How do you explain 39 billion missing suns?

The universe doesn't show its cards very often — flaunting a physical reality that so clearly contradicts the laws of nature — but there was the evidence in the hands of a junior astronomer on her first night of her first project of her first job. And there were only two explanations for what she saw: either there was something wrong with the laws of gravity, or there was an enormous quantity of invisible matter in the universe.

Vera Rubin had discovered dark matter. Her measurements have now been repeated on over a thousand galaxies and the results are all the same: dark matter — whatever it is — seems to comprise most of the mass of the universe.

“We became astronomers thinking we were studying the universe,” Rubin said, “and now we learn that we are just studying the 5 or 10 percent that is luminous.”



My colleagues and I work in amazing institutions. Some of the institutions are giants, with epic missions like The increase and diffusion of knowledge (Smithsonian Institution, USA), A center for learning, dialogue, tolerance, and understanding (Bibliotheca Alexandrina, Egypt), and [To support] citizens in the defense of their rights and encourage the production of scientific and cultural knowledge (Arquivo Nacional, Brasil). Some of them are small, with just a handful of staff and quiet, humble missions that are nonetheless deeply important to the people they serve.

I am talking about museums, libraries, and archives — heritage, culture, knowledge, and memory institutions — and there is really nothing like them on the face of the earth. And whether we’ve realized it or not, my colleagues and I who work with technology in these institutions have been participating in an extraordinary project — the building of a planetary scale knowledge sharing network for the benefit of everyone in the world.

For over 20 years we’ve followed every step in the explosive growth of technology and its impact on society. We’ve digitized our collections and put them online. We’ve built websites and mobile apps; livestreamed lectures and performances; and published electronic books, games, and educational materials. We’ve blogged, tweeted, cataloged, pinned, friended, poked, liked, crowdsourced, uploaded, downloaded, licensed, sold and organized. We’ve learned HTML, CSS, Java, JavaScript, Ruby, PERL,

PHP, Python, Drupal, ColdFusion, ASP, ActionScript, Applescript, C, C+, C++, C-sharp, Objective C, LAMP, RAMP, MAMP and a few dozen other technologies, and we've built things so elegant and stable that they're works of art in their own right — and so obtuse and convoluted that they'll be bringing our colleagues to tears of frustration and rage for years to come.

We've reached, and to varying degrees satisfied, hundreds of millions of people with our efforts, and for more than twenty years we have done it all on shoestring budgets (when we were lucky enough to have budgets at all), in direct competition with some of the biggest and most aggressive media companies in the world, through three global recessions, a global banking crisis, wars in Afghanistan, Iraq and terror (not to mention 61 other global conflicts), and at the end of the day we've almost always generated a positive impact on the visitation, reputation, and financial sustainability of our hallowed institutions.

That's not a bad stretch of work for what is mostly a bunch of self-taught hackers and designers who've been making it up as we've been going along.

But as I look back on these accomplishments and I think of where we are today; how our institutions think about the World Wide Web 25 years after its birth, and the degree to which we understand and are taking advantage of its full capacity to serve, educate, enlighten, and empower our constituents, wherever they are and wherever they live, my thoughts return to the story of Vera Rubin and dark matter.

Despite the best efforts of some of our most visionary and talented colleagues, we've been building, investing, and focusing on only

a small part of what the Internet can do to help us accomplish our missions.

90% of the universe is made of dark matter — hard to see, but so forceful that it seems to move every star, planet, and galaxy in the cosmos.

And 90% of the Internet is made up of dark matter too — hard for institutions to see, but so forceful that it seems to move humanity itself.



Fast forward 40 years from Vera Rubin's first spiral galaxy measurements in 1967, to January 1, 2007. On that day, Hank Green, an environmental writer and web consultant living in Missoula, Montana, uploaded a YouTube video in which he bet his brother, writer John Green, living in New York City, that they could go an entire year without texting, sending email, or exchanging written words with each other, in any form. Instead, Hank proposes, they will communicate only through YouTube. They call the effort *Brotherhood 2.0* ("365 days of textless communication") and you can see a short mashup of their first two messages, as well as links to the entire oeuvre of *Brotherhood 2.0* videos.

These are not high-tech productions and Hank and John Green are not movie stars. It is evident from watching 30 seconds of any of their videos that they are nerds, and they proudly describe themselves as such. If you announced to your museum director or boss that you intended to hire Hank and John Green to make a series of charming and nerdy videos about literature, art, global warming, politics, travel, music, or any of the other things that Hank and John

make videos about you would be thrown out of whatever office you were sitting in and probably be asked to find another job.

But over the course of the 1,000-plus Brotherhood 2.0 videos recorded to date, Hank and John Green—or the Vlogbrothers, as they’ve titled themselves and their YouTube channel (a vlog is a video blog)—demonstrate an exquisite mastery of the dark matter of the Internet. They didn’t start by making a website. They didn’t develop a mobile app. They didn’t have a marketing budget, a content review committee, or a brand strategy. They sat down in front of their cameras and started talking about the things that interested them, and in the process, they got to know their audience. Their work is social, graceful, spontaneous, humble, funny, creative, humane, and generous. And from the perspective of formal institutions, used to working with professional content developers, actors, videographers and web developers, it all looks like a joke.

But look at what happens over the course of the years as the brothers Green move their experiment forward.

- They create the *Vlogbrothers* YouTube channel.
- They discover that people are interested in what they do, and they start interacting with their followers.
- They start referring to their followers as nerdfighters —nerds who fight “to reduce worldsuck,” i.e., bad things in the world.
- They begin noticing that the nerdfighters are interested in social causes.
- They encourage nerdfighters to donate money to certain charities (the nerdfighters respond with great enthusiasm.)

- They incorporate the Foundation to Decrease Worldsuck, Inc., a Montana based 501(c)3 charitable organization, to receive and re-distribute the charitable donations of nerdfighters.
- They create the Project for Awesome, an online film festival in which nerdfighters submit short YouTube videos promoting their favorite charities. In 2013, the Project for Awesome raised \$869,146 for the Foundation to Decrease Worldsuck, which then redistributed the money to charities chosen by the nerdfighter community.
- They begin talking about Kiva, a non-profit micro-finance organization that lets individuals make small, short-term loans to low-income entrepreneurs around the world. The Nerdfighters respond, and to date, the nerdfighters Kiva group has made over 133,000 loans totaling almost \$4 million.
- Hank Green, noticing that there was no gathering for creators and fans of YouTube videos, starts the VidCon conference. In its first year (2010), VidCon sold out its 1,400 seat venue at the Anaheim Convention Center.
- John and Hank sell out Carnegie Hall for an event titled "An Evening of Awesome" in 2013.
- With a grant from Google, they create Crash Course, a YouTube channel of short, educational science and humanities videos targeted at advanced high school students. Topics include Ophelia, Gertrude, and Regicide — Hamlet II and That's Why Carbon is a Tramp: Crash Course Biology #1. Crash Course now has 3 million subscribers and 260 million views.
- To sustain Crash Course after the Google grant ran out, they create their own crowd-funding platform

Subbable. Subbable allows people to support ongoing creative projects with small monthly donations — including donations of \$0. (John Green: “Because people who are struggling financially have enough trouble in their lives without feeling that they can’t fully be part of something that matters to them, simply because they don’t have money.”) Within a week of Subbable’s launch, it had more than \$30,000 in monthly subscriber pledges, and more than \$70,000 in total payments.

- They create DFTBA Records (“Don’t forget to be awesome”), an online store that features fan merchandise designed by and for nerdfighters.
- John’s behind-the-scenes collaborator and wife, Sarah Urist Green, a curator at the Indianapolis Museum of Art, creates The Art Assignment, a YouTube channel (produced by the Public Broadcasting Service’s Digital Studios) in which Sarah and John teach people about the concepts of contemporary art by challenging viewers to create, share, and discuss their own works and experiments. The Art Assignment has been running for two months and has 105,000 subscribers and 2 million views.

The Vlogbrothers network of 32 channels (just stop and think about that for a moment: two nerds built their own network, with 32 channels in it) has 7 million subscribers and has received over 1 billion views.

- They have 8 times more views and 25 times more subscribers than the Oprah Winfrey network’s channel. Note that Oprah Winfrey is a billionaire and an international celebrity (true, John Green is a

best-selling author of young adult fiction, but he's no Oprah Winfrey).

- They have 106 times more views and 759 times more subscribers than the Louvre's YouTube channel. Note that the Louvre is the most visited museum on earth.

To summarize: in seven years, two lovable nerds used YouTube and their own creativity to build what amounts to a vast educational content community that any museum or cultural institution on the planet would be proud to call their own. They've got millions of avid followers, they've helped give millions of dollars to charity, they've elevated and sustained a discourse about culture, science, thought, suffering, and existence — and they're having a blast and making people happy.

They — two nerds — did this in seven years. I've been on website redesign projects that lasted seven years. I've been on committees that took seven years to write a report.

You've probably never heard of the Vlogbrothers or Brotherhood 2.0. Hank and John Green are working in, and they're part of, a kind of Internet production — a kind of interaction — that is difficult for institutions to think of as legitimate, sufficiently respectable, educational, scholarly, or erudite.

But it seems that the public doesn't care. It's likely that the public doesn't think of what memory institutions often do as being sufficiently accessible, smart, joyous, attentive, generous, welcoming, imaginative, bold, educational or meaningful to merit much of their attention.

In the 1990s, researchers from the Urban Institute conducted a study of arts and culture participation in underprivileged communities in Oakland, California. When they surveyed local residents to find out where they got their culture, they were met with blank stares and a general reply of ‘we don’t have that kind of stuff around here.’ But when researchers returned a few months later and asked the question a different way; ‘Who are the creative people in your community?’ they received an outpouring of information about the artists, musicians, writers dancers, and other creative people who lived nearby. The problem wasn’t a lack of culture in the community, it was that people weren’t associating their creative lives with the galleries, museums, concert halls, and other formal arts institutions that were created and operated on their behalf.

In a similar vein, the organization UX for Good held a “design challenge” workshop in Washington, DC last February to help generate new approaches to accomplishing the mission of America’s National Endowment for the Arts. Seven teams of information architects and user experience designers were invited to invent projects, processes, and programs to “support the arts in every community in the United States,” as their brief stated. They were told they would have the equivalent of the NEA’s \$130 million annual budget, staff of 162 people, and national network of experts — but they were not told that the project was for, or about, the NEA, or that NEA officials were in attendance. When the teams reported back, none of their concepts proposed to use any aspect of the existing cultural infrastructure that the NEA has spent the last 50 years helping to build. In the minds of those designers, America’s cultural institutions — its museums, symphonies, operas, ballets, performing arts centers, and other cultural attractions — did not seem to be an asset that would help them support the arts in every community in the United States. (NEA acting chairman Joan Shigekawa and UX

for Good co-founder Jeff Leitner, both present at the workshop, told me they were humbled and inspired by these results.)

Online it may be no different. The UK's 40 biggest cultural venues attract less than 0.04% of UK web traffic, observed Culture24 Director Jane Finnis in the Guardian last year, in an article titled "Why your cultural website is rubbish."

Internet Archive founder Brewster Kahle said of America's academic and research libraries, "The people who are supposed to be doing universal access to knowledge, and are getting \$12 billion a year to do it, are not getting the job done."

Some of the disconnect between what institutions could do online and what they do do online can be attributed to the clothesline paradox, a term environmental pioneer Steve Baer coined to describe the phenomenon in which activity that can be measured easily (e.g., running a clothes dryer) is valued over equally important activity that eludes measurement (e.g., drying clothes outside.) The same can be said for the way in which institutions habitually value activity such as visits to museums or journal articles published by their scholars over equally meaningful but more difficult to measure activity such as the sharing of museum-related materials on social media sites or the creation of wikipedia pages.

In *Measuring the impact of the sharing economy*, Tim O'Reilly writes:

*It's quite clear to me that there is a new economy of content that is quite possibly larger than the old one, but just not as well measured, because we measure value captured, not value created for users.*

Erik Brynjolfsson's research at the MIT Center for Digital Business indicates that "the value of free Internet goods in 2011 was about \$300 billion — and increasing at a rate of about \$40 billion a year."

The opportunity here is tremendous, and the experimentation that's happening in the museum, library, and archive community is encouraging. At the current moment, I'm particularly fascinated by the way in which the Rijksmuseum is celebrating the re-use of its openly licensed collections; the civic commitment and spirited execution of the DMA Friends initiative at the Dallas Museum of Art; and the network models and leadership on intellectual property issues being demonstrated by the Digital Public Library of America and Europeana. (I hate to leave worthy projects and individual innovators out of this brief list but I wanted to give some idea of what I've been looking at. There are dozens of individuals and smaller organizations that are experimenting and innovating in breathtaking ways — you know who you are!)

But the question now is how to get these experiments to scale up, to more users, and scale out, across more of our industry. Leaders of cultural technology projects often tell me that they have to fight tooth-and-nail for every dollar of funding and every "yes" of permission from their superiors. Even for projects that are considered to be successful, project teams are painfully aware of how much more they could be doing to scale the impact of their initiatives, if they had adequate support. A director of a digital media group at a major metropolitan library system told me of a recent award-winning project that took two years to bring to fruition; "It's been great, but we should be doing 10 of those a year."

This is not just a matter of the glass being half empty or half full. The disconnect here is that the glass — the Internet and the dark

matter of open, social, read/write culture — is so much bigger than we are accustomed to seeing and thinking about. The glass is huge, and it keeps getting bigger, every day.

In *Cognitive Surplus*, Clay Shirky asserts that among the educated, Internet connected inhabitants of planet Earth, there are 1 trillion hours of free time every year that could be used for community action, civic engagement, and learning. But when Shirky published *Cognitive Surplus* in 2010 there were only 2.1 billion people online. Almost a billion people have joined the Internet since then. In *The New Digital Age*, Jared Cohen and Google chairman Eric Schmidt predict that another 5 billion people will come online in the next decade. Even using the gigantic numbers that astronomers use to describe the universe, its difficult to comprehend the combined cognitive abilities, expectations, and desire for learning, participation, and self-improvement that 6, 7, or 8 billion people on the Internet might have.

This is a critical issue that institutions will be contending with for decades to come: There's just an enormous, humongous, gigantic audience out there connected to the Internet that is starving for authenticity, ideas, and meaning. We're so accustomed to the scale of attention that we get from visitation to bricks-and-mortar buildings that it's difficult to understand how big the Internet is — and how much attention, curiosity, and creativity a couple of billion people can have.

- By 2011, Facebook's collection of photographs had reached 140 billion images, which was reported to be 10,000 times larger than the online image collection of the Library of Congress. Two years later Mashable reported that Facebook's image repository had

reached a quarter of a trillion photos, with 350 million new photos being uploaded every day. In April 2015 Aperture magazine edition, Lev Manovich wrote, "The photo universe created by hundreds of millions of people might be considered a mega-documentary, without a script or director." (Given Facebook's history of borderline exploitation of its user base I hesitate to hold it up as an example in a discussion of open, participatory practices, but the scale of activity is so impressive that it can't be ignored. Furthermore, Facebook is an important channel for many smaller institutions.).

- Reddit had over 195 million unique visitors in June 2015, and an astonishing 8 billion page views. This is not simply lowbrow entertainment; the top Reddit "Ask Me Anything" discussions have been with Barack Obama, Sir David Attenborough, and Bill Gates.
- In 2013, recording artist Moby distributed his latest album as an openly licensed BitTorrent Bundle. TechDirt reported that he "got an astounding 8.9 million downloads of his offering — with 419,000 of them agreeing to join his mailing list and 130,000 of them going over to iTunes to the album (many of which likely resulted in sales)." Fans have created more than 68,000 remixes of his songs..
- Tumblr: 256 million blogs; 120 billion posts. That's all I'm going to say about Tumblr.
- In two years, Pinterest has grown from a concept to serving 10s of billions of page views a month. As of April, 2014 they were reported to have 30 billion pins on 750 million boards.

- People upload 1.2 billion photos to the top four mobile social sites every day.
- Library.nu, a peer-to-peer book sharing service, may have been the best free online library in the world. (In 2012, a coalition of publishers got a German court to shut it down on charges that it violated copyright.) An Aljazeera commentary reported that Library.nu contained between 400,000 and a million free books, mostly “scholarly books: textbooks, secondary treatises, obscure monographs, biographical analyses, technical manuals, collections of cutting-edge research in engineering, mathematics, biology, social science and humanities.”
- TED served its billionth TED talk video in 2013.
- The Kickstarter community gave away its 1 billionth dollar to support new creative projects in 2014. Among the projects supported was the delightful Mini-Museum by Hans Fex. Mr Fex’s fundraising goal was \$38,000: he raised \$1.2 million from over 5,000 backers.
- Wikipedia and the Wikimedia projects have received over 2.1 billion edits from users.
- The Khan Academy’s art history website Smarthistory served over 2 million learners from 200 countries last semester. The Khan Academy itself reaches more than ten million learners a month with its free online classes.
- MIT’s Open Courseware project served 100 million people in its first decade and their goal is to reach 1 billion learners in the next ten years.

“We used to define the value of an artwork by its frame. It’s in a museum. It’s validated by critics. It’s priced by a label or a store. It is owned. And so on. And not really, any more...” wrote Matt Mason, BitTorrent’s Chief Content Officer. “We’ve been watching our art objects become social objects. 2013 was the year that it stuck. Content has finally caught up with the Internet: value = virality.”

What makes these sites tick? For many of them, it’s a strategy of openness and generosity — a genuine respect for, interest in, and admiration for the people who participate. It’s an ongoing commitment to listening, respect, and empathy that manifests itself in every decision and strategic choice, and which benefits both the participants and the convener.

TED founder Chris Anderson puts it this way:

*So, at TED, we’ve become a little obsessed with this idea of openness. In fact, my colleague, June Cohen, has taken to calling it “radical openness,” because it works for us each time. We opened up our talks to the world, and suddenly there are millions of people out there helping spread our speakers’ ideas, and thereby making it easier for us to recruit and motivate the next generation of speakers. By opening up our translation program, thousands of heroic volunteers — some of them watching online right now, and thank you! — have translated our talks into more than 70 languages, thereby tripling our viewership in non-English-speaking countries. By giving away our TEDx brand, we suddenly have a thousand-plus live experiments in the art of spreading ideas. And these organizers, they’re seeing each*

*other, they're learning from each other. We are learning from them. We're getting great talks back from them. The wheel is turning.*

But is a TED talk as good as a museum visit? Is any online experience as good?

There's a lot of doubt among museum leaders that online experiences can be as authentic, as impactful, as a visit to a museum. But try Googling "TED talk made me cry" (my favorite is The full epic of Ed Gavagan) and then read "Art Museums and the Public", a 2001 report by the Smithsonian Institution Office of Policy and Analysis, which concludes,

*One of the most striking results of this generation-worth of museum audience studies is that the explicit aims of exhibition planners are rarely achieved to any significant degree. In study after study [...] researchers found that the central goals of the exhibition team (which are usually learning goals) were rarely met for more than half of the visitors, except in those cases where most visitors entered the museum already possessing the knowledge that the museum wanted to communicate.*

Art historian Beth Harris, dean of art and history at the Khan Academy (along with her collaborator, co-dean Stephen Zucker) and former director of digital learning at MoMA, told me her own feelings about what is all-too-often the reality of museum visits,

*It isn't this amazing, contemplative, aesthetic, transcendent experience. It's jostling crowds, it's feeling*

*hungry, it's being annoyed by the people you're with sometimes, it's feeling disappointed that you can't have the reaction that the museum wants you to have — that you don't have the knowledge and the background to get there. I mean, it's a whole range of complicated things.*

Museums and museum websites can be disappointing to people used to the more open, participatory, and playful collaborative environments they find elsewhere on the Web, and sometimes they take action. Aurora Raimondi Cominesi, Francesca De Gottardo, and Federica Rossi (now joined by Alessandro D'Amore and Valeria Gasparotti) became so frustrated that so few Italian museums were online that they created their own social media movement, Svegliamuseo — literally “Wake up, museums!” — to inspire and encourage change. Art historian and travel writer Alexandra Korey became so frustrated with the Uffizi Gallery's lack of interpretive materials, both online and in the museum itself, that she created her own mobile app and e-book to fill the void — despite the fact that she had no programming experience.

“If there is one museum in the world that is worth spending a lot of time in, it's the Uffizi. Unfortunately, it's not a museum that loves visitors, and that visitors love,” wrote Korey. “It's a museum that desperately needs a guide...I took it upon myself to write that guide.”

The open, social, and collaborative platforms of the read-write web make projects like Svegliamuseo and Alexandra Korey's Uffizi app and e-book inevitable, and even the largest, most brilliant institutions can not match the wit and energy of their followers, particularly when those followers are part of a network

that connects more than a third of humanity. We should expect to see countless thousands of projects like these as the Internet continues to grow, platforms become more powerful and easier to use, and citizens become more confident in their abilities to challenge, help, and even surpass the accomplishments of what have previously been sacrosanct institutions. Our choice will be whether to ignore or discourage these people, compete with them, or dedicate ourselves to ensuring their lifelong success.

“I realized the community has never been about us, Hank,” said John Green in a recent Brotherhood 2.0 video. “It’s been about having big conversations around big questions and lifting up people who need it.”



Until recently, we thought we had a pretty good idea of what museums were made of. Museums — and with them libraries, archives, and cultural and educational institutions of all kinds — were made of buildings, collections, staff, and visitors: things we could see, touch, smell, hear, or directly measure by counting tickets sold and people through our doors.

But we were wrong. Not just a little wrong. Wrong at a stupendous scale. Like the universe before Vera Rubin discovered dark matter, we were seeing only the small percentage of cultural activity that we expected to see, where we expected to see it. But we know more now — there is more now — and it’s tremendously exciting to think about what we can accomplish if we begin to work with true conviction in the areas of the Internet that are less familiar to us and more familiar to our visitors.

Museums, libraries, and archives — heritage, culture, knowledge, and memory institutions — can play a huge role in the story of how Earth’s 7 billion citizens will lead their lives, make and participate in their culture, learn, share, invent, create, cry, laugh, and do in the future. It is often forgotten that Tim Berners-Lee designed the World Wide Web to have a remarkable central characteristic: everyone who joined would automatically be granted the right to both consume and produce — to read, and write — on equal footing with everyone else.

“The idea was that anybody who used the web would have a space where they could write, and so the first browser was an editor — it was a writer as well as a reader,” said Berners-Lee. “Every person who used the web had the ability to write something.”

The entire architecture of the World Wide Web is based upon these humanistic, democratic ideals, and we can do a lot of good with them if we make wise choices and concentrate our efforts where they’ll matter the most.

“In a very real sense, astronomy begins anew,” Vera Rubin wrote after the discovery of dark matter. “The joy and fun of understanding the universe we bequeath to our grandchildren —and to their grandchildren. With over 90% of the matter in the universe still to play with, even the sky will not be the limit.”

# THE MOON BELONGS TO EVERYONE

MIKE MURAWSKI

PORTLAND ART MUSEUM

Mike Murawski brings the perspective of the educator to diversify this technology focused collection. He questions whether our increased interest on digital results in a putting aside the elements of human contact, generally understood as the center of the educational experience museums.

Currently the Director of Education & Public Programs for the Portland Art Museum, Murawski is also the creator of [ArtMuseumTeaching.com](http://ArtMuseumTeaching.com) – a collaborative online forum on experimental education practices in art museums.

Murawski earned his MA and PhD in Education from American University in Washington, DC, focusing his research on educational theory and interdisciplinary learning in the arts.

The following essay was originally published in the CODE | WORDS project. Some data has been updated by the editor on August 2015.

As the television series *Mad Men* aired its midseason finale back in May 2014, more than two million viewers were graced with an unexpected song and dance performance from senior advertising executive Bert Cooper, played by actor and past Broadway star Robert Morse. In this musical equivalent to hitting the pause button on a much anticipated final season that does not resume until next spring, Morse crooned the lyrical lines first written in 1930: “The moon belongs to everyone; the best things in life are free.”

For me, it was certainly one of the most intriguingly beautiful and surprising moments on television in recent years. The song comes during the last two minutes of an episode in which the daily dramas of the show’s characters are laid on top of, and intertwined with, the 1969 Apollo 11 moon landing. At one point in the episode, everyone gathers around a television, wherever they are, to watch Neil Armstrong take that small step onto the surface of the moon—engaging in one of the most memorable shared human experiences of the 20th century (an estimated 600 million people worldwide were watching the moon landing live on television at that very moment). Technology, engineering, and new media undeniably acted to create a profound connection. In her Los Angeles Times column about the *Mad Men* episode, Meredith Blake wrote:

*It was an unexpectedly hopeful hour of television, one that reaffirms the possibility of positive collective experience while contradicting the notion that technological progress must come at the expense of human connection.*

This perspective has particularly resonated with me at a time when I have been grappling with the effects of digital technologies and media on the educational role of museums. Are my own core values

of human connection, shared experience, and community co-creation a part of the digital transformation happening in museums? When we're overly suspect of digital technologies, are we missing out on a greater opportunity to embrace a 'digital is everywhere' mentality — a mindset that brings together thinking about digital technologies and the new ways in which humans connect, share, and learn in a digital age?

Yes, and yes.

### **Well, how did I get there?**

In May 2013, I gave a talk at the Museum of Contemporary Art in San Diego entitled *Museums Un/Plugged: Are We Becoming Too Reliant on Technology?* that explored my uncertainties about the growing emphasis on technology in museums. Far from being anti-technology, I was, however, exploring some burning questions I, myself, had about the role of digital technology in museum learning and visitor engagement through the polemical dichotomy of 'plugged in' versus 'unplugged.' Among many questions, I asked:

*As we focus more and more on digital and online experiences, are we sacrificing any of the human-centered elements that have been at the core of museum education for more than a century? If your museum lost power, how would that affect the learning experiences in the galleries and across programming?*

After seeing some museums investing more in a single digital project than other museums have in their entire annual operating

budget, I was genuinely concerned that we might be losing sight of the basic ‘unplugged’ human interactions at the core of learning that allow these institutions and their collections to have public value and mean something to the communities they serve. I even wrote, “when I head into the galleries to facilitate a learning experience, technology often falls away and I find myself focusing entirely on the analog elements of museum teaching.”

Yet, I have come to realize that we can no longer unplug the effect of digital technologies and Internet culture on the ways we think about and re-imagine museums today. If the lights go out in the museum and all the WiFi hotspots and screens go dark, we might lose the physical technology infrastructure, but we do not lose the powerful participatory, networked, open source culture that has taken root in our audiences and communities in the 21st century. In this regard, digital technology cannot simply fall away.

In the *Let’s Get Real 2* report developed from the second Culture24 Action Research Project involving 22 arts and cultural organizations, experts from across the field noted that institutions are struggling to embrace the new realities of audience behavior (via the web, mobile devices, social media, etc). Jane Finnis, Project Lead, remarks in her foreword to the report:

*This challenge is absolutely not about technology, which we are often guilty of fetishising as a solution to problems. It is first and foremost about audience and the ways in which digital technologies are changing their behaviours: at work, at home, on the move, learning, playing, questioning, socialising, sharing, communicating. Forever.*

For museums in the 21st century, becoming more aware and responsive to these changes requires a shift in thinking at all levels — I, a shift that embraces a wider ‘digital mindset.’ This approach envisions a deeper fluency and understanding of web behaviors, mobile behaviors, and social media behaviors across all areas of museum practice, rather than relegated to the IT, online collections, or website functions of a museum. In her core essay from the 2014 *Sharing is Caring* anthology (a must read, by the way) entitled *This Belongs to You: On Openness and Sharing at Statens Museum for Kunst* Curator of Digital Museum Practice Merete Sanderhoff sets out to define “a new foundation for our work, one that comprises digital infrastructure and a digital mindset in equal measure”. She continues:

*Technology should not govern the museums’ work. But in order to learn and understand how we can use new technologies and benefit from the opportunities they open up for us, we must explore and incorporate not just technologies themselves, but also the changes in behaviour and expectations they prompt in users. We must think like users.*

So how might we begin to think more like users, and see our audience as users, as well?

## **Be more open**

With the rise of the Internet, the phrase ‘open source’ began as a way to describe open access to software source code and the collaborative model for how it is developed. Key elements of this development model have been: universal free access and redistribution

of the source code, an openness for users to modify and adapt that blueprint in any way desired, and an emphasis on transparency and collaboration. In museums today, one of the direct effects of this open source movement can be found in the ways through which institutions have released their collection data. As the OpenGLAM (Galleries, Libraries, Archives, and Museum) initiative coordinated by the Open Knowledge Foundation asserts:

*The internet presents cultural heritage institutions with an unprecedented opportunity to engage global audiences and make their collections more discoverable and connected than ever, allowing users not only to enjoy the riches of the world's memory institutions, but also to contribute, participate and share.*

In 2013, the Rijksmuseum released 150,000 copyright-free, high resolution images of public domain works — one of several art museums that have made collection data and images openly available online. But they have gone beyond simply releasing images and data, and actively encouraged people to share their collection, remix the artworks to create personalized collections, print reproductions (including everything from posters and canvas prints to coffee mugs and bed covers), and allow artists free reign to use these images to create something new. As of May 2015, visitors had created more than 203,500 new virtual exhibitions through the RijksStudio web platform. Ed Rodley's CODE | WORDS essay *The Virtues of Promiscuity* [p.62] lays out an interesting case for museums like the Rijksmuseum being promiscuous with its collection.

Pushing open use of a collection even farther, in January 2014 the Walters Art Museum hosted its second Art Bytes hackathon

to bring together technology and creative communities to use the museum's rather new API to create games, Twitter bots, scavenger hunts, 3D prints, web apps, e-books, digital docents, etc. This competition not only utilized the collection data to inspire community-wide creative rethinking about the Walters, but it led to a whole series of incredible adaptations, recreations, and visitor experiences with the collection at the core.

One of Denmark's leading IT lawyers, Martin von Haller Grønbaek, writes in his essay GLAMorous Remix: Openness and Sharing for Cultural Institutions from the 2014 Sharing is Caring anthology:

*All cultural institutions should endeavor to be as open as possible in the sense that as many people as possible should have the easiest access possible to the institution's content. At the same time the institution should seek to ensure that the freely available content is shared, enriched, and processed by users, whether they are citizens, students, scholars, researchers, or commercial ventures.*

If we think of the concept of 'open' in the broadest way possible (beyond releasing collection data), it has the potential to challenge museums to let go of some of their control and the limitations that come with this control. Embracing a mindset of openness changes the way we think about museum practice, inspiring a more participatory mentality focused around creating, transforming, and adapting—without the traditional restrictions that have limited forms of public cultural learning.

## **Redefine authority**

“With the web has come a new collaborative approach to knowledge generation and sharing, a recognition of multiple perspectives, and an expectation by users that they will be able to contribute and adapt/manipulate content to meet their own needs.” (Graham Black, *Transforming Museums in the 21st Century*, 6).

A hundred years ago, people relied on museums as a repository for the knowledge and information related to its cultural collections. If you wanted to learn more about the artists, artworks, cultures, and places of its collection, you walked inside a museum’s grand halls of knowledge. Today, that has completely shifted. Visitors can access far more information through their smartphone or mobile device than any museum could ever hold (87% of people in the US use the Internet, 67% own smartphones, and they have access to more than 672 billion gigabytes of data from more than 1 billion websites).

During a recent visit to the Nelson Atkins Museum of Art in Kansas City, I found myself sitting in front of an amazing Franz Kline painting entitled “Turin” in their Abstract Expressionism collection. While the pithy 98-word unattributed ‘voice of god’ label offered a few tidbits (“Kline used commercial house paints,” and that the painting was “named after a city in northern Italy”), I quickly went to my iPhone to search for more — I was hungry for more. From the 350,000 Google search responses, I instantly found videos, photos, Wikipedia entries, curatorial essays, poetry, music, visitor comments, slow looking reflections, and links to dozens of other museums that had works by Kline in their own collections. While I may have been standing in the Nelson Atkins building, I found myself reaching outside of its walls and connecting digitally with a wide distributed network of authorities and communities of

knowledge — even sharing my own content to this mix with tweets and Instagram photos. When I sat down with docents in front of this painting for deeper conversations, we opened up further layers of thoughts, insights, and questions that were not part of the authoritative knowledge repository of the museum.

We have rapidly moved out of the era of passive consumption of content selected by a few experts, and museums now have an opportunity to actively reshape their own authority in this new equation. The digital age does not negate the authority of museums and curatorial expertise, but, rather, it puts this authority in public conversation and dialogue with a wider network of knowledges, voices, and experiences. Cultural authority is not something solely established by a didactic label, curatorial essay, or published catalog; it is negotiated through discussion and collective participation, and shared with our community and the users (yes, I said ‘users’ instead of ‘audience’). with which we connect. In his 2009 essay “A Manual for the 21st Century Gatekeeper,” New York-based curator Michael Connor explores the ways in which the internet, social media, and new collaborative ways of working are fundamentally changing the relationship between arts organizations and their audiences. He writes:

*A curator’s authority pales in comparison to the audience’s vast collective stores of knowledge and passion. How can gatekeepers redefine their role in ways that harness the power of the audience without losing the sense of subjectivity and personal risk that lie behind aesthetic decisions?*

As museums work toward sharing authority, they can begin to allow for the voices of specific communities and the public to be heard inside the walls of these institutions — to speak for themselves. In

her guest editor preface to the July 2013 issue of the Journal of Museum Education focused on this theme of “shared authority,” Elizabeth Duclos-Orsello includes a powerful quote from historian Karen Halttunen that relates to the role museum staff play as workers in these public institutions:

*We [must] divest ourselves of the special authority sometimes granted to us ... [and we must] enter democratic partnerships with other members of our communities.*

For me, the Memory Jar Project a couple years ago at the Santa Cruz Museum of Art and History really stands out in terms of a museum working to renegotiate traditional, monolithic structures of authority (using a ‘digital mindset’ in an analog way). Part of a larger community-sourced exhibition project called Santa Cruz Collects, visitors were invited to ‘bottle up’ a memory in a jar, label it, and leave it as part of this exhibit to share with others.

The Portland Art Museum’s Object Stories initiative also continues to strive toward shared authority and multiple voices (see “Sharing Authority/Sharing Perspectives: Native Voices”). By redefining authority through these processes of co-creating knowledge and meaning with the community, a museum has the potential to be far more than just a place that holds and disseminates knowledge.

## **Get connected**

At the core of the digital age are new ways of relating to one another, new ways of interacting, new kinds of groups, and new ways of sharing, learning, collaborating, and connecting. In their

2012 book *Networked: The New Social Operating System*, Lee Rainie and Barry Wellman argue that the large online social circles of familiar platforms such as Facebook, Twitter, Pinterest, etc. actually expand opportunities for learning, problem solving, and personal interaction. Their work at the Pew Internet Project and the NetLab (especially research for the Connected Lives Project) suggests that digital technologies are not isolated—or isolating—systems, but rather networked systems built upon these social networking platforms as well as mobile device technologies.

*People's relationships remain strong—but they are networked. Neighbors, and neighborhoods still exist, to be sure, but they occupy a smaller portion of people's lives. It is hard to borrow a cup of sugar from a Facebook friend 1,000 miles away, but it has become easier to socialize, get advice, and exchange emotional support at whatever distance. Where commentators had been afraid that the internet would wither in-person ties, it is clear that they enhance and extend them.*

Through countless digital projects and social media activities, museums are tapping into global networks and becoming more connected to this growing virtual community (that, in many cases, actually has a strong relationship with a museum's physical community). As Paola Antonelli, senior curator of architecture and design at the Museum of Modern Art, stated in a recent *New York Times* piece, "We live not in the digital, not in the physical, but in the kind of minestrone that our mind makes of the two."

Through the Portland Art Museum's recent #captureParklandia project, we were able to effectively explore the interconnected network of interest-based social media communities (via Instagram)

and the physical communities in Portland itself. The overall reach of this project through Instagram was far larger than the museum's annual in-person attendance, motivating us to rethink how we define our audiences and the new ways in which we might bring them together through moments of exchange. Rob Stein explores related ideas in his CODE | WORDS essay "Museums... So What?" [p.211], writing:

*The face-to-face dialog that happens in real life at the museum is critically important, but I keep thinking about all the ways we could enhance and improve this dialog digitally and online. What if we considered how we might detect when meaningful discourse happens in our social media and online activities?*

The Question Bridge project is a particularly powerful example of using digital technologies in a participatory way to bring people together in dialogue and exchange. Organized by artists Chris Johnson and Hank Willis Thomas in collaboration with Bayeté Ross Smith and Kamal Sinclair, this innovative transmedia art project aims to facilitate a question-and-answer dialog between black men from diverse and contending backgrounds and create a platform for representing and redefining black male identity. In addition to its online interactive site, the project has been installed at over 25 museums and galleries, including the Brooklyn Museum, Fabric Workshop and Museum, Milwaukee Art Museum, Oakland Museum, Cleveland Museum of Art, the Exploratorium, and the Missouri History Museum, and includes a multiple-screen video installation as well as a youth development curriculum and specialized community engagement events. The project (about which I encourage you to learn more) is all about dialogue and listening, and it taps into both

technology and a digital mindset in order to enhance the connective and collective experience of participants in a digital age.

In her recent book *Museums in the Digital Age*, Susana Smith Bautista discusses how notions of place, community, and culture are changing for museums in the digital age. In her conclusion, she writes:

*If museums are to remain relevant, vital, and meaningful, then they must adapt to a changing society, which means not only recognizing and incorporating new digital tools for communication, but more importantly, recognizing the changing needs and aspirations of society as reflected in their communities of physical and virtual visitors.*

As the behaviors of our audiences and communities change, so do the ways in which they learn. A core part of this digital transformation in museums (see “Museums Morph Digitally”) involves expanding our concepts of learning and engagement to be responsive to an Internet culture defined by participation — and not just ‘participation for the sake of participation,’ but as serious involvement in the deep, connected forms of cultural and creative learning that can occur with museums.

Embracing a digital mindset of openness, participation, and connectivity allows museums the chance to extend the boundaries of what is possible, and serve as sites for profound human connection in the 21st century — in much the same way that new technologies brought people together for that powerful shared moment 45 years ago to witness Neil Armstrong’s ‘giant leap.’

After all ... the moon belongs to everyone.

# THE VIRTUES OF PROMISCUITY

ED RODLEY

PEABODY ESSEX MUSEUM

It's hard to talk to Ed Rodley for ten minutes and not be seduced by his passion for museums and the potential he identifies in digital media to positively transform the museum practice and experience.

Rodley started early in the business. By the age of 11 he was already a volunteer in museums during the summer holidays. Since then it has been more than 25 years creating exhibitions, websites, audio tours, multimedia kiosks and mobile applications.

He is currently the Associate Director of Integrated Media at the Peabody Essex in Salem, Massachusetts, keeping the belief that informal learning is the heart of a museum experience.

The following essay, also published in the series CODE | WORDS, somehow dialogues to all other texts. Some data has been updated by the editor on August 2015.

The Dutch artist Theo Jansen has spent the past 24 years creating wind-powered kinetic sculptures he calls Strandbeests. These walking constructs gather wind energy to propel themselves across the beaches of Scheveningen and can walk, store energy, and detect atmospheric changes now. Jansen works at an interesting intersection of art, engineering, and science and his artistic practice is deeply influenced by biological metaphors. He refers to his creations as “creatures” and the ubiquitous PVC wiring conduit he builds them from as the “protein” of Strandbeests. They become “fossils” once he stops working on them, and new beests inherit traits from older ones, “evolving” from earlier forms. Jansen thinks a great deal about survival.

The Web has provided him with a global audience for his site-specific creations. There are approximately 14,000 YouTube videos of Strandbeests in action. You can find versions of his creations in robotics labs in Berkeley and Cambridge. You can order build-it-yourself kits from Japan, and now you can even order 3D printed Strandbeests directly from the artist. Success, right? For now. But, Jansen is looking even further ahead, to the future of his creations after his death. Ask Jansen about the future of Strandbeests and he will tell you that the survival of his creations beyond his lifetime is now possible through the “viral” propagation of digital files that contain the “DNA” of his creations. The Internet has brought him not only an audience, but also a new means of reproduction for his Strandbeests. This sharing of digital DNA might seem counterproductive to a working artist, since it will make it easier for others to copy his work, potentially reducing the value of “authentic” Strandbeests. For Jansen, the long-term benefits outweigh any potential short-term loss of control or revenue. Jansen’s interests lie in creating art and exploring ideas around the nature of life and living systems. Given finite time and resources, he chooses to prioritize the making and let the rest go and grow however it will.

## **Being promiscuous, but discriminating**

Museums would do well to learn a thing or two from Jansen, and focus more on the creating and spreading the “digital DNA” of our shared cultural heritage and less on controlling access to those assets. This is a call to be both more promiscuous and more discriminating in what we share and how. I know that sounds contradictory, but bear with me.

Museums’ current survival strategy is not unlike those of creatures that have evolved on remote islands. We have gotten very good at passing on one model of “museum” from generation to generation. We may have developed elaborate plumage and interesting displays, but these mask the underlying sameness of the idea we pass on. As long as the larger ecosystem evolved slowly, museums could adapt and keep pace. The global internet has shattered that isolation for good, and in the new ecosystem our current reproductive specialization will not continue to serve us well. Insularity — the tendency to look inward, ignore the larger world and produce institutions that are increasingly self-referential, self-pleasing, and obscure to the billions of potential museumgoers — is a strategy for extinction.

For Jansen, encouraging others to build on his idea of Strandbeests is a reproductive and evolutionary strategy. His best hope for the survival of his creations beyond his lifetime is to let them loose for others to tinker with. Survival (and further evolution) lies in spread. Cynthia Coburn gave a fascinating talk at the MacArthur Foundation’s Digital Media and Learning conference in 2014 on scale and spread. If you’re at all interested in dissemination of ideas, it’s worth reading. One thing that struck me from her talk and the paper from which it was distilled are that we tend to be imprecise about what we mean when we talk about “doing more!”

Unpacking that, Coburn finds that there are “fundamentally different ways of conceptualizing the goals or outcomes of scale. We identify four: adoption, replication, adaptation, and reinvention.” For this essay, I’m most interested in the fourth outcome. This way of thinking about spread Coburn describes as, “the result of a process whereby local actors use ideas, practices, or tools as a jumping-off point for innovation.”

If we’ve learned anything about species evolution, it is that those species that are most inventive at the reproduction game are also most often the clear winners at natural selection. The same holds true for museums. Survival lies in the widest, most promiscuous spread of the cultural seeds we steward and create. Think of the Internet as a new landmass risen from the sea. It is rapidly being populated by all sorts of ideas and content. There is both room enough and need enough for museums to colonize that land.

## **Ideas having promiscuous sex**

I realize I’m being a bit provocative in claiming “promiscuity” — with all its sexual connotations — as a virtue, but it’s apt. In its earliest sense, promiscuous meant “things mixed together.” In this sense, to be promiscuous is to be for mixing things up. For me, being promiscuous means spending more effort on creating and spreading, and less on trying to control access. A central part of the missions of successful museums in the present century will be, as Will Noel puts it, “to put the data in places where people can find it — making the data, as it were, promiscuous.”

Trade in ideas is possibly the distinguishing variable that separates humans from every other species. Evidence for trade amongst

humans is ten times older than the earliest evidence of farming. Matt Ridley, the author of *The Rational Optimist*, gave a great TED talk in 2010 where he claims that the engine of human progress and prosperity has always been, and continues to be, “ideas having sex with each other.” The ability to share ideas, combine them, and recombine them in new ways has been humanity’s key to survival and evolution. Sharing, not technology, has been the key. That’s an important point to keep in mind. Technofetishists (many of them well-financed) would have us believe that new technologies will solve all humanity’s woes. Early humans used the same lithic technologies, unchanged, for almost a million years: 30,000 generations of making and using the same tools for the same jobs. We’re no longer using Acheulean hand axes, because humans developed the ability to trade things and concepts, and that has led to where we are now. For museums, the situation is analogous in many ways to the Paleolithic. Continued evolution will require us to think differently, develop new tools, and most importantly, trade our goods as widely as possible.

## **Who’s out there?**

It may seem like a step into the unknown, but museums are not alone in exploring this territory. It’s all well and good to talk about promiscuous sharing, but a marketplace of ideas requires somebody else to be there. Who is the audience for the assets museums might share? They are legion.

Promiscuity connects museums to maker communities. Community interaction and knowledge sharing are often mediated through networked technologies, with websites and social media tools forming the basis of knowledge repositories and a central channel for

information sharing and exchange of ideas, and focused through social meetings in shared spaces such as hackspaces.

This latest eruption of interest in self-guided learning and doing has a long, distinguished lineage. Computer hobbyists, ham radio enthusiasts, and even the model railroad enthusiasts at the Tech Model Railroad Club at MIT, who gave us the modern meaning of “hacking” could claim to be “makers.” They were all communities of interest who came together to explore their passions and help each other out. The difference this time is the spread that the Internet makes possible. The 2012 Bay Area Maker Faire drew a crowd of 120,000 attendees over a weekend. “Making” with a capital M is now a firmly established subculture, and part of a growing economic sector.

Promiscuity allows museums to be participatory culture advocates. Henry Jenkins may have coined the term “participatory culture” in 2005, but the idea of a world where individuals are producers of culture, instead of just passive consumers, has been around a long time. I’ve got a dog-eared paper that I’ve toted around for years with a quote from the psychologist Mihaly Csikszentmihályi which reads, “Creating culture is always more rewarding than consuming it.” As someone who’s worked the cultural/creative sector my whole life, I know the truth of this statement. What might the world look like if we not only preserved and exhibited examples of human creative expression but also more actively encouraged that creative impulse in everyone we serve?

This kind of digital promiscuity also nicely aligns museums with the Open Culture movement. “Open” is already on track to supplant “participatory” as buzzword of the year, with good reason. The proliferation of groups supporting and encouraging openness

in the cultural/creative sector is impressive. Wikimedia, Creative Commons, the Open Knowledge Foundation, free software advocates, open-source software advocates: the list gets longer all the time.

## **The virtues of promiscuity**

So, if all of these factors are agitating for openness, transparency, and agency, how do we make the business case for promiscuity? Some of the virtues of promiscuity include the promiscuous spread of digital assets is a key factor in delivering on museums' missions to educate, inform, stimulate, and enrich the lives of the people of the planet we live on. Merete Sanderhoff, in the excellent *Sharing is Caring* lays it out clearly:

*Digital resources should be set free to form commons—a cultural quarry where users across the world can seek out and find building blocks for their own personal learning.*

The more we sow these seeds of culture and the more effective we are at seeing those seeds take root, the more likely museums are to see cultural ideas persevere in the constantly-changing world.

Promiscuity is one way to demolish the perception of exclusivity that has dogged museums for longer than I've been around. I realize that this virtue is by far the most painful, because it would force us as memory institutions to lay bare lots of things of things we'd rather not have to deal with: legacies of imperialism and colonialism, tensions between indigenous peoples and more recent arrivals. The history of the relations between Native Americans and museums is not

the most cordial, at least in part because the perception that some museums are probably hiding things they don't want tribes to know about is almost impossible to counter. Promiscuity offers a way to end that particular debate.

The "global village" the Internet has created is real, and now it is possible for a museum of any size to have global reach, provided they have anything to share. As Michael Edson pointed out in his introduction to *Sharing is Caring*, 40% of humanity is now reachable online. That's 3 billion people who might be interested in your content.

One of the most interesting and infuriating changes in attitude that the Web has wrought is the expectation of finding everything. Not being visible online now is the equivalent of not existing. Promiscuous sharing of digital assets is a way for your audience to know you exist. As the Director of The Kislak Center and Schoenberg Institute for Manuscript Studies, Will Noel says:

*(P)eople go to the Louvre because they've seen the Mona Lisa; the reason people might not be going to an institution is because they don't know what's in your institution. Digitization is a way to address that issue, in a way that with medieval manuscripts, it simply wasn't possible before. People go to museums because they go and see what they already know, so you've got to make your collections known. Frankly, you can write about it, but the best thing you can do is to put out free images of it. This is not something you do out of generosity, this is something you do because it makes branding sense, and it even makes business sense.*

So promiscuity has value to museums. Being successfully promiscuous, though, requires some fine discrimination of the sort that museums have not traditionally been good at.

### **It's not an either/or proposition**

The value of museums doesn't change from being about physical things to being about digital things. It expands from the physical to include spreading digital information about those assets. When I was a newly-minted museum professional, I distinctly recall seeing the slogan for the 1989 ICOM conference: "Museums: Generators of Culture" and thinking simultaneously, "Yes!" and "Yeah. In your dreams!" What was unthinkable in 1989 seems perfectly reasonable 25 years later. The Internet allows museums to be promiscuous on a global scale, seed a global cultural commons with the highest-quality building blocks from across the entirety of human endeavor, and finally be able to deliver on that 1989 aspiration. As Michael Edson pointed out in *Dark Matter* [p.26], "it's tremendously exciting to think about what we can accomplish if we begin to work with true conviction in the areas of the Internet that are less familiar to us and more familiar to our visitors." It's mission creep of an unfathomable scale, with all the ramifications that entails. The question museums have to ask are, "Is it worth it for us?" and if so, "How do we proceed?"

### **It requires us to disambiguate the digital from the physical**

Huh? Disambiguating the digital from the physical (to steal yet another phrase from Koven Smith) is essential to being able to see

the issue clearly. In his MuseumNext 2014 keynote and subsequent blogposts, Smith warns against the peril of the skeuomorphic view of digital museum assets and the challenges of being authentically digital. Mapping real-world strategies and structures onto the digital realm is not a recipe for success.

Skeuomorphism has uses. I had the privilege of working on a couple of projects with major film studios during my career, and one of the tenets of science fiction filmmaking friends at Industrial Light and Magic shared with me was that to be successful as a film experience, sci-fi had to be backwards-looking. Everything new and interesting had to have some real-world analogue it referenced, so you, the audience, could understand what it was without having to be told. Thus, spaceships that move like airplanes, weapons that function like swords and firearms, and aliens that act like humans. As a storytelling tool, it's great. As a business strategy.

Creating digital analogues of our existing museums is a straitjacket that will not serve us well going forward. Making a virtual museum (in addition to sounding hopelessly 90s), regardless of the technology underlying it, fails to take into account the reality of how people consume digital content. They don't go to museum websites. Jon Voss of HistoryPin made the statement that you have to meet people where they are, not where you wish they were. Museum websites, the traditional place for museums' online presence, are not those places, so plowing resources into making bigger, swankier ones is a waste of resources that might be deployed in ways that actually reach a global audience.

## It's not about adding screens

Just as dragging the physical into the digital is unhelpful, so is carelessly layering the digital on the physical. David Starkey, in an article in *The Guardian* called "Museum of the Year 2014: what makes a winner?", extolls the virtues of the Mary Rose Museum for eschewing digital interpretation in the museum and not "whoring after strange gods in museums with every sort of technological device." And he's got a point, to a point. There are plenty of examples of digital technologies being employed to fix perceived problems with museums' physical operations that would've benefited from some additional discrimination in the scoping phase.

## The collections metadata ≠ the collection

Digital information about collections is not the same as the physical objects in that collection. Here is where I think museums need to be much more discriminating about what they limit access to in the name of preservation, and adapt a mindset and workflows that treats digital assets as part of the cultural commons to be birthed and shared, unless there's a compelling reason not to. Giving away a digital image of a specimen or art object is not the same as giving away the object. As Seb Chan wrote in announcing the Cooper-Hewitt's upload of their entire collections database to the code sharing site GitHub:

*Philosophically, too, the public release of collection metadata asserts, clearly, that such metadata is the raw material on which interpretation through exhibitions, catalogues, public programmes, and experiences are built. On its own, unrefined, it is of minimal*

*'value' except as a tool for discovery. It also helps remind us that collection metadata is not the collection itself.*

## **It's not about "putting the collection online"**

Let's be clear that what I'm talking about is not "Let's put the collection online" by making a database with a web interface. Access is important, but a web portal is an oracular cave, dark and mysterious. You go into the dark place, ask your question, and the Sibyl answers. Hopefully, it makes sense. Sometimes, it's a very detailed answer, sometimes not. But the seeker never has the ability to appreciate the collection as a whole, or to interrogate it in any ways other than those chosen by the architects of the CMS and the portal. And they're black holes to indexers. Google, Yahoo! and Baidu have no way of knowing what lies beyond your search box, and in a world where findability equals existence, this is death. Actually it's worse, it's annihilation — being made into nothing. Not a great strategy for proving relevance.

"We have to look out for the museum's reputation" is one reason I've heard repeatedly for restricting access to assets, be they images or a dataset. The argument goes something like this: by making people ask for access, and charging them for the costs the institution incurs to produce this digital asset, museums discourage casual misuse of these assets by outside parties. This gatekeeping is necessary, and for the privileged few (mainly art) museums with famous collections, this provides a revenue stream that often pays the salaries of those gatekeepers. So, my theoretical position about promiscuity suddenly turns into people's jobs and livelihoods, which is where things get messy. But this kind of access

control is anathema to both the Enlightenment ideals that underlie the museum enterprise and the nascent global culture we could become an indispensable part of.

A nice thing about selling access is that it's quantifiable. You can create reports about how much money licensing brought in, how many requests were processed and fulfilled, and so on. The more promiscuously one shares, the harder it gets to measure. Harder, but not impossible. Image spread can be tracked, download statistics and pageviews can tell you something, and as more museums get more promiscuous, I'm sure other metrics will be developed to help us quantify the success of our efforts.

But just because something is amenable to measurement doesn't make it the best thing to measure. On a larger scale there is, to me, a certain logic in promiscuously sharing as the best way to create the most opportunities for the kinds of epiphanies museums can generate. As Rob Stein asked at the Museum Computer Network conference in 2011, "How do we measure for epiphany?" If museums are in the business of inspiring, even changing people, then Stein's call to track and measure alumni creativity in *Museums... So What?* [p.211] becomes even more important. David Gerrard, Ann O'Brien, and Thomas Jackson from Loughborough University in the UK proposed a way to study this at the Museums and the Web 2014 conference. Their "Epiphany Project: Discovering the Intrinsic Value of Museums by Analysing Social Media" represents just one approach to measuring what matters.

And if we don't? Merete Sanderhoff lists three problems this inability to be promiscuous creates:

- By putting up impediments museums are pushing users away from authoritative sources of information.
- We are missing out on the the opportunity to become hubs for people. The social gravity that museums could generate is largely unrealized.
- By not using these new tools that are at our disposal, museums undermine their own *raison d'être*.

Kristin Lyng of the Meteorological Institute of Norway writes, “Freeing data can be compared to letting your child go out and play in the playground. You’re letting go of control, but you know that it’s best for your child to be able to play out in the open.” Or, as a participant said in Kristin Kelly’s 2013 Mellon Foundation report on image sharing, “We have lost almost all control, and this has been vital to our success.”

### **Promiscuous ≠ easy**

Being promiscuous will not be easy for the sector. It will require approaching our work in new ways, taking on a greater responsibility, and counting our digital audiences as unique and different from our physical ones. Resources will need to be applied and reapplied to deliver these assets to the commons we could become integral to. I think it’s worth it. Given finite time and resources, promiscuous sharing is a way of finally delivering on the ambitions of those Enlightenment thinkers who dreamed of universal knowledge diffusion. There’s already an audience out there, one potentially numbering in the billions, who might use the content we set free. The technologies exist to make it possible for any museum to stake out a place in the commons. And museums are already beginning to tentatively step out into this new territory.

**GLAM AND  
THE FREE  
WORLD**

**CORY DOCTOROW**

Canadian fiction writer, activist, journalist and worldwide known blogger Cory Doctorow is one of the most influential and active thinkers of contemporary digital culture. Former director of the Electronic Frontier Foundation and co-founder of the UK Open Rights Group, Doctorow was one of the first authors to distribute ebooks for free and from that point became a *New York Times* best-selling author.

This is the secret formula that museums everywhere are and should be interested: how to find relevance and sustainability by opening their collections rather than controlling public access.

The following is the transcript of a talk given by the author at the Museums and the Web conference held in Florence, Italy, in February 2014.

There's a little apocryphal story about that may perhaps speak to you as museum-folk, and it goes like this:

The state of Roman metallurgical science determined the maximum length of a chariot's axle and hence its wheel-base. The Roman chariot's wheel-base determined the width of the Roman roads. The width of the Roman roads determined the width of modern carts. The width of modern carts determined the width of modern roads. The width of modern roads determined the width of wheel-bases for cars and lorries. The width of lorries determined the width of containers and the parameters rail-cars and container-ships.

And since the Space Shuttle's reusable fuel-tanks had to be transported on these roads and railroads, they, too, were ultimately determined by the state of Roman metallurgy, thousands of years ago.

This is, of course, a gross oversimplification, but it is intended as parable and not as history. The reason to recount this parable here, now, at this early, liminal moment in the future history of the information age is that we are presently building the electronic nervous system of the modern world, and we dwellers on the electronic frontier have it on our power to establish the norms, laws and practices that will echo through the ages to come. They call this the information age and it is.

It may feel as though we have been buffeted by change for these past twenty years but it is just getting started. We live in a world that is increasingly made of computers, that we put inside our bodies and we put our bodies into.

And here is only one computer. Turing complete: A computer that can execute all the instructions we can express in symbolic logic.

So any policies that we create for computers redounds through the entirety of experience. So let's talk about archiving, cultural dissemination, cultural preservation, and the information age. This age has been attended by two parallel and contradictory shifts in the way we think about value. First, it has been attended by the rise of neoliberal globalisation, and this project says that everything must be viewed through a market lens. Every one of our public institutions is being subjected to this lens, with great distorting effects. Our schools, for example, have largely been recreated as factories whose products are educated children, whose employees are teachers, whose management is the school administration, whose board of directors are the government and whose shareholders are the taxpayers. And like any business, schools must produce quarterly reports that hold the management accountable to its shareholders. It must quantify its production efforts and show that they are producing good value for money.

There are really only two things you can chart in the context of education: standardized test-scores and attendance. And so these two factors have been reified in public education beyond all others. Schools have been refactored to relentlessly focus on these two numbers at the expense of every other activity. If a student walks into her grade two classroom and picks up a book and starts reading it to herself, has her brain catch fire with the sheer, vertiginous joy of reading, the job of a modern teacher is to stop that activity when the bell rings and to move that student on to the next stage, lest her learning proceed unevenly and her standardized test-scores suffer as a result.

When I was seven years old, I plucked a copy of *Alice in Wonderland* from the class shelf and lay down on the carpet and read and read and read. And my teacher saw what was happening and let it unfold — she recognized that the everyday extraordinariness of

true learning was taking place and she let her student kindle the spark of interest into a blaze of passion, a lifelong love-affair with books. But the school-as-factory model has no room for this.

The indiscriminate application of market-logic makes a nonsense out of activities that are, fundamentally, non-market, and these non-market activities necessarily include archiving, scholarship, cultural preservation and communication.

To describe the “business” of museums in market logic is to apply a metaphor that is both highly suspect and highly susceptible to intellectually dishonest manipulation. Think for a moment of digitization projects undertaken with through public/private partnerships, like the digitization of the US Department of Defense archives by T3 Media or the British Film Institute’s digitization with Siemens. In these projects, a commercial operator is brought in to digitize these public collections and then put them behind a paywall in order to recoup their costs.

The market-logic goes like this: a company like Siemens is making a sizable investment in the archiving of these public assets, so they have the right to recoup their investment — they’re assuming the risk, so they get the reward. But this is a highly selective way of expressing the way capitalism works.

Let’s take another look at it. In Silicon Valley and throughout the high-tech world, we have a grand tradition of startups who court investors with high-risk/high-reward propositions from search engines to Bitcoin. It’s virtually unheard-of for a startup to be profitable from the get-go; a startup may run for years before it gets its first dollar in income, and years more before that income exceeds its outgo and becomes a profit — Amazon is still unprofitable, decades after its

founding. So entrepreneurs will seek out “angel investors” — individuals who put very early money into the business in return for a generous ownership stake in the business.

Almost every angel investment will come to nothing, money flushed down the drain, but there is no shortage of angel investors, because the reward for a successful bet is incredible: being the first investor in a business means that the business pays you a much larger dividend than it pays any of the later-stage investors — you’ve assumed the risk, you get the reward.

Back to public archives: for decades, for centuries, the public have played the role of angel investor for these collections, paying and paying, year after year, to keep them afloat while they seek the path to profitability. Now these archives have arrived at their moment: the world of digitization has unlocked untold value in their collections. Through digitization, the whole world can now use these archives simultaneously, scholars everywhere can text-mine them, they can be used to start new businesses and create new curriculum.

This is the thing that every entrepreneur dreams of: the moment when their weird and unlikely idea is validated by the marketplace, when it arrives at its cultural moment: when the idea of a bare-bones search-engine like Google suddenly rockets to ascendancy and leaves the bloated incumbents like Yahoo and Altavista in the dust.

At that moment, it is customary for the angels and the entrepreneurs to seek out some deeper pockets — venture capitalists — and sell them a very small slice of equity in exchange for a lot of money, to build out all the infrastructure you need to handle all the demand.

Importantly, though, the angels are not crowded out here. If the big investors tried, the management and the VCs would end up in court, faced with a minority shareholder suit that they would lose. This is exactly the opposite of what happens with Siemens and the BFI or the T3 Media and the DoD. We, the public, are the angels.

We built up all that value in our public assets. The return on our investment comes from access to those assets — the right to see and use them. And the johnny-come-lately digitization firms are the venture-capitalists, latecomers to the party who only put their money in once our money had paid to bring the enterprise to profit.

The risk they assume — the cost of digitization — is infinitesimal compared to our own. And yet, they demand terms that result in the confiscation of our equity for accomplishing the relatively minor, low-risk task of taking pictures of our stuff.

And management — the governments of the neoliberal era — give it to them. Even in the dubious enterprise of applying market-logic to public enterprises, this is a titanic ripoff that no actual business would get away with in the real world. But of course, this is a nonsense from start to finish.

The public don't invest in cultural preservation because we perceive a profitable upside down the road. We invest in cultural preservation, archiving, and access because these are public goods — they are not primarily market activities.

Using ROI to calculate the value of the museums sector is like adding up all the money you spend on raising your children and then handing them a bill for their upbringing when they graduate from

high-school — it's the work of a sociopath. Our cultural institutions exist to tell us who we are, where we have been and where we are and where we're going.

The information age is, in many ways, the beginning of history. It's a moment at which every person is swiftly becoming an archivist of her own life, a curator of billions of blips of ephemeral communications and ruminations and interactions.

As any archaeologist who's ever rejoiced at finding a midden that reveals how normal people lived their lives in antiquity can tell you, this ephemera, so rare and badly preserved through most of our history, is of incalculable value. Which would you rather see: an oil painting of a Victorian monarch, a ramrod stiff photo of your great-grandmother in her confirmation smock, or a hundred transcripts of the conversations she shared with her peers and her family?

The tools by which we accomplish this archival business are, of course, computers. Carried in our bags and pockets, worn in and on our bodies. There is one group of people in the world who understand how archiving works, who understand the importance of the ephemeral en masse, who can steer us to personal and cultural practices of preservation, archiving, dissemination, and access — it's the museum sector.

Just as librarians — who have toiled for centuries at the coalface of information and authority, systematizing the process of figuring out which sources to trust and why — are more needed than ever now, when we are all of us required to sort the credible from the non-credible every time we type a keyword into a search box. So too are curators and archivists more needed than ever, now that we are all archiving and curating all the live-long day.

You can help us lay roads that lead us from our primitive information chariots, here at the dawn of history, to a future of information spaceships that carry us to the stars.

## **The stakes are high**

Because the self-serving application of market-logic to information is even more absurd and harmful than its application to public institutions. Since the 1970s, technologically illiterate politicians and economists have bandied about the idea of an “information economy,” based on buying and selling information piecemeal. Their bizarre utopia is a world where you can buy and sell information in ever-thinner slices.

- Selling the right to watch movies at home but not on vacation.
- Selling the right to stream, but not save, a song.
- Selling the right to use a program on the phone in your pocket today, but not the right to run it on your next phone.
- Ultimately, selling the right to sell a novel to read on Wednesdays, but only between the hours of 5 and 7, while standing on one leg.

Once I was in a meeting at the DVB, where they make the standards for European digital TV, and there was this insane discussion about whether a TV program could be flagged so that you could only watch it in the room where the receiver was. That is, you couldn't run a wire or use a wireless transmitter to watch it in another room. I asked, “Come on, what is this for? It's not like there's any law that lets a broadcaster dictate what room you're allowed to watch a

show in". And there was a rep from the MPA, the Hollywood movie industry association, there and he said, "Look, watching a movie in one room that's being received in a different room has value, and if it has value, we should be able to charge money for it".

Siva Vaidyanthan calls this the "if value, then right" theory — if something has value, someone should have a right to earn money from it. But I call it it urinary tract infection business model.

Instead of the right to use your stuff coming in a healthy, satisfying gush, every button on your remote has a price-tag attached to it, and the value flows in mean, painful drips. This is that self-serving version of market logic again. Even assuming that markets have any place in determining what you do in your house.

Why should the pseudoproperty right to determine how you watch TV trump the right to have your TV do as you tell it?

There's the crux of the matter, where it all comes together. The concept of an "information economy" predicated on selling you access to information piecemeal requires, necessarily, that your computers be designed to disobey you. If you only have the right to watch a movie in your bathroom while you're eating a ciabatta and whistling Dixie, your computer has to have the ability to refuse when you tell it to play the movie under any other circumstances.

This is an offensive idea whether or not you buy into the markets-are-all logic or not. Let's start with the market argument, since it's pretty damned simple. If you own something, it should do what you tell it to. The dead hand of some remote authority should not weigh on your refrigerator door, controlling when you can snack;

nor should it bar your closet if you want to change clothes. This is what property is — stuff that's yours.

Back before the 1970s, only a few nutcase extremists used the term "intellectual property" to describe copyright. They called it "copyright" or used terms like "author's monopoly". This acknowledged that copyright was a limited, temporary regulatory monopoly that primarily related to industrial entities. The promulgation of the term "intellectual property" has been a conceptual disaster. What is "intellectual property"? Foundationally, it's the idea that if someone's intellect is involved with something, it is forever their property.

The very idea of so-called "intellectual property" is incompatible with actual, real property. The facade of your house, the gears on your bicycle, and the shirt on your back all have some intersection with someone's intellect. If your purchase of those objects does not terminate the others' interests in what they made, then where does this idiocy end? Does the butcher get to tell you how to cook a steak? Can the cobbler tell you how to shine your shoes?

If we're not talking about specific things like "copyright" — a technical statute that regulates the entertainment industry — we are instead using a term like "intellectual property" — a term that means "Shut up and do as your told," in the same way that "terrorist" means "Person doing anything I don't like" then we are talking nonsense. But forget "property" arguments:

- Your house is not the agora.
- Knowledge isn't property.
- Peer reviewed journals don't determine the scholarly rigour of an article on the basis of a price-discovery mechanism of bids and puts.

These processes are non-market, and property relationships are only incidental to them — buying paper to print journals, paying for hosting for online versions. Let's talk about the history of the future instead.

The shape of the space-ships that are prefigured by the wheel-bases of our primitive new informational chariots. What does it mean to design a computer that disobeys you? Remember "Turing Complete"? There is only one way to design a computer, and that's to make a computer that can run every valid program — that can execute any instruction that can be expressed in symbolic logic.

And yet every iPhone and iPad is designed to prevent you from running code that doesn't come from the App Store, so that Apple can extract a 30% commission from all the software vendors trying to sell to you. Your satellite receiver won't connect to a PVR that lets you record shows and save them. Your PS4 won't run games that aren't blessed by the politburo at Sony. Your Kindle won't let you load books you inherit from your parents' estate onto your device.

How does this work? How is it possible that these valid programs won't run on these devices?

The answer is, they will run on those devices. But the devices are designed to ship with spyware out of the box. Hidden programs that lurk in the depths, watch everything that you do. Waiting for you to do something forbidden. And then they swim to the surface and say, "I can't let you do that, Dave."

An iPhone isn't a computer that can't run non-App-Store apps — it's a computer that won't let its owner run non-App-Store-apps. It is designed from the ground up to have certain programs that

you can't terminate. To have programs that hide from users, whose associated files are intentionally obscured by the operating system. It is a computer whose operating system has a mote in its own eye, by design.

When the user asks the computer whether there's a "don't run unauthorized code" program running, the computer's job is to say no. When the user asks the computer to run a fake "don't run unauthorized code" program, it refuses. That's the nature of a digital restriction in the age of universal computers. Whether it's a mandate that a self-driving car can't drag race; that a 3D printer can't print a gun; that an iPad can't run unauthorized software. The outcome is a computer that hides things from its owners.

In a world where computers are inside our bodies and our bodies are inside computers, this is an insane idea. What happens when your computers betray you?

If you're the American retail giant Target, a computer that lets someone else run covert code means that 100 million peoples' credit-card numbers leak.

If you're Cassidy Wolf, the reigning Miss Teen USA, then a computer that lets someone else run covert code means profound betrayal: in September 2013, the FBI arrested a man called Jared James Abrahams who hijacked Wolf's computer, took nude photos of her, and attempted to blackmail her into performing on-camera sex-acts, as he had done with 150 other victims, including minor children.

If you're one of the civilians wrongly murdered by a US drone, the information leaking out of your computer about your location is a matter of life and death.

There is no way to design a computer that disobeys its owner when ordered to do so by the police, the government or a corporation but doesn't disobey its owner when a crook, a creep or a spy uses that facility for his own purposes. This is just the beginning.

In November 2012, the late security researcher Barnaby Jack demonstrated an attack that would allow him to exploit the wireless interface in implanted defibrillators and cause them to seek out and infect other defibrillators and then cause them to deliver lethal shocks to their owners. There's a reason former US vice president Dick Cheney specifically had the wireless interface on his own defibrillator disabled when it was implanted. We are at the beginning of history.

We have seen what happens when computers and networks are designed to betray their owners rather than protect them. Edward Snowden has lifted the rock that the National Security Agency (NSA) and The Government Communications Headquarters (GCHQ) were hiding beneath and shown us how deep their rot has spread. They have undermined every email channel, every messaging channel, the undersea cables and the chats in World of Warcraft.

The NSA theory of future history might be summed up as the "greater manure pile theory of crimefighting". They believe that if the pile of manure is deep enough, there must be a pony in it somewhere. If they can only wiretap every conversation, they will eventually catch all the bad guys. This method ignores the important contributions of Cardinal Richelieu to the theory of guilt and innocence: If you give me six lines written by the hand of the most honest of men, I will find something in them which will hang him. That is to say, once you have a big and deep enough dossier on anyone, you can find something in terminally destructive in there.

I have another theory of future history. Technology that is designed to serve its users, rather than betray them, has the power to make a world that is better in every way. Because the most significant effect of adding networked computers to your life is that it reduces the cost of collaborating with other people.

When I was an activist in the 1980s, 98% of my job was writing addresses on envelopes and putting stamps on them and the remaining 2% was spent figuring out what to put in the envelopes.

Now we get the envelopes for free. The cost of organizing ourselves is in free-fall. Organizing work is the project that defines our species. The thing we've been perfecting since the first primate said, "I'll watch out for tigers, you take care of the kids, and he's gonna go the fruit". The thing that lets us transcend the limitations of individual humans and approach something we can only call superhuman — the power to do more than a single human can do.

The Internet doesn't have to serve as a force-multiplier for spies. We have in our grasp ciphers that can encrypt messages so perfectly that even if all the hydrogen atoms in the existence were made into computers that toiled until the heat-death of the universe on their decryption, they would still never attain it.

In some deep and mathematical sense, the universe wants us to have secrets. This is why the NSA and GCHQ are so freaked out, why they're spending \$250 million a year on programs like BULL-RUN and EDGEHILL, which exist to sabotage the implementations of cryptography. Because they know that when the crypto is done right, they can't get in.

Our networks can be tools that allow us to simultaneously link our efforts to make our world a better place, AND keep the details of those arrangements secret from the forces of greed and reaction who would use our social graphs as a to-do list for midnight arrests, torture and secret execution.

This is something we can only do if we liberate ourselves from the self-serving narratives of a market logic that confiscates the public domain and our public institutions and flogs them off like Vladimir Putin handing out state industries to his oligarch pals.

And from the technologically bankrupt idea that we can fix social programs by breaking the computers, a colossally bad idea on the lines of putting cameras in all our living rooms to make sure we're not planning terrorist atrocities during the commercial breaks.

And then acting surprised when it turns out that some of your own agents are freelancing, selling surveillance footage out the back door; or that the cameras are being watched by people other than the legitimate authorities, or that the spymasters have been politicized and are looking at the government's critics in order to find ways to discredit them. I want you to help me avert this future history and find a better one.

You, whose mission is to preserve our culture and to communicate it. Stop telling your patrons to put their cameras away. If the only way to get something for your collection is to promise that you will prohibit non-flash photography of the item, then that item is not a fit candidate for your collection.

You can't convey the mission of cultural preservation and communication to an audience whom you are prohibiting from preserving

and communicating their interactions with culture. It's like telling your kids not to start smoking while you put a light a fresh cigarette from the one you've just smoked to the filter.

Refuse the dishonest market logic that says public archives should pay for digitization by allowing paywalls to be erected between the public and the archives they already own.

Place your scholarly works with open access journals that hew to the Enlightenment ethic that says the difference between rigorous science and superstitious alchemy is whether your researches are widely circulated for criticism, replication and debate.

Above all, do not, under any circumstances, allow the digitized artifacts from your collections to be locked up with digital rights management — that “I can't let you do that, Dave” stuff that tries to control how files are used once they're on someone else's computer.

This is not only ineffective — if the piracy wars taught us nothing, they've taught us that. It also betrays the mission of the museum as an institution conceived for the public good. What is the point of an institution that exacts such a terrible price? How can you square the mission of cultural preservation with tactics that require your patrons to allow for hidden programmes that surveil and control them?

And if that's not persuasive enough, consider the future history of a museum in a world where all the digital artifacts you wish to preserve and communicate are locked up with technology that is illegal to remove, whose sole purpose is to prevent the long-term diffusion of their payloads?

Archives and DRM go together like rare book collections and flame-throwers. Every time you use DRM, you legitimize, promote, and promulgate technology whose sole purpose is to prevent the preservation and communication that is the very purpose of museums.

Look, it's not that I reject the very idea of rules for how we use cultural artifacts. I'm all for them! But let's have those rules determined by an approach that begins with the idea that cultural rules should serve free expression, not censorship. That public institutions should serve the public first and foremost.

That the nervous system of the information age should be designed and regulated with the care and gravitas due to something that we place our lives, our freedom and our destiny in — not as a political football.

In two thousand years, our descendants will arrange cases full of our artifacts from this dawn of digital history. They will wonder about the curators and historians and archivists who were their progenitors. The professionals who, more than anyone else, had it in their power to understand what it meant for, what potential it had. You can choose how history remembers you.

Whether you served a future history in which our informational roads were used to conquer and control us. Or to give us the freedom to communicate and collaborate to our enduring and universal benefit. There are people who caricature this whole position.

Who say that this a mere naive belief that "information wants to be free". But I've had a long talk with information about this. We went away for a weekend in the country, drank white wine, cried and hugged. And when it was over, information whispered in my ear that it doesn't want to be free.

The only thing it wants is for us to stop anthropomorphizing it. Because information doesn't WANT anything. It's a mere abstraction. However, PEOPLE want to be free. And when the world is made up of networked information-processing devices, that human freedom can only be attained through a free, open, and fair informational infrastructure. Help us create it.

# THIS BELONGS TO YOU

**MERETE SANDERHOFF**

STATENS MUSEUM FOR KUNST

Merete Sanderhoff is the curator of digital practices at the SMK National Gallery of Denmark and a very special type of hands- on museum leadership: art historian, project manager, passionate about the potentials of web and digital media in making art more accessible and exciting for users.

As an advocate for OpenGLAM (galleries, libraries, archives and museums), since 2011 Sanderhoff leads the international seminar *Sharing is Caring*, bringing great museum thinkers to engage with their counterparts in Copenhagen.

The following article is a combination of two segments of the text Sanderhoff wrote for the anthology *Sharing is Caring - Openness and sharing in the cultural heritage sector*, where she explores the opportunities of digital media.

Do you remember your first mobile phone? How heavy was it? Did it have buttons? A visible antenna? Did it have a camera? Was it online?

Back in the 1980s my father, who is a furnace technician, had an Ericsson mobile phone in his service van. This was back before the network went digital. The telephone itself consisted of a large black box, a so-called relay station, mounted on the front panel of the car; the box was connected to the handset by a spiral wire. Today we would hardly classify this as a mobile phone. But it allowed customers to reach my father instantly, even when he was out on service calls. Some years later that mobile phone would be pressed into service during the Gulf war 1990-91. The American forces were keen to have any surplus mobile phones with relay stations and even offered to pay for them, so my father's phone was replaced by a new Ericsson HotLine model with a market value of \$4,400, which was wireless and weighed less than a kilo.<sup>1</sup>

Most of us have an anecdote like this to tell. When I think about my father's first mobile phone and look at my own present day smartphone I see an example of incredible technological development and evolution. Digital technologies are exerting ever greater influence on life in all its aspects — right from the Danish NemID digital identification scheme to the bike ticket I bought on the train this morning via my smartphone. If I want to know anything about the history of the mobile phone, or if I have forgotten whether Vivaldi wrote his last opera in 1737 or 1739, I simply Google my inquiry on my smartphone. In seconds the entire accumulated knowledge of the Internet is at my fingertips.

Hi am used to that now. I wasn't just a few years ago. Just as I was not used to posting status updates, to taking pictures with my

telephone, instantly sharing them with my network, holding Skype meetings with people I have never met in real life, sharing work documents in the “cloud”, using Twitter to actively participate in conferences that take place halfway across the globe, being able to watch whatever obscure music video happens to spring to my mind while commuting, verifying that I’ve used a stock phrase correctly by checking the number of hits it has on Google, or finding new inspiration for tonight’s dinner on my mobile rather than in a cookbook.<sup>2</sup>

I note that my personal habits and expectations are constantly changing as new technologies become available. And I have no idea what habits I will adopt in future. I bring this awareness with me to work every day at Statens Museum for Kunst (SMK), the National Gallery of Denmark and the country’s main museum of art. Perhaps museums are not the first things that spring to mind when you think of ongoing and restless change; rather, they tend to be associated with tradition and permanence.<sup>3</sup> We work with cultural heritage; one of our key tasks is to safeguard objects from the past along with the memories and meanings that go with them, preserving them for future generations. However, the ways in which we do that must be in keeping with life as it is lived outside the museum walls. When we try to envision the things we might experience and do at museums in the future our imaginations are, quite naturally, hampered by the constraints of our present-day experience. If someone had said, 25 years ago, that we could now access the collections at MoMA by swiping the surface of a mobile phone we would have dismissed the very notion. So what might we be able to do 25 years from now? Making predictions is difficult, but it will always be useful to monitor the latest developments with an inquisitive and open mind, actively helping to shape and direct them so that new technologies support and strengthen

our mission and our role in society. Technology should not govern the museums' work. But in order to learn and understand how we can use new technologies and benefit from the opportunities they open up to us we must explore and incorporate not just the technologies themselves, but also the changes in behaviour and expectations they prompt in users. We must think like users.

## **Catalysts for user creativity**

GLAM. That is one acronym you'll remember. GLAM is short for Galleries, Libraries, Archives, Museums, a sizable portion of the cultural heritage sector. In just a few years GLAM has become the umbrella term for what is also called Memory Organisations. The concept of GLAM has been consolidated via digital initiatives such as Europeana, the EU Commission's joint portal to European digitised libraries, archives, and museums; The Digital Public Library of America, a US equivalent initiated by Harvard University; and GLAM-Wiki, which cooperates with cultural institutions worldwide to share digitised resources on Wikipedia.

At present the international GLAM sector is confronting rapid and radical developments in the media, platforms, and channels used by us all. Over the course of a few decades, the Internet and social media have turned firmly established practices and roles upside down. Audiences have become users who may no longer be satisfied with passively receiving information and content; they have become accustomed to participating actively themselves, contributing their own knowledge, attitudes, and creativity. All this has created the basis for OpenGLAM, an international grassroots movement which endeavours to make openness the standard for the GLAM sector and to establish shared principles for a new

OpenGLAM practice based on the culture of sharing found within the social Internet.<sup>4</sup> Here, openness should be regarded in two ways:

- An open and welcoming attitude towards the users' approaches and contributions to the work of GLAM institutions (such "user involvement" encompasses popular designations such as crowdsourcing, crowd-curation, citizen science, citizen exploration etc.)
- Open access to the museums' digitised assets in the form of images, data, etc.

This article is mainly concerned with the latter aspect — which can, indeed, also be viewed as a prerequisite for the former.

The GLAM sector constitutes the overall context for this article, with special focus on the M for Museums. Statens Museum for Kunst (SMK) is the specific case studied, and the subject under particular scrutiny is the slow incorporation of OpenGLAM principles into SMK's DNA. The central leitmotif — which can be traced from the article's introductory bird's eye view of the challenges and potentials faced by the GLAM sector today all the way through to the presentation of the specific case — is that we must take on a new role as catalysts of the users' knowledge and creativity. In order to achieve this we need a new foundation for our work, one that comprises digital infrastructure and a digital mindset in equal measure. This article addresses how these foundations are currently being built, bit by literal bit, at SMK.

The literature serving as the basis for this article reflects a GLAM sector in the dazzling sidelight cast by external sources. References are made to Lawrence Lessig, Clay Shirky, Chris Anderson, Tim O'Reilly, Don Tapscott, and Anthony Williams — some of the

most well-established thinkers within Internet culture and economics. Their analyses of new scenarios for development and growth, for the production of knowledge, information, and culture have come to define how the Internet and digital media are described and perceived worldwide. Many of these writers are American, but their analyses have won global acclaim and use: The Long Tail, Social Media, Crowdsourcing, Cognitive Surplus, and Wikinomics are now firmly established concepts used across the world about the Internet, digital media, and the ways in which they affect our culture, economy, and self-image.

## **On foreign turf**

This article presents six years of studies in, and development of, digital museum practice at SMK. Here, 'digital museum practice' encompasses museum work that uses digital tools or is realised on digital platforms — i.e. everything from entering artworks into collection databases, digitising works, building websites, developing digital presentation and interpretation efforts in the galleries, to webcasts of museum events, and the use of social media. Over the course of these six years I have worked as a project researcher at SMK, focusing on the digital presentation of the museum collections. During this period, openness and sharing have won increasing attention as strategic options for the cultural heritage sector. This has become a focus area for my studies and has been translated into a range of initiatives intended to demonstrate the potential inherent in transforming SMK into an OpenGLAM institution.

Let me be entirely honest; I'm not on my home turf here. My professional qualifications consist of a degree in Art History, and

I have no digital background — neither practical nor theoretical. My university thesis described how a canon of art history is established and changed over time, leading to a critical analysis of the exertion of power that a canon imposes on the art scene — and, very importantly, how this can reduce diversity in contemporary art. At first glance this subject may seem miles apart from the digital field that has now become my professional focus at SMK. Nevertheless, a red line connects my background in canon criticism — a critique of the power structures determining what is included in and excluded from art history — to the ways in which digitisation and the Internet allow open access for everyone. My fundamental position is that museums should always endeavour to present art in all its diverse manifestations and be in constant dialogue with the surrounding world about which decisions inform their collecting and curating practices — what is on display and what is put away, and why. My work at SMK has slowly revealed the potential of digital media to me. Piece by piece I have found that the Internet offers almost ideal opportunities for realizing the paradigm of diversity that I described in my thesis, long before digital media became a central part of my profession. As a result, I have dedicated my efforts to the core task of exploring and developing digital museum practice that can bring my profession — art history — into a strengthened position in the digital media culture of the 21st century. Sharing is Caring has become my professional stance; I see tremendous potential in the GLAM sector sharing digitised collections without restrictions, co-operating rather than competing, and demonstrating trust in our users and respect for their knowledge and creativity. And, very importantly, in the realisation that what does not regenerate, will degenerate.<sup>5</sup>

During my time at SMK, I have noted increasing political expectations that state-subsidised museums co-operate, share their

digitised assets, and incorporate user perspectives in an ongoing interplay with a new social Internet culture. Often, this is a requirement to gain access to state funds. As the nation's main art museum, SMK has a special obligation to act as co-ordinator and guide for other Danish art museums. In other words, I have a pragmatic approach to the technological development and how it affects my profession. Having said that, my professional background in art history has also presented something of a challenge at times. In Plato's Symposium Aristophanes relates how man searches for his complementary half. Similarly, my position as an art historian occupying a job within the digital field makes me painfully aware that my professional qualifications only meet some of the real requirements of the job. At times I have felt that, with my limited insights into the realms of technology, I have been trying to reinvent a wheel that had long since been developed and put into production by someone else. At the same time, however, my background in art history has allowed me to fulfil an important role at SMK, bridging the gap between traditional and new approaches to museological work.

My work on examining and developing digital museum practice has not rested on any formal theoretical basis. Digital museum practice was not defined from the outset as a proper professional field at SMK; rather, it has been perceived as an experiment, an add-on supplementing the museum's core activities. Classic parameters of academic study, such as choosing a specific method and carefully delimiting the area of study, were not defined from the outset; such issues have gradually come up and been addressed on an ongoing basis. Indeed, rather than research, my real task was practical in scope: Creating a vivid and engaging presentation of the SMK collections online. As this article will show, this task would expand and change along the way. This has created unforeseen challenges.

The strategy at SMK has been to try out various digital media and platforms in order to learn from specific experiences. I am not an expert on digital infrastructure, copyright, or business models. Even so, over the course of the last six years I have ventured into these fields because they create new opportunities for the ways in which museum work is conducted.

## **Mutable practices**

The process at SMK is in no way unique. GLAM institutions across the world are trying out various digital technologies, platforms, and working methods; they experiment, share the lessons learned, and seek to adapt to their users' changing needs and expectations. There are no firm guidelines in place for digital museum practice for the simple reason that the field is still in its infancy and undergoing rapid development. Knowledge about the wildly prolific field of digital media and technologies and how they can be used in a museum context is very much generated through DIY learning.<sup>6</sup>

A surprisingly large number of people working with digital media in the GLAM sector are DIY learners. Our ranks include everything from artists to anthropologists to experts on English literature — but we rarely have formal IT qualifications on our diplomas.<sup>7</sup> This is first and foremost a pragmatically focused field, but even if it had been more academically inclined, the field is moving too quickly for traditional print publishing to keep up. For those reasons most of the sources for my studies are not traditional printed publications, but a wide range of wikis, blog entries, tweets, emails, presentations shared via Slideshare, online videos and interviews, etc. It is a liquid, expansive body of information and insights.

Digital museum studies is an emergent academic discipline, with Digital Heritage at Leicester University being the most firmly established example, and Digital Humanities constituting a wider, interdisciplinary field of study that looks poised to gain influence in the GLAM sector in the years to come. However, digital work is still quite far away from being an established professional discipline within practical museum work — certainly in a Danish context — which means that most of the work is done on a project basis and only slowly finds its way into the operating budgets. Pioneers within the field have paved the way for ‘best practices’ by being the first to adopt new technologies, media, methods, platforms, and tools in their museum practice; by demonstrating value, benefits, and drawbacks; and by sharing their experiences with international peers. At SMK we have sought to learn from and build upon these pioneering efforts, but as yet the specific examples are so scattered — and the variations between the institutions so great in terms of size, collection area, user demographics, etc. — that it can be difficult to simply transpose a given practice from one museum to another. The cases I use to elucidate the process at SMK come from the international GLAM sector, and together they present a picture of scattered developments. Some of the most extensive examples come from American GLAM institutions, as well as museums in The Netherlands, Great Britain, and Australia. Furthermore, the Internet and digital technologies are only just now reaching a level of maturity where their potential can truly unfold itself in substantial and sustainable ways. Only now have they become ubiquitous in our everyday lives, always at hand and utterly indispensable.

Setting up digital museum practice at SMK has in itself been a DIY process. The process has received only limited managerial direction; the museum has no digital manager equivalent to its head of research and head of education. Rather, our work has taken the form of practical

field studies and concrete development, driven by a desire to explore digital technologies and media, and how we can use them in our museum practice. Our method has consisted in thinking big, starting small, and moving fast, all based on the tenet “Fail Forward”. We have made a virtue of experimenting with new technologies and platforms that we found interesting, not always knowing exactly where they would take us. For us, it was crucially important to let digital technologies and media become a part of our everyday work life, to learn what they can — and cannot — do, using this insight to prompt further development in directions that support our mission.

We have learned a lot from this process, but at times it has been an expensive way of growing wiser. The approach has given us lots of experience that contributes to the shared pool of digital museum practices, that we ourselves have drawn on so heavily during our development process. We have been driven by curiosity and desire, but also by a sense of pressing need. Our work has prompted a growing awareness within SMK of the fact that openness, sharing, and co-ordinated efforts across the sector are what make our institutions robust and relevant in the digital age. These properties can help us transform into platforms — physical and virtual — that have meaning and value to our users, the very people we are here to serve. If we do not evolve along with the technologies that shape user behaviour, then the institutions for which we are responsible will at best become relics of a bygone era, at worst stagnant and forgotten cultural archives.<sup>8</sup>

## **A weath of opportunities**

A new tier has been added to all GLAM institutions throughout the world: the Internet. Here we seem to have access to everything,

everywhere, at all times. We do not need to concern ourselves with opening hours, modes of access, or whether the museum itself is thousands of miles away. If we have an Internet connection, we have access.

The role of the GLAM sector in society is, broadly speaking, to make our cultural heritage available to all, to support learning and education among the general public, to inspire creativity and personal development, and to help contribute to the building and preservation of a diverse culture. The Internet has opened up brand new opportunities for museums, libraries, and archives for gaining a wider reach and being relevant to people when and where they need them. But it also requires the GLAM sector to adjust to a radically new situation; a situation that changes our users' expectations of us and requires us to adapt, leave old habits behind, and adopt new strategies and skills to fulfil our mission. A lot of hype tends to surround digital technologies, and at times the pace of technological development can almost take our breath away. However, I — and many others — view digital technologies as something that offer us unique opportunities for fulfilling our mission in the 21st century.

Even though keeping track of the technological developments can seem daunting, we nevertheless seem to adapt quickly to the new habits and comforts they bring. First, the PC entered our everyday lives, making it easy to work with data and information in a structured manner, whether you were a doctor, art historian, or accountant. Then the Internet arrived, opening up entirely new dimensions for what the PC could do for us by placing the entire world before our feet in digital form, like a Maggi cube of the world. The Internet, whose 20th anniversary was celebrated in 2013, was from the outset conceived as a free and open domain, allowing everyone to

utilise its potential.<sup>9</sup> Finally, the PC and Internet became truly integrated when smartphones and tablets made digital access mobile and ubiquitous, putting it right into our hands.

Productivity and efficiency are not the only things to have made a huge leap ahead with the aid of the Internet's radical openness and the rapid proliferation of digital technologies. As Clay Shirky puts it in his book *Cognitive Surplus: Creativity and Generosity in a Connected Age* the emergence and global reach of the Internet has set free a tremendous surplus of knowledge and creativity. This overabundance can flow freely thanks to new social technologies that turn passive TV audiences into multi-media producers, newspaper readers into reporters, and put people across the world in touch with each other in dedicated networks with powerful, free tools right at their fingertips.<sup>10</sup> We are rapidly moving out of the broadcast era, where we were accustomed to the passive consumption of content selected and related by authorised experts, into the Internet era, where we are becoming accustomed to the fact that media are also social — they are places where we arrange and organise things ourselves, pass on our own knowledge and attitudes, and help shape the way our shared reality is presented. We have gained direct access to the “publish” button, and more and more people are seizing that opportunity, pushing the button hard. Jay Rosen from the New York University simply calls Internet users “The People Formerly Known as the Audience”.

A general trend is emerging; many companies and institutions, that are successful online, are good at supporting and harnessing people's cognitive surplus. Instead of watching TV as a parttime job, as Shirky aptly puts it, we now have the opportunity to spend our time actively contributing knowledge, help, and skills in contexts that mean something to us and where we can make a real difference.

The best-known example is Wikipedia — an encyclopaedia aspiring to encompass all the knowledge in the world, in myriad languages, created through the shared efforts made by thousands of volunteers from the entire world. An unthinkable concept prior to the Internet. But now, after the advent of the Internet, it is a tangible reality that most of us use every day, and to which people all around the world devote millions of hours of voluntary work.<sup>11</sup>

How do they find the time? That is a question puzzling many readers of *Cognitive Surplus*. However, Shirky turns the issue upside down, asking this question: How many hours of cognitive surplus would be set free if the world's population spent just 1% of the hours we spend watching TV every year on contributing to a common cause? Just this one per cent would correspond to the production of more than 100 Wikipedias a year. If people have the means, motif, and opportunity they will also find the time. The Internet and social technologies serve to accrue and pool people's individual enthusiasm, giving it direction and real impact. Generosity and creativity are central aspects of this culture (as is indicated by the title of Shirky's book); not because we live in an age where people are more generous and inventive than before. But, argues Shirky, because the development of the social Internet has given the world's population the tools to unleash potentials that have always been inherent in mankind, on a hitherto unseen global scale.<sup>12</sup>

## **A new museum culture**

The culture of co-operation, generosity, and participation that characterises Internet culture has prompted a new economic paradigm that has been given the striking name *wikinomics*, invented by Don Tapscott and Anthony D. Williams in their 2006 book by the

same name. *Wikinomics* is based on four pillars that fundamentally change how companies and knowledge institutions can act:

- Openness: transparency and open standards replace secrecy and closed licences.
- Peering: professional peers and users are actively mobilised to help develop and improve data, products, and services.
- Sharing: information and assets are shared freely in order to allow everyone access to the ongoing development, thereby giving added impetus to the discovery of new solutions.
- Acting globally: the global network culture makes it possible to scale up initiatives and reach far larger markets and user groups.

The book *Wikinomics* is full of examples of how this new economic paradigm generates value, both in terms of sustainable solutions and cool cash. *Wikinomics* extends from the business world far into the knowledge and culture industries. In recent years a wide range of non-profit organisations and grassroots initiatives have successfully generated vast amounts of knowledge and content by opening themselves up to user contributions, collecting and combining them to form useful digital resources.

Aside from the wellknown example Wikipedia, other highlights include OpenStreetMap, which has grown from its humble beginnings in 2004 to become a worthy competitor to Google Maps (more than two million registered contributors as of March 2015); Librarything, where readers can catalogue their books and make them searchable to others, share recommendations, and get in touch with like-minded readers (more than 1.6 million users, more

than 80 million books catalogued as of April 2013); and DigitalKoot, where more than 100,000 users helped the National Library of Finland proofread and correct more than 8 million words in digitised newspaper articles over the course of less than two years, simply by playing a simple and fun online game. In Denmark, the DR Kunstklub (the Danish Broadcasting Corporation's Art Club) seems to be taking Clay Shirky at his word, turning traditionally passive viewers into active co-creators of cultural expression. The Art Club successfully nurtures a bubbling creativity by presenting people with more or less firmly delimited tasks, prompting responses from a dedicated and growing community. The resulting cultural artefacts and statements — often beautifully crafted and thought-provoking — are exhibited by the DR Kunstklub online and at cultural institutions nationwide.

When analysing what makes these diverse platforms successful, certain structural features recur:

- Influence and scope for action: Users are invited to take part in decision-making, actively affecting the service or forum to which they contribute.
- Combining work and pleasure: Users get the opportunity to contribute something useful and valuable while having fun.
- Community-oriented: The platforms establish a framework where users can meet likeminded individuals and form communities based on shared interests. One of the main driving forces for participation resides in contributing to the common good.

This new culture, made possible by the Internet's social technologies and global network, changes people's perception of themselves and their relationship with the world. Knowledge and culture is no longer

exclusively created by experts and professionals, served up to passive consumers; rather, it is something to which everyone can contribute. The boundaries between producers and consumers become blurred, giving rise to the so-called prosumers, who have become accustomed to — and increasingly expect to — participate actively if they so desire. This quite obviously has strong implications for the GLAM sector, which is situated at the intersection of this development. Our sector of expert institutions must now relate to “The People Formerly Known as the Audience” — an involved, active, and participating audience. How to approach this task? According to Nina Simon, who has kept the influential blog *Museum 2.0* for a number of years and is now head of the Santa Cruz Museum of Art and History, this change is fundamental. Today museums cannot simply be satisfied with producing professionally valid and engaging exhibitions; they must also develop and offer opportunities for visitors to share their own content in meaningful and appealing ways.<sup>13</sup>

Adjusting to this new situation is a major challenge for museums. Our institutions have strong traditions and high moral standards as far as the discharge of our duties is concerned. The tasks of collecting, recording, doing conservation, research, and educational activities are already stretching work schedules to snapping point. How can we possibly find the time to also collect the users’ knowledge and facilitate their creative endeavours? How can we teach ourselves the necessary skills and competences to carry out these new tasks to proper professional standards? Is it a job for museums to act as creative playgrounds and public forums for dialogue? Couldn’t people simply turn up and visit exhibitions just as they have always done?

Internet culture affects museum culture whether we want it to or not. Museums must face up to new sources of competing offers to

keep up and stay relevant to next generation users.<sup>14</sup> The cognitive surplus of knowledge and creativity, that fizzles and pops on the Internet, will not flow into the museum ecosystem by itself. It requires effort. At the same time the Internet's free flow of content and knowledge also changes the public's general expectations on what museums can and should offer. In just a few years, users will expect easy and user-friendly access to searching and re-using the museum's online collections.<sup>15</sup>

In 2013, the Danish Ministry of Culture launched a digital think tank that includes representatives from the entire Danish cultural sector. The initiative testifies to the fact that not only the museums, but the cultural sector in a wider sense — all the industries that form and convey cultural output and information in a country like Denmark — is under pressure from many sides: Technologies are changing rapidly, as is user behaviour. Large international enterprises such as Google, Amazon, and Netflix are in competition with Danish cultural alternatives. Users expect easy, instant, and preferably free access to information, culture, and entertainment online. This situation creates challenges for all creative industries.<sup>16</sup> All branches of the cultural sector are realising that the conditions, subsidy schemes, and patterns of user behaviour we know and have been comfortable with, are likely to change. If museums, and indeed the GLAM sector in general, is to have relevance and value to future users, it is crucial to adapt and assign new and different priorities to our resources and energy.<sup>17</sup> If our institutions are to thrive in the years to come, we must face the developments that will happen, whether we welcome them or not. If we act decisively and with our eyes open, we stand a much better chance of affecting the general development and ensuring that our specialised skills and institutions will hold an important position within Internet culture.

## A fully digital museum?

When we defined the vision for SMK digital in 2008, we said that we wanted to be a 100% digital art museum. In hindsight the efforts to integrate digital media, methods, and approaches in SMK's workflow and mindset has taken the form of a long series of pilot projects, one following the other in steady succession. For SMK the process has been tantamount to basic research, and this research has been accompanied by a growing awareness that a new professional field is emerging, one that is bound to be crucially important for cultural institutions' wellbeing and impact in the 21st century: Digital museum practice. The question is whether five years of working with SMK digital has made us a fully digital art museum? And whether such a strategy is even desirable? Anne Skovbo, who has worked as digital project manager in SMK digital, has reflected on what we have learned during the project, and her conclusions include the affirmation that sustainable digital museum practice requires what she calls digital management.<sup>18</sup>

Digital management — what does that mean? To put it in simple terms, it means that digital museum practice should be an integrated professional field in its own right, on a par with the museum's other areas of responsibility, and that an experienced expert should be assigned to manage the area and set professional goals and standards, just as the museum also has a director of collections and research, education, and conservation. In practice, however, it has proved less than simple to introduce digital management. In these years of financial austerity, SMK (like many other state-operated cultural institutions) is facing lower funding, fierce competition for private funds, and increasing political requirements to meet measurable objectives. Nevertheless, in the long run investing in digital management is necessary. As Ross Parry, Senior Lecturer in

Museum Studies at Leicester University points out, digital museum practice has held its pilot status for long enough. The cultural heritage sector is ready to venture into more of a theoretical and historically founded practice infused by a methodical stringency in its use of digital media.<sup>19</sup> Among other things this requires thoroughly professional management of the digital endeavours at museums.

One of the main undercurrents in SMK's development work has been to strike the right balance between innovation and infrastructure. Today we see that the absence of a dedicated digital management has meant that we have often launched exciting innovative projects without realising what they demanded in terms of infrastructure if they were to become fully operational. In other words, the museum's grand, forward-looking ambitions have not always been tempered by a realistic overview of what it would take to translate them into reality.<sup>20</sup>

Digital museum practice is a new field of work that had not been incorporated into SMK's strategy and practices before 2008. The DIY method has taken us far. But now we have reached a point where our work with digital media must be professionalised in order for us to increase the scale and sustainability of our initiatives, and give them value that reaches beyond the mainly symbolic. In the wake of five years of pilot efforts we now face a pressing need to measure and document the effect of our work — and adapt it accordingly. In addition to a digital management organisation, the museum will also require a new set of analytical skills that enable us to gather data on the effect of our digital work and learn from this information for our future work.

The professional skills required for such work has not been represented on our staff before, but now they are urgently required.

This is yet another area where we must fulfil our responsibility as the main museum of art in Denmark, developing tools and guidelines that can benefit the Danish museum scene in general.

Conversely we also see that right from the outset SMK digital defined a set of forward-thinking and viable visions: Being a catalyst for users' creativity, working with openness and dialogue as fundamental principles, focusing on high-quality, high-resolution images as a particular attraction of an art collection in the digital age. These trends have only grown more pronounced since the launch of SMK digital. For example, we see that the Rijksmuseum's popular and critically acclaimed new website employs several of the basic principles that were also at the heart of Art Stories: Providing an outlet for the users' creativity, high-resolution zoomable images, images acting as points of entry to the experience, optional texts, layered design, and links to external sites that provide information already available online. The difference is that the Rijksmuseum website presents these trends in a fully realised form, created within the framework of an institution that has achieved a greater level of digital maturity. We find ourselves convinced that our visions are on the right track, but we still need to carry out important preliminary work: Update and consolidate our strategy, build infrastructure, and introduce professional digital management. Such foundations must be in place before we can truly engage in dialogue and interaction with the users and their cognitive surplus.

### **Wanted: A digital infrastructure**

When SMK decided to release a small batch of high-resolution images the museum did not have the technological clout to handle

free downloads. All data, images, and information were assembled manually, a process that was extremely time-consuming — particularly in view of the fact that open access has only been provided to such a tiny part of the collection. In spite of the small scale, the project has had a tremendous impact. The results have prompted the SMK management to pass the decision to release high-resolution images of all SMK works in the public domain. An open access policy for SMK is being developed, and the release of larger batches of images for free download will be made on an ongoing basis, as we build the necessary infrastructure and digitise more parts our collections. Almost 60% of the museum’s paintings and sculptures are in the public domain, as is more than 80% of the collection of prints and drawings, and 100% of the plaster cast collection. In other words it is possible to release a major part of SMK’s digitised collections for unrestricted use and sharing. However, doing so will require investments in a viable and sustainable digital infrastructure that automates and rationalises the museum’s workflows, and optimizes searchability of the digitised collections.

The results we have to show as yet are only ripples on the surface. SMK digital has opened our eyes to the fact that real innovation resides in the construction of a digital infrastructure. Building a digital infrastructure will entail radical changes in the ways we think and work; changes that involve open access and standards in all aspects of our practice: When we collect and catalogue art, users can help select, index, and describe the works. When we develop open source database systems, other institutions and developers can benefit from our work. When we make our research and conservation processes transparent we pave the way for exchanging knowledge with the outside world — with professional peers and the general public alike. And when there is unrestricted access to our collections we move away from one-way to

dialogic communication that can encourage users to express their own views and creativity. We create a digital museum mindset.

Quite ironically, a crucial aspect of such a mindset rests on the fact that the digital element should often remain invisible. Digital technologies, tools, and platforms used in museum settings should not necessarily call attention to themselves; often, they should discreetly and seamlessly support the experience of the content they present: A fully integrated web that expands and enriches the users' art experience and enables them to act.<sup>21</sup>

Our collections and knowledge remain among our most important assets: they must be preserved, ensuring their continued relevance, and we do so by sharing them. In this sense the vision of being a fully digital art museum still makes perfect sense today.

## **GLAM success in the digital age**

In the winter of 2012-13 SMK once again brought together a panel of international advisors from around the world to attend a number of in-house workshops. The panel represented some of the world's leading cultural institutions: the Rijksmuseum, Tate, Brooklyn Museum and MoMA. These institutions have all made a digital mindset part of their DNA. Their success in the digital age is based on long-term investments that specifically aim at building a digital infrastructure and at translating their collections and knowledge into flexible digital formats. They have often benefited from substantial private funding when building their digital foundations. And they have benefited from strong and consistent digital management structures, or highly qualified employees within the digital field who have the authority to make decisions. These things pay off.<sup>22</sup>

As a result of these workshops, SMK is currently redefining a number of fundamental principles for our future digital efforts. These include that:

- We are data-driven in our work.
- We use open source technology.
- We carry out in-house development.
- We work in an agile manner.
- We partner with other institutions to carry out joint development work.
- We put well-defined user needs at the basis of our development work.
- We involve users in the development process.
- We provide unrestricted access to non-copyrighted data and images.
- We facilitate sharing, reuse, sampling, and remixes of our digitised resources.

At the time when SMK introduced open access to its images, no major studies on the effect of unrestricted access to data and digitised image collections were available. Only now do we begin to see documentation describing the impact of an open access policy — and consistent methods for measuring this impact. A comparative study from 2013, supported by The Mellon Foundation and carried out by Kristin Kelly, examines the impact of open licensing of digitised art collections among eleven British and American museums that have introduced varying forms of open access. The study provides a detailed account of the different interpretations of and rationales behind open access policies, among others at Yale University, The Metropolitan Museum of Art, and The National Gallery of Art in Washington — all of which have inspired SMK's decision to choose an open licence. The study affirms that the introduction

of an open access policy is based on each museum's mission to promote awareness and use of public collections, that facilitating user-friendly access to digitised image collections and data requires investments in digital infrastructure, and finally that the museums which have introduced open access to their digitised collections have concluded that there is no reason to be concerned about the risk of abuse or damage to the integrity of the works. Rather, the study suggests that a policy of open access leads to greater awareness of — and positive attention to — the museums, their collections, and their brands.<sup>23</sup>

Documentation of the effects of an open access policy and open licensing is now beginning to arrive from several different quarters. Entities such as Europeana, the UK Collections Trust, and the OpenGLAM network are collecting data that show the effects of opening up, and are also identifying viable parameters on how to measure the value of such openness — all in order to encourage support for joint, co-ordinated efforts that promote universal access to digitised culture.<sup>24</sup>

Simon Tanner, whose 2004 study on image licensing in US museums provided important documentation of the fact that museums' traditional photo sales are unprofitable, published *The Balanced Value Impact Model* in 2012. The model offers a set of tried-and-tested methods for measuring the impact of digitisation and digital media presence on cultural heritage institutions.<sup>25</sup>

These studies view the value of access to, and use of, digital culture from a wider perspective than the purely profit-oriented. According to these sources, the impact of open access policies should be regarded from a more holistic point of view and be measured using parameters such as greater awareness of the

museums' collections, the circulation and usage of these collections on non-institutional platforms (so-called "earned media"), and the long-term effects of the greater awareness of and usage of digitised collections — for instance in terms of the number of visitors attracted to the institutions in question, and the general public's attitude to the value and relevance of cultural heritage and museums.

Parameters such as these are undoubtedly important when assessing the impact of digital presence in the cultural heritage sector. However, museums also still need to generate revenue and attract funding in order to maintain their levels of activity and high quality standards. A major challenge for the cultural heritage sector in the coming years — as open licensing looks poised to become the norm and displace traditional photo sales — will be to develop new, viable business models based on open access to digitised resources. More evidence is needed of which digitally founded business models return real value for cultural heritage institutions as well as for their users. There are ideas in abundance about print on demand, freemium and micro-payment models, but as yet there are no obvious examples of best practices for the museum world to adopt. Even the Rijksmuseum, whose new website is a resounding success, has not yet seen strong sales of 'on demand' products such as postcards, posters, and customised, framed detailed views of artworks based on the images available in the Rijksstudio. Nevertheless, the Rijksmuseum itself regards its open access policy as a success, even if they have not yet cracked the code of developing profitable 'on demand' business models to supplement their free services. Since the launch of the new museum website, which focuses attention on the large body of images with unrestricted access, traffic on the website and the time spent by each visitor

has increased greatly. Indeed, how is it even possible to calculate the value of the greater exposure and positive press generated by the museum's decision to open up their collections? How does one establish the monetary value of the greater awareness of the museum's artworks and exhibits among people who would not normally visit the museum, but who come across their collections on blogs, social media, in Wikipedia articles, online videos, and so on?<sup>26</sup>

Not every museum has a collection as famous as that of the Rijksmuseum; a collection capable of generating a great deal of international attention in itself. Even so, any and every cultural heritage institution will have collections which could, by being accessible, potentially become part of the Internet's long tail, finding new, interested users in the most unlikely places and becoming of value to them. Each individual institution must carry out their own analyses of the financial consequences of changing their existing image and data licensing policies before transitioning to open access. However, at this point there are strong indications that only few museums will lose profits on abandoning their conventional business models while they are likely to gain major advantages by providing open access to their digitised collections – specifically in the form of exposure, extra traffic, and new forms of usage that create value for users.

### **The future is now: Co-ordinated effects**

When speaking about technological developments many try to gaze into the crystal ball in an attempt at divining what the future holds for the cultural sector. But that's not necessary. The future is now. The Internet and digital media have already changed our field of

operation. User behaviour has changed. Expectations of what cultural institutions have to offer, where they can be approached, and how their content can be used are different now compared to the decades that went before. To paraphrase Michael Edson, what we need to do now is not to prepare ourselves for the future, but for the present. We must learn to swim in a flood of images.

We have a well-established tradition for responding to political guidelines pertaining to our research, conservation, presentation and education activities. In recent years we are facing increasing requirements concerning digital accessibility, inclusion, and collaboration with other institutions in Denmark and abroad. Grass-roots organisations such as Creative Commons, OpenGLAM, and Wikipedia work across professional and national boundaries to establish open standards as the norm for cultural institutions.

It is this kind of culture, one that aims for collaboration and coordinated efforts, that SMK has sought to nurture in Denmark in recent years. A wide range of shared challenges await the cultural heritage sector, and we wish to continue to work with other institutions on developing shared and sustainable solutions. Examples of such work include:

- Joint efforts to make Denmark's cultural heritage – and research within the field – available on Wikipedia.
- Joint efforts to promote user tagging of Danish cultural heritage collections to enable user-friendly cross-collection search.
- Joint development of national technical platforms, for mobile presentation and multimedia productions
- Co-ordinated collection of data on user behaviour

across institutional borders.

- Co-ordinated negotiations on copyright, and the introduction of open access as the standard policy for digitised material in the public domain.

There is plenty of work to do. However, pilot projects such as billedeling.dk and HintMe where Danish museums build shared technical platforms and introduce open access to their images, suggest that it is possible to establish shared standards for openness when we work together to pave the way for new practices within our sector. The way ahead is to professionalize digital museum practice, co-ordinate efforts among similar institutions, jointly build flexible and sustainable technological solutions, contribute to a digital cultural heritage commons, and work together on incorporating the users' knowledge and creativity to enrich our shared cultural heritage.

## Notes

1. Sanderhoff, 2007, p. 190-201.
2. This was recently consolidated in the new Museum Act.
3. According to Ross Parry, Senior Lecturer in Museum Studies at Leicester University, there has until very recently been a striking lack of methodical stringency within the branch of Museum Studies known as museum computing (Parry, 2010, sp. 457). Digital Heritage is a field of study offered as a Masters Degree or Postgraduate course under Museum Studies <http://www2.le.ac.uk/departments/museumstudies/postgraduate-study/digital-heritage>. On Digital Humanities, see [http://en.wikipedia.org/wiki/Digital\\_humanities](http://en.wikipedia.org/wiki/Digital_humanities)
4. Both expressions stem from members of the international advisory board that is associated with SMK digital. "Think Big, Start Small, Move Fast" is a basic idiom in Michael Edson's work, while "Fail Forward" comes from Shelley Bernstein.
5. The term "The digital age" leans to Ross Parry's definition and use of the term in *Museums in a Digital Age*, 2010.
6. I'm thinking especially of Edson's, Shirky's and Tapscott & Williams' arguments for harvesting and including the knowledge and competencies of the crowds in the professional work

of the culture and knowledge sectors. (Edson, 2011; Shirky, 2010; Tapscott & Williams, 2008)  
7. Shirky, 2010, p. 36.

8. In March of 2012 the success of Wikipedia prompted the venerable Encyclopaedia Britannica to bring its 244-year long history of printing reference books to an end, adopting an exclusively online publication strategy instead.

9. Shirky, 2010, p. 20-29.

10. Tapscott & Williams, 2008. The term 'wiki' is derived from the Hawaiian word for 'fast'.

11. This aggregate of collective knowledge volunteered by non-experts is often divided into two overall categories: Crowdsourcing: when an enterprise or institution outsources a function or task and Citizen science, when independent experts and amateur researchers make volunteer contributions to the work done by an established museum or institution, e.g. in the form of collecting, recording, data processing, research, etc. (Carletti, Giannachi, Price & McAuley, 2013) <http://mw2013.museumsandtheweb.com/paper/digital-humanities-and-crowdsourcing-an-exploration-4/>

A recent addition is Citizen exploration, introduced by David Lang in the online magazine Make: as a critical comment to the Citizen Science concept: <http://makezine.com/2013/11/02/makers-as-explorers-of-the-universe/>

12. OpenStreetMap: <http://www.openstreetmap.org/>

LibraryThing: <http://www.librarything.com/>

Digitalkoot: [http://www.digitalkoot.fi/index\\_en.html](http://www.digitalkoot.fi/index_en.html)

DR Kunstklub: <http://www.dr.dk/Nyheder/Kultur/Kunstklub/kunstklubben.htm>

13. A commented overview of websites and online services capable of generating large quantities of user-generated data and content can be found on the SI

Web and New Media Strategy Wiki <http://smithsonian-webstrategy.wikispaces.com/>

websites+that+get+1+million+hours+of+effort

I carried out this research for Michael Edson at the Smithsonian Institution in October 2011.

The overview is a living document, and everyone is welcome to add to and edit the list.

14. <http://museumtwo.blogspot.dk/>

15. Programme for the Danish Ministry of Culture's Digital Think Tank's start-up seminar in Copenhagen, 27 May 2013: <http://kum.dk/da/Temaer/Digi-konference/>

16. The need for measuring the effect of museum computing and statistical analyses of the field (web metrics) is a central theme at leading international digital museum conferences these years, e.g. Museums and the Web, Museum Computer Network, and MuseumNext.

17. The digital infrastructure we are currently planning will include a Digital Asset Management system – a multimedia database that will be integrated with the museum's collection database – as well as embedding machine-readable data in image files to ensure easy and correct credits, tagging images with keywords in order to optimise searches, developing a user-friendly search function for the collections, developing an interface that allows for free downloads of high-resolution image files from the multimedia database, and an open API that provides access to downloading the museum's complete non-copyrighted data and image collections.

18. SMK's Conservation Department is a trailblazer within the field: its employees regularly blog about their ongoing projects, post video footage demonstrating their work, and are very active on social media, discussing various issues and exchanging know-how and observations with interested parties throughout the world. <http://www.smk.dk/udforsk-kunsten/hos-konservatoren/>

19. The international advisors at SMK's internal workshops were Shelley Bernstein, Chief of Technology, Brooklyn Museum, Lizzy Jongma, Data Manager, Rijksmuseum, James Davis, Program Manager with the Google Art Project and former project manager of Tate Art & Artists, Jesse Ringham, Digital Communications Manager, Tate, and Allegra Burnette, Director of Digital Media, MoMA. Concurrently with the internal workshops SMK also staged a number of public lectures where representatives from the Danish cultural heritage sector could take part and learn from the know-how accumulated by our colleagues from abroad.

20. Agile development is a designation used for a form of project management where you work iteratively and incrementally in brief, self-contained sequences or sprints, each of them leading to the completion of specific deliverables before the overall project is ultimately concluded.

80. Gorgels, 2013.

21. In Gorgels' own words, "The only aspect that has not been in line with expectations is the number of orders for products. Perhaps users find the ordering process too complex, or are not yet satisfied with their own creative efforts." (Gorgels, 2013)

22. Edson, 2011-12.

23. I am referring to e.g. the guidelines pertaining to the funding allocated for presentation/education and digitisation by the Danish Agency for Culture and the Danish Ministry of Culture, as well as to the increasing demands requiring Danish culture institutions to supply data and digitised collections to Europeana.

24. For example, the Wikipedia project GLAM-Wiki supports cultural institutions that wish to enrich Wikipedia with their knowledge and materials. GLAM-Wiki offers to facilitate such work on the basis of the principle that this will benefit everyone: the GLAM institutions, Wikipedia, and – very importantly – the users. See <http://outreach.wikimedia.org/wiki/GLAM>

25. Other countries provide excellent examples that might usefully be emulated, e.g. the BBC-led initiative Your Paintings, which facilitates user tagging of works in national collections <http://www.bbc.co.uk/arts/yourpaintings/>, TAP, a free open source tool for developing guided tours at museums, developed by the Indianapolis Museum of ART <http://www.imamuseum.org/blog/2010/04/05/5-reasons-why-tap-should-be-your-museums-next-mobile-platform/> and not least Europeana's data exchange agreement, which transfers all aggregated cultural heritage data to the public domain. <http://pro.europeana.eu/web/guest/data-exchange-agreement>

26. Trove <http://trove.nla.gov.au/?q=>

An introduction to Tim Sherratt's work <http://www.digisam.se/index.php/en/speakers> Sherratt's talk is available on video via this link <http://digisam.se/index.php/konferensen>

# DEMOCRATISING THE RIJKSMUSEUM

JORIS PEKEL

EUROPEANA FOUNDATION

There is at least one exemplary case that is cited in most essays and articles in this edition: the Rijksmuseum, in Amsterdam, that presents Dutch art and history from the Middle Ages to the present day. Even before its reopening in 2013, after undergoing nearly a decade of renovations, the Rijksmuseum surprised the cultural sector with a radical sharing of its public collections, allowing any reproduction - even with commercial use.

Joris Pekel presents a clear introduction to this process starting in 2011 in partnership with the Europeana, an internet portal that acts as an interface to millions of books, paintings, films, museum objects and archival records by European cultural institutions.

Pekel is one of the coordinators of Europeana and the OpenGLAM Network Foundation that promotes free access to the global cultural heritage.

Europeana is a trusted source for cultural heritage. Its goal is to give everyone access to all of Europe's heritage with as few restrictions as possible. To achieve this, Europeana believes a thriving and healthy public domain is essential and therefore advocates that digital representations of public domain works should be freely accessible. However, this is not an easy decision to make for the cultural institutions themselves, especially when they profit from the sale of these images.

In 2011, the Rijksmuseum in the Netherlands started releasing images of public domain works online. In 2013, these were all made available in the highest resolution possible, without any copyright restrictions. In this paper, the different steps taken during this process are described, along with the consequent results. We hope that this case will be an inspiration for other cultural heritage institutions and encourage anyone with a cultural collection to learn from the experiences of the Rijksmuseum. This research has been done by the Europeana Foundation with the help of the Rijksmuseum and is largely based on the annual reports of the museum and personal interviews with employees.

The public domain comprises all the knowledge and information that does not have copyright protection and can be used without restriction. This includes books, pictures and audiovisual works. The public domain provides a historically developed balance to the rights of creators protected by copyright. It is essential to the cultural memory and knowledge base of our societies as it consists of almost all of humanity's intellectual output up until the very recent present. To emphasise the importance of the public domain, Europeana released the Public domain Charter in 2010. One of its main principles is: :

*Exclusive control over public domain works cannot be re-established by claiming exclusive rights in technical reproductions of the works, or by using technical and/or contractual measures to limit access to technical reproductions of such works. Works that are in the public domain in analogue form continue to be in the public domain once they have been digitised.*

On a theoretical level, this principle is endorsed by many - most people would agree that unrestricted and free access to the heritage, upon which modern society is built, is beneficial for all. But on a more practical level, this leads to many questions and issues. The digitisation, preservation, storing and cataloguing of the works is not without costs. For this reason, cultural institutions with out-of-copyright works are hesitant to publish them on the web in high quality without restrictions as they are worried about losing a potential source of income. Money that is sorely needed in times of cultural budget cuts and governments that expect the institutions to become more self-sustainable.

This is why Europeana continually explores and works with the cultural sector on new business models to help institutions profit from their digital assets, while at the same time living up to their public mission to make the material openly available where possible. Europeana has, alongside other organisations and initiatives, worked with the Rijksmuseum since 2011 to make their public domain collection available online without restrictions. This has turned into a great example of a cultural institution making high quality public domain content openly available while also deriving profit from it.

## **The Rijksmuseum and their online presence**

The Rijksmuseum is the Dutch national museum dedicated to art and history and was founded in 1800. Since then, it has collected over 1,000,000 physical items. Between 2003 and 2013, the iconic building in Amsterdam was being renovated and therefore closed for the largest part. At that point, only 800 square meters were open to the public. This increased to 22,000 square meters when the building was reopened in 2013. But even in this larger space, only about 8,000 objects are currently on display.

To show more of the collection, the Rijksmuseum put enormous effort into creating the digital representations of items available online today. Not only did they make around 150,000 images available online, they made them available openly and in the highest possible resolution. The quality of the images is good enough to print on a bed cover, a poster or a wall, and it is communicated by the museum actively that this kind of use is allowed and encouraged. The museum provides multiple access points to these images, including an API (Application Programming Interface) and a dedicated website called the Rijksstudio, discussed later, where they can be easily downloaded in a variety of sizes. The website also lets the user know if the particular object is currently on display in the museum or not. Because these images are free to re-use, they can also be found in other places such as Wikimedia Commons, Kennisnet, Artstor and various other websites.

Before reaching the decision to release all the material without restrictions, there were a lot of internal and external discussions. In the following chapter, a few key moments are discussed.

## Rijksmuseum in Europeana

In 2011, the Rijksmuseum started working with the Europeana Foundation. The metadata of the Rijksmuseum was made available in the Europeana database and users could access the collection via the Europeana portal. Europeana had just released its Public Domain Charter and had begun a campaign around the benefits of the public domain and the need to correctly label digitised reproductions of artwork/books/archival records etc. held by cultural institutions. When the Rijksmuseum was asked to provide legal information about their collection, not much information was available. As more and more of their collection was made available online, it became clear that there was a need for this information to indicate clearly to users what could and could not be done with the material provided by the museum. The digital collection department took a pioneering role in adding this information, and they developed a separate rights tab to their collection management system. Under it, they gave all detail about copyright and other relevant information such as third party rights and the copyright expiry date. At the same time there was considerable internal debate about the application of the public domain mark to the Rijksmuseum collections. The curators had concerns about letting material out fully into the public domain. They wanted to use a Creative Commons – Attribution (CC-BY) mark on their material, as it required the user to attribute the item to the museum. Europeana and Kennisland, a Dutch think tank that worked with Europeana on the public domain charter, argued that on reputation grounds, this would not be a good move. At the time, several open access groups such as the Wikimedia Foundation, the Open Knowledge Foundation, and others were making a fuss about maintaining the public domain status after a work is digitised. The result was wholesale adoption of the public domain mark by the Rijksmuseum and together with the following events, a serious shift in strategy.

## **Apps4Netherlands and the Open Cultuur Data challenge**

At the end of 2011, Rijksmuseum was approached by the Dutch Open Cultuur Data initiative with the request to make a few of their images available for the Apps4Netherlands competition. This competition aimed to bring institutions that produce data together with creative people such as programmers and designers, to discover what could be done with their openly available data. Open Cultuur Data encouraged a number of cultural institutions to submit datasets. When the Rijksmuseum was approached, the collection department made a careful first step by making available for the contest a small set of Chinese drawings that were not very well known. At that point, it was the marketing department that stepped in and argued that if people were going to work with their collection, they would rather give them access to the best material they had. They argued that the core goal of the museum is to get the public familiar with their collection, and that the internet can greatly facilitate that. Their belief was that making images available would not endanger the museum's existence. On the contrary, they argued that the digital reproduction of an item would pique public interest in it, leading them to buy tickets to the museum to see the real deal.

This resulted in the museum making available all the digitised objects that were out of copyright, including the masterpieces by van Gogh, Vermeer and Rembrandt. Besides the fact that the images were well known, they were also made available in a resolution high enough for full screen display on tablets and laptop screens (about 1600x1300). The combination of high quality, freely re-usable digital images resulted in the most used dataset of the competition and a lot of attention for the Rijksmuseum. This success started a larger internal discussion about making available the

even higher quality digital images of the museum and what else could be done with it. This led to the writing of the digital strategy of the museum for the following years. The strategy is not publicly available, but the key points are described in a paper by Peter Gorgels, digital manager at the Rijksmuseum, which he wrote for the Museums and the Web conference.

## Quality control

Another reason for the Rijksmuseum to release the images themselves was the proliferation of unofficial digital representations of the famous paintings on the web. When entering a search query for a famous artwork like Vermeer's *Milkmaid* on Google, it showed many unofficial results. Most of the results were bad copies of the famous artwork and they were used widely. For this reason, the museum decided to publish the high quality and true-colour images themselves. They argued that internet users could find the images anyway, so by releasing them, the Rijksmuseum could actually control the images used online a lot better. In an interview with the *New York Times*, Taco Dibbits, the Director of Collections stated:

*With the internet, it's so difficult to control your copyright or use of images that we decided we'd rather people use a very good high-resolution image of the 'Milkmaid' from the Rijksmuseum rather than using a very bad reproduction.*

As the images came from a trusted source, the good digital copies were quickly adopted by large knowledge-sharing platforms such as Wikipedia, making the bad quality images drop in popularity. The Rijksmuseum version now shows up first in a Google

image search. This process has also been described in detail in the Europeana whitepaper *The problem of the Yellow Milkmaid*, which used the case to demonstrate the benefits to cultural institutions of releasing material, and in particular, metadata describing the material, under an open license.

## **Put the material where the users are**

The release of these images without copyright restrictions made it possible for the users of various platforms to use them. The biggest and probably most well known platform is the online encyclopaedia Wikipedia. So far 6,499 images from the Rijksmuseum have been uploaded to Wikimedia Commons which is the media file repository of Wikimedia - the foundation responsible for Wikipedia. 2,175 of these images are currently used in various Wikipedia articles. These images have been shown 10,322,754 times to users visiting the articles where the material is used. The fact that these images were made available without re-use restrictions made it possible for them to appear on Wikipedia. Wikipedia editors prefer to use trusted material provided by the cultural institutions themselves to illustrate the articles they are editing. This greatly benefits both the users who have a richer experience, and the cultural institution that reaches out to a public far beyond the scope of its own website.

## **Rijksstudio**

Rijksstudio was launched in October 2012 to promote the images and the collection of the museum. Via this web platform developed by the museum, users get easy access to the material and can create their own exhibition. They are encouraged to download

and re-use the images in any way possible and to share the results with the Rijksmuseum. At the time of writing, about 136,000 virtual exhibitions have been created by visitors on a large variety of topics such as 'ugly babies' and 'birds' . Sets are also sets created for educational purposes and used in school exams. In 2013 the museum launched the Rijksstudio Award and invited everybody to create a new artwork out of their materials, the 10 best of which would be exhibited by the museum.

The Rijksmuseum has been very pleased with the results of making the images available to the public and will continue to do so wherever they can. The next section zooms into the legal implications of this decision.

## **Out of copyright works**

The Rijksmuseum is fortunate to have a very large collection that is no longer protected by copyright. In the Netherlands, as in most other European countries, creative works fall in the public domain 70 years after the death of the author (for more info see the Public Domain Calculators ). It is therefore quite clear that some of the most iconic paintings the museum holds such as the Nightwatch, created in 1642 by Rembrandt van Rijn, are no longer restricted by copyright. This allows everybody to make a copy of the images and redistribute in any way they like.

With more contemporary works it is often very difficult for institutions to publish their collections to the web because of copyright restrictions. As archivists/librarians etc. are not trained as legal experts, it is hard for them to know for sure if a creative work is still protected by copyright. This uncertainty and the fear for claims can hold an

institution back greatly in the process of making their digital collections available to a wider audience.

## **Digitising public domain works and copyright**

With the digitisation of artworks, many questions about applicable rights arise. Debated extensively is the question as to whether or not copyright may be claimed on the digitisation of public domain works. According to copyright law in most European countries, making an exact copy of a work that is in the public domain does not generate new copyright on the new version and therefore automatically falls in the public domain as well. However, when a work that is out of copyright is used in a new creative work like a remix or significant alterations have been made to the original, the creator is allowed to claim copyright on his new creation. This is where the law is open to interpretation and also differs per country. What qualifies as a 'new creative work'? Some would argue that setting the contrast settings on a scanner already requires creative interpretation of the work and therefore creates new copyright, although in most court rulings this has not been approved.

## **Restricting access to public domain works**

At the moment, cultural institutions face difficult decisions. On the one hand, the benefits of publishing collections in an open way are acknowledged more, as it allows material to be easily shared in a variety of different places on the web. This results in a great increase in the visibility of the collection and institution. On the other hand, the process of digitisation is costly, cultural budgets are being cut and institutions have been told to look for other sources of income.

For this reason many institutions are hesitant to publish their data with a public domain mark and try to keep some control over their data by applying restrictive rights labels to the objects.

## **From Creative Commons to public domain**

When the Rijksmuseum started to publish the digital representations of their public domain collections in 2011, they were cautious and added a Creative Commons Attribution licence (CC-BY) to their material to demand an attribution from users of their material. As this is effectively claiming new rights, Europeana and Kenisland argued against this. After discussions with various departments within the museum, the digital images were put out as public domain using the Public Domain mark.

Besides the argument of maintaining a healthy public domain, the Rijksmuseum's decision to adopt the Public Domain mark was guided by practicality - it was for them both impossible and undesirable to actively check and control where their images were used on the web and if the attribution was done right. At that point, their images were already being widely used and there was no way the museum could control this. By providing the high quality images without any costs and restrictions, they had spurred users to start using their authenticated scans instead of the bad reproductions.

## **Different sizes for different prices**

Many cultural institutions hold material that is in the public domain. This does not mean that they also have to publish it for free. The

Rijksmuseum has, like most art museums, an image bank where they sell digital copies of images. When at the end of 2011 they started releasing images, they offered two sizes. The medium quality image (.jpg, 4500x4500, +/- 2MB) was available free to download from their website without any restrictions. When the user clicked on the download button, a pop-up asked the user to attribute the Rijksmuseum as a courtesy. If the user was looking for the master file (.tiff and up to 200MB) they were charged.

It is interesting to compare the revenue of the image bank over the years. In 2010, when nothing was available under open conditions, there was actually less revenue than in 2011, when the first set was made available. It is even more interesting to see that in 2012, there is an even more substantial increase in sales. This shows that releasing the medium quality images to the public in 2011 still allowed them to have a viable business model, and in fact increased the amount of image sales.

This was also confirmed by the employees of the museum. This may be because individuals with no commercial interest do not want to pay high fees for a digital image whereas more commercial parties such as publishers or designers need the highest possible quality and are therefore more willing to pay for this. By making a media size available of high enough quality, it can be used in other platforms and more potential clients will learn of the available material.

## **Sustainability of image bank**

When the Rijksmuseum started to publish the digital representations of their public domain collections in 2011, they were

cautious and added a Creative Commons Attribution licence (CC-BY) to their material to demand an attribution from users of their material. As this is effectively claiming new rights, Europeana and Kennisland argued against this. After discussions with various departments within the museum, the digital images were put out as public domain using the Public Domain mark.

In October 2013 the Rijksmuseum decided to no longer charge for public domain images that were already digitised and started releasing their highest quality images for free. They preferred instead to focus their efforts on generating project funding from art foundations in order to digitise an entire collection. Such administrative costs are much lower, as a transaction is only made once and is a lot easier to handle than multiple private individuals. The fact that the Rijksmuseum is so well known for their open access policy has made getting project funding easier, it was in some cases a requirement to get the funding, according to the interviewees. For the Rijksmuseum the revenue from image sale was relatively small and they decided to abandon it all together as a way to create more goodwill, get more people familiar with their collection and attract them to come to the museum.

## **Public domain and business models**

The Rijksmuseum has made a clear decision to use the digital collection to get more people familiar with the museum and hopefully persuade them to visit. It is hard to say to what extent the free availability of the images has led directly to new visitors, but it is clear that this move towards open access to the collection has attracted a lot of attention from all over the world. Even when the museum was still closed, it was featured in the *New York Times*

and many other international newspapers. Rijksmuseum representatives were invited to present at a multitude of museum and heritage conferences, gained attention from a new audience of developers and designers. The museum was widely celebrated on social media, and used as a case study for researchers looking at what the museum of the future could look like.

The Rijksmuseum made the conscious decision to no longer charge for high quality images in return for other types of value. However, in a time where budgets are dissolving and institutions are more expected to generate their own sources of funding, any profit can greatly help, for example to, continue digitising the collection. The step to make the highest resolution images available for free can be considered quite radical. For the Rijksmuseum this decision was in line with their business plan and ambitions, but it is very likely that many institutions are not in the position to do this. For this reason the previous setup of the Rijksmuseum - where they make good quality images freely available to popularise their collection, and charged for the master files – can be a good solution for cultural institutions. This way, a wide variety of audiences get unrestricted access to the material and can get more familiar with it. And they pay a small fee for the highest resolution. This way the public domain images are not hidden away from the public, so the institution lives up to its public duty, and it also allows the institution to still make a profit from the commercial sector.

## **Conclusion**

This case study of the Rijksmuseum shows that an institution can benefit greatly by making its digitised collection openly available to the public and by applying the correct rights label to their

material. It also shows that these decisions are not made overnight. The Rijksmuseum had to carefully discuss the different steps that have led to making all of the high resolution images available for everyone. They have made sure that they only publish material that is 100% out of copyright and communicate this extensively to the public.

What greatly benefitted the museum is that other people started making new creative works with the material and therefore promoting the museum on a larger scale than they had ever been able to do themselves. Releasing the material has resulted in an incredible amount of goodwill from the public and creative industries. Combined with the enormous exposure, reputational benefits and the ability to enter more cost-effective sponsor programmes greatly outweighed the reduced images sales for the museum. Employees of the Rijksmuseum concluded during the interview that they are extremely satisfied with the result of their move towards opening up their collection to the public. The process has been exciting and to some extent a bit frightening for them, but when asked if they would do it again they replied: 'Yes, but a lot faster'.

# **PART TWO: DIGITAL**

**"WE LIVE NOT IN THE DIGITAL,  
NOT IN THE PHYSICAL, BUT IN  
THE KIND OF MINISTRONE THAT  
OUR MIND MAKES OF THE TWO"**

**PAOLA ANTONELLI  
MoMA**

# A THINK PIECE ON DIGITAL

JANE FINNIS

CULTURE24

Jane Finnis is Chief Executive of Culture24, a British non-profit organization that works to support the cultural sector with policies and strategies to reach online audiences.

Interdisciplinary, before the term became fashionable, she studied art, film, video and music. Her inspiration: "I try and keep track of what is happening in the online world – commercially and creatively and I get inspired by things that make me think differently, feel more connected or make me laugh. I don't like bureaucracy and believe that you should never be afraid to admit if you are wrong".

The following article was published in the Culture24 website.

I am a digital immigrant and I am fluent in webtalk. I love sci-fi, nerdy conferences and Lord Of The Rings. I have an online presence on Twitter, Foursquare, Facebook, Flickr, LinkedIn and edit five different WordPress blogs. I daily use Basecamp, Dropbox, Google Drive, BBC iPlayer, Spotify, Photoshop and Skype.

I am also a woman and I am fluent in my own ideas. I love sushi, conceptual art, and Italian architecture. I go to a gym, a bookclub, a singing group, flamenco classes and I know how to edit super8 film. I talk to my friends, my kids, my husband, my colleagues at work, around the UK and overseas, my family and random strangers in the street who I think look interesting.

I have a laptop, a desktop computer, an iPad and an iPhone. I have a bike, a bank account, an office and my feet. I live one life, am one person and don't really have an online or an offline Jane anymore. It is just me, doing what I need to do and trying to do it the best that I can and I dip in and out of the digital world without thinking about it anymore.

I'm not saying I am always online, or that I have sorted my work life balance (not!) but just that it's become a fluid thing. This realisation has been dawning on me for the last few years as my interaction and behaviour with technology has become integrated and impossible to separate from what I used to call my real life. I haven't decided if I like it, or even if it is a good thing but nevertheless it is true and I don't think there is any going back for me – or you.

This article is a think piece on how this fundamental shift is touching everyone and in particular the impact it is having on cultural organisations trying to understand, adapt and embrace the change.

Don't think I am suggesting that I have all the answers but I hope that you will agree I have some of the right questions.

## **Let's talk about digital**

Digital is not really something separate. No one under the age of 20 even talks about 'digital' anything anymore. It is simply a part of everything – communications, transport, retail, manufacturing, entertainment, education, medicine etc. So why when it comes to cultural policy, the arts and heritage sector and building its digital capacity are there separate strategic policy areas and funding strands? As the Arts Council England are now moving to integrate arts and museums, why not digital too? Wouldn't it be better if instead of a digital strategy, a gallery or museum thought about the use of digital tools, channels and technologies simply within its wider mission, existing content, exhibition, touring, education and audience development plans? Could you even go further and start with digital?

If we look at the development of the Guardian newspaper they moved from setting up a new media lab in 1995 and a separate supplement called OnLine, to an online branding as Guardian Unlimited separate from the newspaper, before in 2008 integrating and rebranding everything under one name [guardian.co.uk](http://guardian.co.uk), followed by [guardian.com](http://guardian.com) as they became increasingly international. They went further in 2011 announcing their plans to become a digital-first organisation, placing open journalism on the web at the heart of its strategy. Their evolution has been a fight for survival and also a response to changing consumer behavior and expectations.

I wonder what a digital-first museum, gallery or arts venue would look like? I'd like to see that. In fact I'd like to run it!

The fluidity that has evolved in my personal life in recent years and that digital natives take for granted, is I believe, largely missing in the organisational development of the cultural sector. To quote my introduction of the second Culture24 *Let's Get Real* report:

*For many cultural organisations the online world and digital tools are still unfamiliar and unknown. They are aware of the knowledge gap between them and those (often younger) individuals who feel fluent in this new language. This tension is made worse by the fact that although digital technologies are understood as tools that need to be used and shaped to a purpose, they also change the very nature of their users' behaviour – allowing access to information on the move, facilitating connections between sets of previously separate data and offering a multitude of opportunities for sharing and participation.*

As such, the shift needed for an organisation to feel confident in understanding these changes in user behaviour and then to integrate the use of digital tactics into their overall strategic mission in useful ways requires a significant shift in internal thinking at all levels. The time, space and commitment needed to do this well cannot be under-estimated.

Many cultural organisations also face a raft of internal pressures sparked by expectations such as:

- Online developments will significantly improve audience reach.
- Online developments will provide access to new audiences (especially younger ones).

- We need to be seen to be using digital tools and not getting left behind.
- Senior management (directors/trustees) wants us to build a big, shiny new showcase digital 'thing' that will show everyone we are cool (app, kiosk, game, etc.)
- Digital will help us earn more money.
- Digital will increase participation.

These expectations are often unrealistic and are strategically the wrong starting place for thinking about any new business development of any kind, but especially any using digital technologies. The starting point should, instead, be the mission of the organisation and the needs of the target audience. You need to know what you want to achieve and who it is for. A useful entry point for each cultural organisation to explore how their organisational missions can connect with the needs of their target audiences online is to examine the question 'what is digital engagement?'

## **Let's talk about engagement**

Engagement is fundamentally about attention, inspiration or connection. For the arts and heritage sector this means our public and their relationships to our stuff. Trying to understand this public and reach them is not a new problem. The reality of inventing, making or producing something that other people don't relate to, value or understand has been something cultural producers and organisations have faced forever. It sits alongside the other big audience issue of the supply (this is what I have) vs. demand (this is what you want).

Audiences for anything can be broken down by demographics (where people live, how old they are, how much money they have and what gender they are). But you can also look at peoples motivations (what they want to know, what they need to buy, where they want to go) and their behaviours (searching, browsing, facilitating, learning, watching, contributing).

When looking at digital engagement behaviour is a key factor as the very nature of many digital platforms, channels and devices fundamentally changes the users behaviour. Mobile technology is accelerating this rate of change at a pace that is now unstoppable as we keep moving between screens, books, websites, shops, tv, exhibitions, apps and cafes in a seamless and continuous online and offline dance. The touch points for our experience/information vary based on our motivation at any one time or the serendipity of our curiosity. Understanding these consumer experiences as a whole is crucial to curating our messages to our audiences.

Statistics tell us that people in the UK are spending as much as 21 hours a week online, more if you live in the USA and up to 40 hours if you are aged 18-24. But what are they doing? Isn't the internet just full of rubbish? Of course it is, but that is a human issue not a technological one. For all the pornography, gambling and trivia, there are many well documented stories of community empowerment, educational revolution and world changing projects that were only possible because the technology facilitated people to behave in a different way and do something different. Projects such as the Ushahidi Platform, TEDx in a box, change.org, Flickr Commons, or Kickstarter. They all plug together communities of users. Writer Clay Shirky defines the channeling of this community capacity as Cognitive Surplus or "the shared, online work we do with our spare brain cycles which means while we're busy editing Wikipedia,

posting to Ushahidi (or even making LOLcats), we're building a better, more cooperative world". The cultural sector is only on the very edge of exploring how they might do this for the arts.

There is also a new generation of vloggers and bloggers out there, independent voices that are original and intelligent. People like charlieiscocoollike who is sharing his love of 'fun' science with an absolutely huge fanbase of over nearly two million subscribers he has built from nothing. If you are ever wondering where all this obsession with things like YouTube is going then check out Jamal Edwards at the 2013 TEDx Houses of Parliament asking if the next prime minister could come from YouTube? Possible.

As cultural institutions we need to be one of those voices, sharing what we have, exploiting the depth of our knowledge and – crucially – our authenticity. This, along with our creativity, are our two greatest assets as a sector.

## **Let's talk about evidence of engagement**

While I am writing this 23 people, one of whom is in Madrid, are looking at the culture24.org.uk website. Three are reading a new article about how a master perfumer is recreating the fragrance of Jacobean London, two are looking at the address of the Pankhurst Centre in Manchester (one of them on a mobile phone), one is reading an oral history shared memory of the Scotswood Road in Newcastle, another is searching for museums in Tunbridge Wells. I could go on.

Anyone with a Google Analytics account can do this and watch in real-time as people leave a digital footprint from their visit to your

website in your GA software. It is very compelling and ultimately quite satisfying as you actually see for yourself something happening live online. But what does it tell me about the level of engagement on our site? How can I know if people are even finding what they want? Google Analytics will allow me to measure the degrees of engagement but not the 'kinds' of engagement (see Avinash Kaushik's books and blog Occams Razor). The truth is that the right kind of engagement is the one that meets your own business outcome and so will be slightly different for everyone. There is no one size fits all with analytics.

Identifying the outcome you desire, in a way that is measurable, is not as simple as it sounds. Sometimes it is hard to even know the questions to ask to start asking the right questions. The *Let's Get Real* action research work I lead has focused on these issues with a range of UK cultural organisations over the last three years and the two reports published are a good place to read case studies of how a range of cultural venues have approached this challenge.

The Tate talk about their work in this area and say: "Understanding our audiences and evaluating the impact and value of their digital experiences is a vital element of Tate's digital transformation. One of the aims is to establish a digital culture within Tate that is audience centred, responds to the audience needs and that is also iterative and evaluation lead". Part of this work has been the creation and sharing of a digital dashboard template that offers a useful starting point for others to format their data into meaningful shapes. Other cultural dashboards can be found online at the Museum of East Anglian Life and the IMA. What I like about both of these is that they mix off and online statistics that have been chosen as they represent what the organisation values, not simply a collection of what they are able to measure in any one platform.

Getting this right inside your own organisation is a process that takes time and it is a long way from the kind of top level digital metrics that are collected by Arts Council from their National Portfolio Organisations (NPO's). These are almost useless without applying some relevant audience segmentation, benchmarking your stats overtime and a contextual framework for defining success against your mission.

## **Let's talk about content**

A good question to ask yourself is – is your content fit for purpose digitally? Are you using the analytics from your current digital activities to better understand the success and failure of your content to engage? Are these insights being used to drive internal change? Are you approaching this with honesty and openness? Do you have confidence in your content and knowledge? Can you try and think differently about what you have and then do differently? Maybe you could try a small scale action that combines examining a quantitative (metric) with qualitative (ask the user) evidence? Perhaps this might help you to consider ways to adjust your editorial strategy or content plans? Could you fail fast and get better faster?

The very talented team at the GOV.UK have produced some excellent Content Principles as a style guide for their site. These combined with their Design Principles make an excellent set of reference points for improving your own digital output.

Remember that online everything is content, your site architecture, navigation, headers, alt text metadata and URL's and they all play a key role in maximising your SEO (search engine optimisation) and therefore the discoverability of your stuff with audiences.

Sadly at the moment, the cultural sector does not have the attention share online we deserve. We are not good at big. Michael Edson, Director of Web and New Media Strategy for the Smithsonian Institution talks about the fact the world has changed in three ways: scope, scale and speed and that some GLAMS (Galleries, libraries, archives, museums) haven't noticed yet. In his brilliant Age of Scale presentation he makes it clear that there is lots of room at the top. He asks "Can we supersize our mission? Can we go to 11?".

It can happen. Look at the phenomenal 23,000% boost in DVD sales that Monty Python received when they choose to giveaway all their TV shows on YouTube for free. Or the over 2.5 billion views of the Gangnam Style music video with its million dollars revenue from YouTube advertising alone, made possible by ignoring all the copyright infringements and rip-offs. This is scale, but not as we know it in the cultural sector yet.

The Rijksmuseum are perhaps the closest with their recent step of offering downloads of high-resolution images of their collection at no cost. Through the new online Rijksstudio, the public are encouraged to copy and transform the museums artworks into stationery, T-shirts, tattoos, plates or even toilet paper. The ultra-high-resolution images of works can be freely downloaded, zoomed in on, shared, added to personal 'studios', or manipulated copyright-free. The scale of this use is yet to be seen but the ripples have been noticed.

All of these examples share a very progressive open approach to content ownership that I believe the cultural sector should watch and learn from. Let's set our content free.

## **To conclude**

Personally, I am a culture addict who loves the physical experience of walking into a gallery, watching a live performance or handling an object but my digital experiences are gaining momentum as digital tools become more useful and support me. I wonder when, if ever, digital culture will hold my passion on its own? Perhaps only with a relentless focus of quality and a commitment to turning our organisations relationship with the audience, inside out.

# **MUSEUM MAKING: CREATING WITH EMERGING TECHNOLOGIES IN ART MUSEUMS**

**DESI GONZALEZ**

**MASSACHUSETTS INSTITUTE OF TECHNOLOGY**

Researcher, writer, educator and maker, Desi Gonzalez has a consistent line of studies on the potential of digital media to producing a meaningful engagement with the arts. Currently she is dedicated to investigate the impact of innovation in cultural institutions, especially in art museums.

Born in Puerto Rico, Gonzalez developed educational materials for MoMA, including interactive learning space MoMA Art Lab: Movement. She regularly writes for cultural magazines on art, language, feminism and sometimes on topics that mix these three.

The following paper was published and presented at the Museums and the Web conference held in Chicago, USA, in April 2015.

In the bowels of the Metropolitan Museum of Art, a robotic arm drags a black felt-tip marker across a white sheet of paper, plotting out the intricate staccato lines of a seventeenth-century etching. Further north at the Peabody Essex Museum in Salem, Massachusetts, a three-dimensional printer whirs in the background while a group of friends prototypes original designs for wearable technologies. And on the other side of the country, on a street outside of the Los Angeles County Museum of Art, an iPad or smartphone reveals augmented-reality versions of LA denizens, rendered via photogrammetry, who will stop to tell you what they have lost.

These are just a few projects that have developed out of an emerging trend that I call “museum making.” Increasingly, art museum staff are developing initiatives that allow everyone from casual visitors to professional artists and technologists to take the reigns of creative production through experimentation with new technologies. Hackathons, maker spaces, startup incubators, innovation labs: institutions are implementing these new and exciting models borrowed from the world of technology and inviting their audiences to participate.

From where has this interest in engaging audiences with hands-on, technology-based production emerged, and why now? Creative technology initiatives in art museums have been the object of my study as a master’s candidate in comparative media studies at the Massachusetts Institute of Technology. Over the past year, I’ve applied an interdisciplinary approach — pulling from sociology, educational theory, cultural studies, and museum studies—to the critical examination of museum-making programs. This research will culminate in a master’s thesis, to be completed in May 2015. In my thesis, I trace the precedents of these initiatives from a historical lens, finding roots both in the history of museums as sites of art making and in the rise of hacker and maker cultures. My thesis also incorporates findings from

extensive fieldwork at three museum sites (LACMA's Art + Technology Lab, the Metropolitan Museum's Media Lab, and the Peabody Essex's Maker Lounge), drawing from observations of programs in action and interviews with key staff and participants.

Why does my research focus exclusively on art institutions, when all kinds of museums are tapping into today's technology ethos? Many types of cultural and learning institutions—especially children's museums, science museums, and discovery centers—have long incorporated making and creative technologies in their galleries. However, I'm specifically looking at initiatives in art museums because of the implications that these have on what is considered culturally and aesthetically valuable: What does it mean for an art museum to encourage new forms of creative production, when that kind of production is not represented in the museum's galleries or collections? And how do change and innovation happen in traditional cultural institutions?

This paper represents only a fraction of my thesis project, drawing from historical research to examine from where and why these museum-making programs have emerged. I'll trace the precedents that have led to the development of museum-making programs. The first section examines arts participation, particularly through amateur art practice, in the history of the United States. I will discuss how amateur art practice was common in the nineteenth century, waned in the twentieth century, and is currently on the rise again. Within this context of cultural engagement, I will delineate how art museums have historically served as sites of creative production.

The second section of this paper traces the precedents that have led to the landscape of creative technology we know today. The earliest computer hackers eschewed authority, championed a hands-on ethic, and saw their hacking as a form of art. The more recent development

of the so-called “maker movement” exemplifies a mainstreaming of creative technology: as it becomes easier to access digital and fabrication tools, more people can become amateur technologists. Art museums today are tapping into both the countercultural impulses of hackers — which resonate with that of artists — as well as the mainstream appeals of the maker movement.

In the final section, I discuss how the two threads — art-based and tech-based production — are now merging at a time when, at least to many public audiences, the distinctions between art, media, and tech- nology are no longer important; instead, a general sense of creative production, whether aligning itself with the art world or the tech world, is king.

### **On art: Amateur practice and museums as sites of creative production in the United States**

Maker spaces, hackathons, and startup incubators are touted as breaking new grounds in museums, but in fact, this kind of museum programming has deep historical roots. Since almost as long as they’ve existed, art museums have served as sites for not only displaying art, but also creating it. In this section, I explore how creating with new technologies fits into a longer lineage of creation as a form of arts engagement in museums.

In *Highbrow/Lowbrow: The Emergence of Cultural Hierarchy in America*, Lawrence Levine argues that in the United States before the late nineteenth century, the boundaries between high and low culture didn’t exist as they are conceived of today (Levine, 1988). Audiences across all classes enjoyed cultural figures and forms such as Shakespeare and opera, sharing “a public culture

less hierarchically organized, less fragmented into relatively rigid adjectival boxes than their descendants were to experience a century later" (1988). Historian, playwright, and director Lynne Conner argues that audience members played a different role in arts experiences, as well (Conner, 2008). As opposed to the contemporary ideal of an audience that "by definition and by current standards of appropriate behavior...looks, listens, and feels at a distance," audiences in the nineteenth century "were expected to participate actively before, during, and after the event" (2008). The audiences, in a sense, were essential to the production, rather than separate from the art event. Museums, like their theater counterparts, had equally diverse audiences. For example, Barnum's American Museum, founded in New York City, exhibited everything from fine art and scientific instruments to medical oddities. Economically diverse audiences came in droves not only to view the spectacle of the museum's collection but also to attend lectures and watch performances. Conner (2008) argues that the "[p]atrons at these museums lived the art space fully; they saw their presence in it as a large affair that was not confined simply to quiet, reverent spectating."

Diverse publics were not limited to arts participation as audiences, but also as creators: amateur art practice was a part of everyday life. In the nineteenth century, pianos were a common sight in households, serving as "the nation's archetypal cultural hearth"; families would often gather around the piano for a sing or a post-dinner performance. As Bill Ivey explains, "the abilit[ies] to sing or play music ... were considered everyday skills, integrated into family life as thoroughly as sewing or the canning of autumn garden produce" (Ivey, 2008). Domestic piano playing was how music was circulated and enjoyed. Conner corroborates:

*Arts patrons also participated in a practical manner by joining amateur production companies, taking studio classes, and creating public works of art as a form of celebration and as a way to solidify and document community identity.*

Since their founding, art museums in the United States have been sites for art making. The primary way in which nineteenth-century museums supported creative production was by offering formal training, often in the form of museum academies. As universities and colleges increasingly began to establish art and art history departments at the onset of the twentieth century, many of these schools began to disappear or distance themselves from their respective museums.

The Metropolitan Museum of Art is an example of an institution with a rich history as a site for art making. Soon after its founding, the Met granted permission to artists to copy works in their collection on Tuesdays through Saturdays from 9:00 a.m. to 12:00 p.m. In 1880, the museum established the School of Industrial Arts, providing free classes to artisans in skills such as woodworking and metalworking, and later ornamental painting and carving, architecture, drawing, and clay modeling.

Toward the turn of the century, the Metropolitan witnessed the decline of art making in the museum. The 1883 Annual Report of the Trustees of the Metropolitan Museum of Art indicates that many of the school's classes were discontinued by that year. (One notable exception to the decline of art making in the museum is the Museum's copyist program, which increased in popularity into the early decades of the twentieth century.) Still, the museum promoted art making in other ways: in 1916, the Met published a

resource on the educational offerings available to artisans living and working in New York City; from 1917 through at least 1928, the museum inaugurated a series of industrial arts exhibitions that displayed works by designers who have studied from the Met's collection. While the Met continued to encourage creative production, however, the physical museum became less of a site for art making itself. In 1926, studio programs geared toward artists and artisans were limited to lectures and study hours; the museum saw its role as fostering a sense of high taste in its audiences (Elliot, 1926). Into the middle of the twentieth century, the Met's programming shifted its focus: educational offerings for adults were primarily in the form of lectures, while art-making courses were geared toward children.

The decline of art making at the Metropolitan was echoed at museums throughout the United States in the early twentieth century. This decline aligned itself with what Levine has dubbed the "sacralization of culture," in which popular and high arts were increasingly differentiated. Shakespeare became exclusively highbrow; the opera was the domain of the wealthy, rather than all audiences. Sacralization also went hand-in-hand with the decrease of amateur art practice:

*The blurring of that distinction [between amateur and professional] had been one of the characteristics of music in America for much of the nineteenth century. But by the end of the century the gap had widened. More and more it was asserted that it was only the highly trained professional who had the knowledge, the skill, and the will to understand and carry out the intentions of the creators of the divine art. (Levine, 1988)*

Pianos no longer served as the home's cultural hearth; according to Ivey, the radio, and later television, would come to replace it

(Ivey, 2008). Arts and culture participation was now an act of consumption, the receiving of music rather than the creation of it. Both shifting cultural attitudes and technological changes (such as the introduction of recorded music and broadcast media) were part and parcel to this new definition of arts participation.

American museums went through a similar pattern of sacralization. As Levine notes, museums transitioned from "the general and eclectic to the exclusive and specific," solidifying the generic distinctions between art, natural history, history, and science institutions that we know today (1988). In building collections, art museums opted for exemplars of the finest taste, eschewing the mix of popular and high-cultural objects of yore. The Museum of Fine Arts in Boston represents this trend: when it opened its doors to the public in 1876, the MFA's collection consisted of both original artworks and reproductions. Over the next years, the museum "began to relegate the photographs, casts, and a variety of 'curiosities' to storage and dedicate its galleries to what its director in 1912 called 'higher things'" (Levine, 2008).

Since their establishment, museums have been seen as educational institutions, but it was around this time that the field of museum education emerged and professionalized. In line with the ideals of the Progressive Era, education departments formed to provide programming and outreach as a service to "uplift" the masses of workers who had increasingly more leisure time. Elliot Kai-Kee (2011) cites the 1930s as a time when "creativity," rather than training in particular skills, "became the chief goal of art instruction." However, docent-led art historical lectures and tours with the aim of instilling a sense of aesthetic appreciation became *de rigueur* for adults, with art making primarily left for children.

As the field of museum education became professionalized, museum workers looked for a body of scholarship to inform their practices. The writings and teachings of figures such as inventor of kindergarten Friedrich Froebel (1782 – 1852), physician and educator Maria Montessori (1870 – 1952), and philosopher and educational reformer John Dewey (1859 – 1952) shared a dedication to self-directed and hands-on learning, tenets that would be widely adopted by museum educators. (Paradoxically, the attitudes behind these educational theories were core to art-making museum offerings for children at a time when museums were phasing out art-making programming for adults.) In the 1970s, Swiss developmental psychologist and philosopher Jean Piaget built on and codified the ideas of Froebel, Montessori, and Dewey in what is now known as constructivism. This epistemology posits that knowledge does not exist separately from individuals, but is instead constructed based on experience. In museums, constructivism — in the form of “visitor-centered learning” and the “visitors experience” — became a dominant discourse in the 1990s (Kai-Kee, 2011; Hein, 2012). Interactive exhibitions, hands-on discovery through creation, movement, and improvisational theater were some of the approaches being introduced into the galleries at this time.

Above, I’ve discussed nineteenth-century museums’ role in training artists and artisans in particular crafts and aesthetic sensibilities, efforts to fulfill their missions as educational institutions. These efforts, however, do not mean that museums’ relationships to living artists have always been painless, nor should they imply that museums’ goals have always aligned with those of artists. Sociologist Vera Zolberg has written extensively about the tense relationship between artists and museums. She argues that:

*Although museums of modern art have many occasions to deal with artists, they have rarely viewed living artists as forming a community toward which they have particular obligations. (Zolberg, 1992).*

Many museums see their primary goal as collecting artworks of high caliber, thereby conferring status on them; most artists will never enter a museum's collection. Despite these tensions, a few museums in the twentieth century have served as sites for art making (or at least support for the development of artistic practice) by professional artists. And unlike programs in the nineteenth century and early twentieth century, which aimed to train artisans in skills or to proselytize the museum's concept of good taste to the masses, these programs were (or are still) often directed towards artists who are either represented by the museum's collection, on par with the perceived caliber of what the museum exhibits, or have the potential to make their name within the realm of contemporary art. The Whitney Museum of American Art's Independent Study Program (founded in 1970) and the Studio Museum in Harlem's residency (founded in 1968) are two examples of programs that help promising artists and curators develop their practices. Around this time, the Los Angeles County Museum of Art began its historical Art and Technology Program, from which today's Art + Technology Lab takes its inspiration. In the original program, which ran from 1967 to 1971, curator Maurice Tuchman placed an impressive roster of artists such as Claes Oldenburg, Robert Irwin, and James Turrell in technology corporations in order to conduct research and develop new, experimental projects.

Thus far, I have discussed the prevalence of art practice in the United States in the nineteenth century and its subsequent decline into the twentieth century. Within this context, museums

have served as sites for art making in many ways: at first as sites for instilling artisans with skills, subsequently limiting art making programming efforts to younger audiences, and, more recently, occasionally inviting professional contemporary artists through prestigious residencies and study programs. Today, arts participation through amateur art practice is again on the rise in the United States, and subsequently museums are being reinvigorated as sites for art making for all ages and levels of professionalization. Over the last few decades, museums have hosted hands-on classes and workshops for adults, geared both toward training students in skills and encouraging creative exploration. Some programs even take a page out of their institution's historical roots: In December 2014, the Metropolitan announced that it will relaunch its copyist program, inviting anyone who applies to set up an easel to paint and draw directly from the works in the museum's collection.

I will return to the rise of arts participation — or as I will argue, creative production more generally — in the final section. For now, I'd like to conclude that the forms of programming emerging in museums now, in which participants are invited to create with new technologies, fit within this larger history of art making in museums. In this sense, such efforts are not all that new. But these technology-oriented programs are also stemming from another historical lineage, one that brings with it particular attitudes: that of hackers and makers, which I will discuss in the following section.

### **On technology: Hackers, makers, and the rhetoric of innovation**

More and more, museums are integrating emerging technologies and Hacker: it's a troubled term. The White House, NASA, National

Science Foundation, Department of Homeland Security, and other federal agencies were all sponsors of this past year's National Day of Civic Hacking. Yet, commenting on National Security Agency leaker Edward Snowden's extradition to Russia in June 2013, President Obama disparagingly remarked, "I'm not going to be scrambling jets to get a 29-year-old hacker" (Gregg & DiSalvo, 2013). "Hacking" strikes the imagination precisely because of these two contradictory perceptions: a hacker is creative, inventive, and industrious, but also unruly and dedicated first and foremost to his or her beliefs.

The earliest computer hackers emerged at the Massachusetts Institute of Technology in the late 1950s and 1960s, when student members of the Tech Model Railroad Club would break into off-limits offices to use giant mainframe computers in the evenings, spending all night coding and debugging their irreverent and playful programs. For these hackers, programming computers became a way of life. In *Hackers: Heroes of the Computer Revolution*, Steven Levy (2001) outlines the doctrines underlying their community:

- Access to computers — and anything which [sic] might teach you something about the way the world works —should be unlimited and total. Always yield to the Hands-On Imperative!
- All information should be free.
- Mistrust Authority — Promote Decentralization.
- Hackers should be judged by their hacking, not bogus criteria such as degrees, age, race, or position.
- You can create art and beauty on a computer.
- Computers can change your life for the better.

This "hacker ethic," as Levy calls it, reveals a countercultural, anti-authoritarian leaning that is still central to our image of computer

hackers today. Hackers held a steadfast belief that information should be accessible to all, a tenet that would become further solidified in Richard Stallman's Free Software Foundation and the free and open-source movement. They also shared the belief that coding was ultimately a creative endeavor.

The so-called maker movement — a name that was coined in 2005 to identify a growing subculture interested in using technology for do-it-yourself projects — builds on the same do-it-yourself attitude of hackers. Unlike hackers, “makers” are not just interested in software, the stuff of computers; they apply their knowledge and enthusiasm of the digital and electronics to creating objects for the physical world. In his book *Makers*, technology and business writer Chris Anderson (2012) identifies three phrases of his personal DIY journey: working with his hands in his grandfather's workshop in 1970s Los Angeles, the punk scene in Washington, D.C., and the spirit of community of the nascent Web in the 1990s. The maker movement, he explains, borrows from these and other precedents a willingness to experiment, an emphasis on interdisciplinarity, and access to tools and knowledge. If open software was a defining tenet of the early hackers, then open hardware is a key a component of “maker culture.”

Despite its DIY ethos, maker culture lacks the kind of subversive agenda that fueled early hackers. From its beginning — at least as a branded entity — the maker movement was not a grassroots movement, as the hackers had developed, but rather an initiative led by a for-profit company. Anderson places the official birth of maker culture in 2005 with the launch of *Make* magazine. Dale Dougherty, a cofounder of the prolific technology publishing group O'Reilly Media, spearheaded these efforts along with Sherry Huss and Dan Woods. (The magazine would spin off into its own publishing company, Maker Media, Inc., in 2013.) Modeled after older periodicals such

as *Popular Science* and *Popular Mechanics*, the magazine focuses on DIY projects involving, among other topics, electronics, computers, robotics, and fabrication. In addition to issuing the bimonthly magazine, Maker Media now also publishes digital and print books, produces Maker Faires — large “show-and-tell” convenings in which makers show off their projects — around the world, and operates Maker Shed, an e-commerce site that sells DIY electronics, kits, and publications.

What has proven to be compelling about the maker movement is how it includes virtually all disciplines within its rhetoric of innovation. Case in point: Dougherty’s essay on the maker movement in MIT Press’s *innovations* journal, which veers toward the promotional (Dougherty, 2012):

*When I talk about the maker movement, I make an effort to stay away from the word “inventor”— most people just don’t identify themselves that way. “Maker,” on the other hand, describes each one of us, no matter how we live our lives or what our goals might be. We all are makers: as cooks preparing food for our families, as gardeners, as knitters. Although this view may not be part of mainstream thought, there once was a time when most Americans commonly thought of themselves as tinkerers. Tinkering used to be a basic skill, and you could get a little bit more out of life than the average person if you had good tinkering skills — if you could fix your own car, for example, or improve your home or make your own clothes.*

With this kind of all-encompassing language, Dougherty invites everyone to his utopian vision of a maker-fueled future.

Community-building is central to the maker movement, and this often happens through maker spaces. Also called “hackerspaces” and “fablabs,” these are shared workshop spaces in which people can tinker with high and low technologies. Some, like the TechShop network, are membership based, allowing members to work on projects during repeated visits. Community centers, libraries, and schools have started implementing maker spaces for their patrons and students. In an educational context, they have been heralded as spaces for open-ended exploration, allowing learners to tap into their own interests through the development of personal projects.

While maker spaces may be a communal gathering point for the movement, making can also happen in the home. The technological equipment found in maker spaces is increasingly becoming cheap enough to own; for instance, 3D printers have dipped below the \$1,000 price barrier. New startups, companies, and products targeted towards makers have emerged in the last five years: Adafruit and Sparkfun are well-known online purveyors of DIY electronics and kits, and the open-source microcontroller Arduino allows users to create interactive objects and environments. Additionally, online communities have formed around knowledge and file sharing: how-to guides are crowd-sourced on websites like Instructables, Howtoons, and Fritzing, while on Thingiverse users share 3D objects files that anyone can download and fabricate on their personal printers.

“Maker spaces,” “makers,” and “maker movement” have increasingly become commonplace terms in popular discourse as the so-called movement increases in attention. Dougherty has discussed the movement’s implications on business, government, and education, and he’s not the only one touting the maker movement as a supposed disruptive force. In *The Tinkerers: The Amateur, DIYers,*

and *Inventors Who Made America Great* (2013), Alex Foege argues that tinkering has been a bedrock of innovation and industry in the United States, from Ben Franklin to Thomas Edison; he applauds the country's return to tinkering, now manifested in makers. The subtitle of Chris Anderson's book *Makers* (2012) says it all: the maker movement is ushering in a "new industrial revolution," one in which manufacturing is no longer bound to large-scale corporations. With a DIY ethic and access to cheap equipment and open-source software, individuals now have the power to fabricate the products they want. He proposes that the maker movement will foster a new and formidable class of small businesses. And makers have made it all the way to the top: on June 18, 2014, President Barack Obama hosted the inaugural White House Maker Faire, which brought together over a hundred people, projects, and companies creating with new tools and technologies.

Whether or not the maker impulse will be a revolutionizing force is yet to be seen, but it has undoubtedly seeped into the realm of education. Attracted to the maker movement's emphasis on creativity, learning-by-making, and self-directedness, educators view maker projects as a way to excite their students about science and mathematics. Thus the same educational theories valued by museum educators (as discussed in the previous section) align with many of the goals of a maker-infused curriculum. Like their art museum counterparts, proponents of hands-on educational technology look to the theories of Montessori, Dewey, and Piaget, and have added a newcomer to the list: Seymour Papert. In the late 1950s, Piaget tapped the mathematician to collaborate on his research investigating how children construct knowledge. Papert took Piaget's theory of constructivism one step further in what is now called constructionism, which posits that learning is most effective when individuals create tangible objects (Papert,

1980; Kafai & Resnick, 1996). In 1968, with Cynthia Solomon, Wally Feurzig, and others, Papert developed Logo, a computer language designed to teach programming concepts to children. He has since advocated for the educational use of computers in new, imaginative ways that align with the ideals of learning-by-making, whether the activities entail composing original music, controlling puppets, or doing mathematical modeling.

More generally, recent years have seen increased advocacy for science, technology, engineering, and mathematics (STEM) in primary, secondary, and higher education. The STEM movement is inextricably aligned with the rhetoric around innovation that dominates in this country. Supporters claim that without a workforce trained in these fields, the United States will not be able to maintain its dominance in innovation. Backing for STEM has professionalized and solidified through a bevy of national and regional nonprofit advocacy organizations such as the STEM Education Coalition. The Boy Scouts of America, Department of Defense, and National Science Foundation alike have announced programs dedicated to improving STEM literacy.

In the past few years, certain stakeholders have proposed adding a new letter to the acronym: A for Art, transforming STEM into STEAM. Designer and computer scientist John Maeda (2012), a pioneer in the STEAM initiative, wrote:

*I would argue that STEM alone will not get us there. Innovation happens when convergent thinkers, those who march straight ahead toward their goal, combine forces with divergent thinkers — those who professionally wander, who are comfortable being uncomfortable, and who look for what is real.*

Without the critical thinking and design skills nurtured through art, Maeda and others argue, we will not be able to achieve economic goals in a holistic and ethical way.

The countercultural impulses of the hackers begat the more mainstream DIY attitudes of the maker movement, which is inextricably tied to today's dominant discourse of technology's economic promise. It is within this context that art museums have begun to invite creators to experiment with new technologies, which I will discuss further in the final section.

## **Participatory culture at the intersection of art and technology**

Hackers and makers are but a part of what some might call a participatory attitude that has become widespread in the United States (and throughout the world) in the last fifteen years. In a participatory culture — as opposed to consumer culture — amateurs take the reins of the production of media and cultural artifacts. Henry Jenkins and Vanessa Bertozzi (2008) describe a participatory culture as:

*One where there are relatively low barriers to artistic expression and civic engagement, where there is strong support for creating and sharing what one creates with others, and where there is some kind of informal mentorship whereby what is known by the most experienced is passed to novices.*

As the Internet increasingly provides easy access to tools and networks with which to contribute and distribute culture, everyone becomes a media maker. Wikipedia, video-sharing site YouTube,

and fan-fiction websites are just a few examples of platforms that allow and in fact rely on the participation of grassroots creators.

Many museum thinkers have adopted this participatory ethos over the last decade. (Case in point: a search on the Museums and the Web archives for the term “participatory” yields hundreds of results.) The word “participatory” is equally beloved and abhorred within the art world, both employed as a rallying cry for engaging new and often underserved audiences and denounced for “dumbing down” the art-viewing experience. In 2010, Nina Simon published *The Participatory Museum*, a widely read guide to designing museum experiences in which visitors contribute, collaborate, and create. In an essay titled *The Exploded Museum*, Peter Samis of the San Francisco Museum of Modern Art speaks of the turn to social media in museums. He argues that a collection’s meanings can be enriched through user-generated content; the interpretation of works of art has now shifted to creation (Samis, 2012). Like museums of the nineteenth century that offered art-making opportunities in keeping with the broader culture of amateur arts practice, museums today recognize the greater participatory zeitgeist and incorporate such strategies into their own offerings.

The previous two sections have thus far distinguished art making from computer- and electronics-based forms of production. But throughout my narrative, there have been moments of intersection, if subtle ones. Museums have been sites of information sharing and skill building, offering (often free) classes since their beginnings; early computer enthusiasts advocated for open access to information. Similarly, educational programming in museums and maker-inspired initiatives today have in common the same theoretical underpinnings, rooting their practices and goals in an ethic of hands-on and personalized learning.

I'd like to suggest that while art museums exhibit a very particular kind of visual art that follows the conventions of the contemporary art world, increasingly, more generalist audiences are blurring the boundaries between art, media, and technology. The maker movement encompasses all kinds of creators, from robotics builder to knitters; STEM has made room for art in STEAM. Platforms like Etsy (an e-commerce website for handmade or vintage items) and Kickstarter (a site that allows individuals, fledgling companies, and established organizations to raise funds for creative projects) have emerged as new marketplaces for creative production, agnostic of labels such as "art" and "technology." New York University founded the Interactive Telecommunications Program (ITP) in 1979 to foster the interdisciplinary study of new and computational media; in 1985, MIT established its Media Lab, a research center that situates itself at the intersection of engineering, technology, design, and art. (These programs themselves are outgrowths of initiatives such as Experiments in Art and Technology and MIT's Center for Advanced Visual Studies, both founded in the late 1960s and both of which paired engineers and artists to work on creative projects.) ITP, the Media Lab, and other similar programs have spawned alumni who go on to lead careers as artists and establish startup companies alike.

Technology, hacking, makers: these words are increasingly common in popular discourse today. Art museums are adopting the tools and strategies of the technology scene today for many reasons. On the one hand, it is easy to see a parallel between artists and hackers, both groups dedicating themselves to the enactment of counterculture through creative production. Like hackers, artists are known for eschewing authority, forming a community of creators around this subversive practice. The image of a hacker resonates with the image of the irreverent artist who uses his craft

to convey an anti-authoritarian, if not full-on political, message. But in practice, tapping into the contemporary tech ethos isn't all that radical, as the maker movement rushes into the mainstream. The maker movement has now been normalized, keeping the elements of creativity while stripping itself from more subversive leanings. In fact, maker culture co-opts tinkering with technology to align itself with the mainstream interests of growing the economy and boosting innovation. Art museums are attracted to technology, the maker movement, and hacker culture because these attitudes align with the creative practices art museums have always championed while imbuing these (often considered staid) institutions with the cache of progress and futurity.

## **Acknowledgements**

Thank you to Ian Condry and William Uricchio for your continued guidance on this paper in particular and my thesis project in general. I'd also like to extend my sincere gratitude to all of the museum makers who have graciously shared their time and thoughts with me; in particular, thank you to Don Undeen of the Metropolitan Museum of Art, Juliette Fritsch and Ed Rodley of the Peabody Essex Museum, and Amy Heibel and Joel Ferree of the Los Angeles County Museum of Art. Finally, I'd also like to give a shout-out to John Craig Freeman, whose EEG ARG: Things We Have Lost — currently being developed at LACMA through the Art + Technology Lab — is the fantastic project I refer to in the very beginning of this paper.

## References

- Anderson, C. (2012). *Makers: The New Industrial Revolution*. New York: Crown Business.
- Conner, L. (2008). "In and Out of the Dark: A Theory about Audience Behavior from Sophocles to Spoken Word." In S. J. Tepper & B. Ivey (eds.). *Engaging Art: The Next Great Transformation of America's Cultural Life*. New York: Routledge, 103–124.
- Dougherty, D. (2012). "The Maker Movement." *Innovations* 7(3), 11–14.
- Elliott, H. (1926). "The Educational Work of the Museum." *The Metropolitan Museum of Art Bulletin* 21(9), September, 201–217.
- Foege, A. (2013). *The Tinkerers: The Amateurs, DIYers, and Inventors Who Make America Great*. New York: Basic Books.
- Gregg, M., & C. DiSalvo. (2013). "The Trouble With White Hats." November 21. Consulted May 10, 2014. Available <http://thenewinquiry.com/essays/the-trouble-with-white-hats/>
- Hein, G. E. (2012). "The Constructivist Museum." In G. Anderson (ed.). *Reinventing the Museum: The Evolving Conversation on the Paradigm Shift*. New York: AltaMira Press, 123–129.
- Ivey, B. (2008). "Introduction: The Question of Participation." In S. J. Tepper & B. Ivey (eds.). *Engaging Art: The Next Great Transformation of America's Cultural Life*. New York: Routledge, 1–16.
- Jenkins, H., & V. Bertozzi. (2008). "Artistic Expression in the Age of Participatory Culture: How and Why Young People Create." In S. J. Tepper & B. Ivey (eds.). *Engaging Art: The Next Great Transformation of America's Cultural Life*. New York: Routledge, 171–195.
- Kafai, Y. B., & M. Resnick. (1996). *Constructionism in Practice: Designing, Thinking, and Learning in a Digital World*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Kai-Kee, E. (2011). "A Brief History of Teaching in the Art Museum." In R. Burnham & E. Kai-Kee (eds.). *Teaching in the Art Museum: Interpretation as Experience*. Los Angeles: The J. Paul Getty Museum, 19–40.
- Levine, L. W. (1988). *Highbrow/Lowbrow: The Emergence of Cultural Hierarchy in America*. Cambridge, Mass.: Harvard University Press.
- Levy, S. (2001). *Hackers: Heroes of the Computer Revolution (Vol. 4)*. New York: Penguin Books.

Maeda, J. (2012). "STEM to STEAM: Art in K-12 Is Key to Building a Strong Economy." October 2. Consulted December 18, 2014. Available <http://www.edutopia.org/blog/stem-to-steam-strengthens-economy-john-maeda>

Metropolitan Museum of Art. (1882). Annual Report of the Trustees of the Metropolitan Museum of Art, No. 23 (No. 23), 523–560.

Metropolitan Museum of Art. (1883). Annual Report of the Trustees of the Metropolitan Museum of Art, No. 24 (No. 24), 561–590.

Metropolitan Museum of Art. (1917). Annual Report of the Trustees of the Metropolitan Museum of Art, No. 24 (No. 48), i–xv, 1–168.

Papert, S. (1980). *Mindstorms: Children, Computers, and Powerful Ideas*. New York: Basic Books, Inc.

Samis, P. (2012). "The Exploded Museum." In G. Anderson (ed.), *Reinventing the Museum: The Evolving Conversation on the Paradigm Shift*. New York: AltaMira Press, 303–314.

Zolberg, V. L. (1992). "Art Museums and Living Artists: Contentious Communities." *Museums and Communities*, 105–136.

# **PART THREE: CHANGE**

**"IF YOU PUT FENCES AROUND  
PEOPLE YOU GET SHEEP"**

KAYWIN FELDMAN  
MINNEAPOLIS INSTITUTE OF ARTS

# TOWARDS THE SOCIOCRATIC MUSEUM

BRIDGET MCKENZIE

FLOWGLOBAL

Bridget McKenzie is director at Flow Associates, a consultancy working for cultural, educational, science, environment and technology organisations. Before Flow, she was head of learning at the British Library for 5 years and education officer for Tate in London. McKenzie also has an relevant career as a culture, ecology and future trends thinker.

In this essay for CODE | WORDS, she investigates the sociocratic museums concept and brings some examples on how digital can help museums change radically.

One inspiring feature of CODE | WORDS experimental discursive publishing project is being able to write in response to others, as part of an evolving whole. As so often happens, my own thoughts were sparked by Nick Poole [currently CEO of the Chartered Institute of Library and Information Professionals], this time in his piece *Change*.

Nick was responding to Michael Edson's vision of museums [p.26] lifted out into a more accessible space of possibilities, not so much by technology but by people outside the museum with access to it. Nick in turn points to the fundamental changes needed to bring about this desired future. He fears museums are still "temples to the illusion of order and predictability in a complex and chaotic world", creating solitarist stories out of messy diversity. I agree with Nick's challenge that too many museums are guilty of 'openwash' — where change to a more participatory culture is only peripheral. I see this openwash as part of a broader 'ethics-wash' in museums, or a complacency about their own ethical authenticity. This demands scrutiny, given the unfolding global crisis that museums cannot escape. I suggest that the fundamental change can only involve more sociocratic forms of practice and governance. The ideal of a sociocratic museum is radically democratic, which arguably goes beyond a 'social museum' expanded by digital programming. I am curious about how digital can play a role in this transition, especially since sociocratic principles are influenced by cybernetics. But I argue that digital alone can't achieve the necessary change, unless integrated with more democratic and ecological ethics of governance and methods of education.

## What do I mean by 'global crisis'?

Climate change is manmade and already dangerous. With current emissions, we are on course to an unliveable planet by the end of the century. The Sixth Mass Extinction is already eliminating species at 10,000 times the background rate. Human civilisation has shifted away from an ecological way of knowing, supporting an extractive economy that allows companies to exploit the living world and disrupt the climate. This current system also creates a yawning social equality gap and airbrushes over abuses of human and animal rights. As people protest more at these abuses, democratic freedoms are eroded and police are militarised.

Globally, governments are capitulating to the influence of corporations, for example by bailing banks out of debt, or providing security and subsidies for fossil fuel companies. Meanwhile, people suffer austerity measures to pay off public sector debts that arise from an unstable casino economy. As I'm based in the UK, I'm especially alert to how publicly funded museums are faring in austerity, as we are facing a rapid dismantling of a wide range of public sector institutions. The budgets of local government are being slashed, threatening significant numbers of smaller museums while national museums must seek more private donations and corporate sponsorship.

There are, of course, movements for resistance and change. However, an orthodoxy in many movements is to encourage people to take individual action as consumers, rather than collective action as citizens. This orthodoxy is less strong in indigenous and radical movements, such as First Peoples and Occupy. Small individual consumer actions are proving to be ineffective in tackling this multiple global-scale crisis. This is exacerbated by the phenomenon of 'pluralistic ignorance' — the bystander effect — where people take their cues on how to behave by

reading others. Most of us see others carrying on with business as usual, stopping us from forging ahead together to effect adequate change.

## **Grasping how technology affects us**

Arguably, so far, consumer technology has been the biggest contemporary force for change *that we are noticing*, wherever connected devices can be afforded en masse. Digital is making more of us less physically active, less private, more exposed to new information, more globally connected, and more active in choosing, creating and contributing to content. Digital is massively impacting how we shop, design new products, collaborate on projects, do science, consume music and film, use libraries and museums, manage our education, join clubs, learn new skills, meet people and plan our travel. There is more to come—as technology is due to progress more in the next 5 years than in the past 10.

Compared to technology changes, the environmental-economic crisis is not greatly affecting how people function, in wealthier countries, at least not in their affluent classes, just yet. In turn, digital technologies are not preventing the poorest people and countries from being hurt by the environmental-economic crisis. That said, digital technology is entangled with the crisis, and we are at a point of balance between two futures, one where digital is controlled by the powerful to perpetuate the crisis (unwittingly or not), another where it is harnessed by collective citizens to overcome it.

Evgeny Morozov points to the sinister side of digital, arguing that governments are creating a “technocratic utopia of politics without politics”. He believes governments are deregulating and privatizing state institutions in hopes of gaining algorithmic control over

us, using narratives, nudges and surveillance to mould the good citizen as a panacea to many problems.

This solutionism might seem efficient. We might hope—with some justification—that participation in culture can be optimised with digital services to bring all kinds of social and educational benefits. The problem is we become so succoured by gadgets, and lured by smart technology into a belief that we are making a difference, we fail to notice the dire state of affairs unfolding beyond our devices. Our devices ever more vividly expose stories of poverty, floods, droughts, protests and wars but we fail to act directly or effectively enough. Our default response, especially if we're early adopters or designers of digital services, is to ask 'is there an app for that?' If states shrink, with governments relying more on data to control us and culture to nudge us, how can museums contribute to that while retaining the ethical authenticity they hope is theirs?

## **How the crisis impacts on museums**

The context is paradoxical, one of rapid progress mixed with unfolding collapse. Museums are pulled in two directions. They are enticed by technological progress — and the glimpsed vistas of consumer and corporate wealth it offers. However, they struggle because they exist to preserve heritage for posterity, and unfolding collapse will be requiring their emergency services. There lies the rub in the dematerialised digital ideal of museum. If the ultimate sociocratic museum only succeeds in cyberspace, how will we ensure that people participate fully in real heritage places? If people get a (proxy) sense of agency within their compelling digital networks, will they be less willing to volunteer for real places threatened by austerity, conflict or natural disasters?

What kind of emergency services do museums actually perform? Museums enable diverse communities to discover, perform and perpetuate heritage *over the long term*, and this is in direct contradiction to the dominant plutocracy who prioritise short-term profit returns over the sustainability of the historic and natural environment, and over open-ended creativity and science. Facing this opposition, museums have a hard job to advocate their core function, and that's exactly why they must work harder to engage the public. Museums can offer the best conditions for 'affective germination' — stirring meanings and emotional responses to things, places and ideas — to remind people why heritage matters. Part of this is broadening the recognition of what counts as heritage, including the ephemeral, demotic and marginal, the non-human and the overlooked. [Director of Curatorial Affairs, Chicago History Museum] John Russick's piece in CODE | WORDS *A Place For Everything*, for example, imagines collections reframed in geo-spatial terms, with all objects from a place mapped to multiple locations helping to connect people to objects and places by making them more meaningful. The more that people feel these connections, the more people can support the long cycle of care. However, it's essential that once drawn in by these mapping apps, or any kinds of participatory programming, the right structures are in place for people to engage step by step — to learn more, to build networks around interests, to give their time and to become stewards of heritage. I suspect that the more focused on short-term and quantifiable outcomes, the more likely museums are to fail in building these structures for progressive participation.

Museums tend to take a long view, which is a positive asset. However, a whole new light is thrown on this long-termism by the fact we can no longer assume the continuity of human civilization. (Or perhaps that's a whole new dark *shadow!*) Should museums focus

on creating an ark of cultural knowledge and biological data, so that surviving humans can rebuild civilisation? Or throw everything urgently into the radical challenge of bring about a sustainable society? Or offer a service of cultural therapy, or 'palliative curation', as more certainty is lost? Any of these are necessary to face the reality of the global crisis.

Unfortunately, such actions are not seen to be realistic when part of this reality is austerity cuts to museums, at least in UK and the rest of Europe. The fittest museums—whose examples we are asked to follow—are seen to manage by targeting more wealthy consumers, accepting more corporate sponsorship (no matter who from) and making cuts to education and outreach. However, I'm not sure how lasting these solutions are, or how appropriate they will be for more community-based museums.

I've argued that for museums to thrive in troubled times, they must radically reinvent themselves. Creating the museum of the future is not about following trends but accounting for critical incidents such as natural disasters, crashes, new social movements or game-changing inventions. The conundrum, of course, is that these are all impossible to account for, by their nature. They also need to develop programmes and governance models that positively game the system to favour the unpredictable outcomes of creative practice, and the sustainability of heritage, ecology and diversity. For example, Robert Stein, in his smart piece [p.211] on how museums can demonstrate social impact, suggests that museums don't just use data to capture how much patrons give but how much their cultural experience leads them to make creative innovations.

## Three museum models

I only have tentative answers for how this could be achieved, and would love to see your ideas in comments or future articles here. But I do have a sense of an ideal, which is that museums could be more sociocratic. To explain this further, it might help to see it in relation to two other museum models.

One model is the **plutocratic** museum. This may have been established by an individual ruler or corporation. Historically, and even today, its collections are funded by the spoils of war, of human exploitation and environmental extraction. Conserving, commissioning and making these riches accessible are a form of 'culture-washing' to justify the plunder by which they appear. Its buildings may be palatial and iconic, and audiences are seen as subjects. Examples include the Louvre Abu Dhabi and Guggenheim Abu Dhabi, the subject of activist protests about degrading labour conditions in their construction.

The model most familiar to me in the UK and Europe is the **bureaucratic** museum. Its collections may have originated in plutocratic plunder, but as states have expanded institutions for public good, museums have emerged as 'jewels in the crown' of national and civic culture. They operate in organised hierarchies, to be efficient yet fair in their service to public. Increasingly their relationship to corporate power is becoming problematic, as they are encouraged to accept philanthropy to replace public funds. Along with their conflicted relationships, they perceive two groups of audiences, one as clients who receive public services, the other as consumers. One example is the Smithsonian, a museum institution dedicated to the public good, but not above accepting major funds from the oil barons, the Koch brothers [family in control of Koch Industries,

the second largest privately owned company in the United States] who fund and perpetuate climate denial. A similar example is Tate, increasingly criticised for its relationship with BP.

The third, then, is the **sociocratic** museum. In ideal form it goes beyond participatory tactics towards governance that is non-hierarchical, consent-based and rooted in its communities. We may see these principles beginning to appear in independent museums run by trusts or co-operatives, or as social enterprises. Such organisations are driven to preserve overlooked or threatened heritage, or to further a social cause or an aesthetic practice. Their audiences are seen as citizens and collaborators. The governance of sociocratic museums may not be perfect, perhaps drowning in committee meetings or overly directed by enthusiastic individuals. However, they offer glimpses of practice whose time has come. Economuseums offer a good example of sociocratic yet commercial museums. These are run by collectives of craftspeople or community heritage groups, and they raise funds in self-reliant ways through workshops, exhibitions and selling artworks. Another inspiring example towards sociocracy is the approach taken in the remaking of the Silk Mill [a museum of industry and history in Derby, England], where visitors and volunteers are invited to become citizen curators, learning skills as they make the display fabric as well as interpretive content of the new space.

## **What can digital do?**

I think the key is not in the question 'how can museums survive?' but in 'how can museums do work that matters?' and 'how can our governance reflect our mission?' In a crisis, I would argue that education and therapy are the most important contributions cultural

services can make. I strongly agree with Mike Murawski in his piece [p.48] about embracing a digital mindset from the perspective of being a museum educator, a background I share with him. A digital mindset is really a connected mindset, which means building on all the ways digital is integrated into how people explore and learn.

[Canadian author, social activist, and filmmaker] Naomi Klein suggests at the Museums of the Future project by The Natural History Museum that:

*The Museum of the Future should be a genuinely multidisciplinary space, so if we're talking about climate change it wouldn't just be talking about climate change as a problem of too much carbon in the atmosphere but about why it's there and who the interests are behind it and what the real, structural barriers are to progress.*

If this is right, museums as educators must be more honest about root causes of change, which means being more 'systems literate'. Digital plays a role in systems literacy, by offering infrastructure for people to connect (non-hierarchically), to build consent about science, to accelerate learning, or to share 'positively deviant' ideas for change. It can combine big data with deep narratives to explore geo-political and human-ecological stories throughout history. Systems-literate museums may help communities be self-reliant and maintain wellbeing as the crisis hits home, much as the Happy Museum Project aims to demonstrate and measure. Museums may then be more valued by doing more valuable work, not just by existing. If they stop assuming that museums have an inherent purity and public good effect, they are less likely to offer 'culture-wash' to unethical sponsors or patrons.

So, is the social web powerful enough to trigger such a reinvention of museums? Is it possible for a big bureaucratic or plutocratic museum to be radical enough, to challenge business-as-usual? Is there a will in museums to be on the side of the people, using digital to resist the perpetuation of crisis?

I don't know, but it might well be that digitally-enhanced people power in response to unfolding events triggers a series of movements leading to change. The *#MuseumsRespondtoFerguson* initiative offers an encouraging sign of this. A joint statement by museum bloggers has led to real actions by museums, amplified by social media. In turn, other galleries are joining the movement, such as Smack Mellon in Brooklyn with its open call to artists to respond. This sentence from the bloggers' statement sums up how museums can do work that matters: "As mediators of culture, all museums should commit to identifying how they can connect to relevant contemporary issues irrespective of collection, focus, or mission."

Perhaps in months and years to come, people will start to demand that their museums respond to terrorist massacres, to climate talks and climate disasters, to global food shocks, to the extinction of the white rhino.

# **WHAT HAVE WE GOT TO DO WITH THIS?**

**MARIA VLACHOU**

Maria Vlachou is a Cultural Management and Communications consultant and Executive Director of Access Culture. Born in Greece, she graduated in archeology (University of Ioannina) and MA in Museum Studies (University College London, 1994), with a thesis on museum marketing.

She worked as Communications Director of São Luiz Municipal Theatre and Head of Communications of the Pavilion of Knowledge (Lisbon-Portugal). Vlachou is a member of ICOM Portugal since 2005 and founder of GAM - Group for Access to Museums.

The following text was published in Musing on Culture blog.

In the last 2-3 years, it has been a pleasure seeing the way museums have been marking Saint Valentine's Day on their Facebook pages. From objects in their collections, to architectural elements to flowers in their gardens, they've made me smile, laugh out loud, look better, learn something new. In a simple, imaginative, humorous way, and from a distance, some cultural institutions have marked on my calendar a day I otherwise find rather uninteresting.

Not all cultural institutions mark this day. Some might be thinking that this is not a serious thing to do, that it is something frivolous, commercial, it doesn't relate directly to their exhibition or theatre play or concert programme. It does relate to something else, though: life.

When hurricane Sandy hit New York in 2012, MoMA PS1 director, posted this on the museum's Facebook page:

*A letter from our director, Klaus Biesenbach, to our friends and neighbors:*

*Dear New Yorkers,*

*Please consider MoMA PS1 a HOME and a SHELTER during this time of difficulty in New York. MoMA PS1 will be open to the community. We know it's not much, but we're happy to offer you a free cup of coffee, a place to rest and charge your cell phone, and to convene with other members of the community and be dry and safe....*

*greetings,  
Klaus*

How did this relate to his museum? To the temporary exhibition? It didn't. It related to something else, though: life.

In 2014, the year of FIFA World Cup in Brazil some cultural institutions presented exhibitions, organized events, made all sorts of references to football. Some might have hoped to lure followers among football fans. Others might simply have thought: this is also life, let's celebrate it!

The Charlie Hebdo attack made me once again think of the role cultural institutions have in society and the capacity they have to relate to it. And also to put their theory into practice. Theory says that culture helps us to be humans, to be tolerant towards the 'Other', to live together, to learn from each other, to share and defend values, to think critically. When the cultural sector comes under attack, we use these same arguments to defend it and to defend the importance of what we do for the society. But when that same society laughs, cries, falls in love, feels in despair, celebrates, mourns... then we take some time (too much time, even) to consider whether it is appropriate for us to acknowledge it, to relate to it. Quite often, we remain quiet.

So, the morning after the Charlie Hebdo attack, I expressed my dismay at the fact that no Greek or Portuguese cultural institution had acknowledged the tragedy. A tragedy that related directly to most things culture stands for. Seconds after I published my post, the Onassis Cultural Centre published theirs. Later on, the Benaki Museum. Relief.... After that, some colleagues let me know of similar attitudes on behalf of the Museu Nacional da Imprensa or the Bordalo Pinheiro Museum. Some more cultural institutions followed. On the 9th of January, the Carmo Archaeological Museum was inviting us for a debate with cartoonists and academics.

Relief.... Still, I am not aware of any large / national portuguese cultural institution acknowledging the events.

A friend wrote to me at that time and asked: "But which cultural institutions do you expect to react? All of them? The ones that somehow relate to what happened? (that would be, for instance, the Museo de la memoria e de los Derechos Humanos in Chile or the Museu Nacional da Imprensa in Portugal, wouldn't it?) The French cultural institutions? Well, I don't want to sound naive, but I would have liked to see reacting all the cultural institutions which claim to want to have a role in forming a better society; which claim to embrace and promote certain values; which claim to want to be relevant for people; which claim to want to be part of society and to help form responsible and critical citizens.

Let me clarify here that by "reaction" I don't mean a hasty response to an incident or a superficial association to a celebration, without consideration for what the institution stands for and with the intention of using it for cheap public relations or simply for not being "left out". People know opportunism when they see it and they don't appreciate it... By "reaction" I mean the thoughtful, responsible, honest and coherent response of a cultural institution that is clear about its mission and about the role it wishes to play in people's lives. And this does not only involve programming or educational activities. It involves being constantly aware of what is going on around us and the way it affects people's lives, so that, as a result of a defined and coherent policy of intervention, the institution may promptly give its contribution towards the kind of world it aims to help build.

What is relevant and what is not relevant for a cultural institution? Well, that's probably not the question. The question is rather: what makes a cultural institution relevant? I recently gave a course,

where we discussed the place and role of cultural institutions in the contemporary society. In the last part of the session, we did a practical exercise:

Please consider:

- The Charlie Hebdo attack.
- Saint Valentine's Day.
- The natural disaster in Madeira in 2010.
- The big anti-austerity demonstration in Portugal on 15 September 2013.

Would your institution react?

If yes, how?

If not, why not?

## **Ferguson, Cleveland and New York**

In December 2014, there was an intense debate among museum professionals in the US regarding the role of museums in the aftermath of the death of black people in police hands in Ferguson, Cleveland and New York. Our American colleagues felt strongly that museums are part of the cultural and educational network that works towards greater cultural and racial understanding. Did they refer specifically to museums with African American collections? Or museums situated in the communities where the events took place? No, they didn't. "As mediators of culture, all museums should commit to identifying how they can connect to relevant contemporary issues irrespective of collection, focus, or mission."

At the time, I agreed with the most cautious position adopted by Rebecca Herz. I find it risky to encourage museums (any institution, really) to act irrespective of their mission, but, as Rebecca put it:

*I personally believe that museums should align all actions with their mission, which should relate to collection or focus. And I think that a connection can be found between any collection and contemporary life, but that these connections need to be carefully considered and developed.*

As I was following this very interesting discussion taking place on the other side of the Atlantic, on 15 December 2014, an Iranian refugee stormed a Sydney café taking hostages. Sixteen hours later, the police intervened, killing the attacker as well as two of the hostages. Fearing reprisals against members of the Muslim community wearing islamic dress, the people of Sydney offered to ride on public transport with their Muslim neighbors who felt unsafe. I found out about this early in the morning of 16 December, through the Facebook page of the Immigration Museum. The museum shared the article of *The Guardian* and joined the rest of the Australians, taking a stand against prejudice and violence.

Taking a stand is not something simple, especially for an institution (as opposed to an individual). It's not a decision that can or should be taken hastily, a response to the moment. It must be a "natural" move, the result of a conscious, structured and sustained policy of civic / political intervention, in accordance to the institution's mission. It is also a great responsibility.

On February 2015, three young Muslims were murdered in their home in North Carolina, USA. At a time where newspapers were reporting

that the motives of the attacker were still not known, the Arab American National Museum shared its heartbreak on its Facebook page regarding the loss of the three young people, thus implying that this was a racial crime. I thought it was too soon, I thought they were jumping into assumptions and that this was neither responsible nor helpful. I asked the museum if it made a statement for every murder in the US. Other people (not the museum) answered that the victims were Arab Americans, so the museum was right to react. I rephrased and asked if the museum made a statement for every Arab American murdered, if it assumed that the murder of every Arab American was a racial crime. I think that museums shouldn't be jumping neither into conclusions nor into statements.

More recently, in Portugal, the Museu Nacional de Arte Antiga published a statement regarding the destruction of archaeological treasures of the Mosul Museum by ISIS militants. It was a good surprise, as this museum, like most Portuguese museums, are not used to taking a stand publicly. One might argue that this was not exactly a political statement and that it was a rather "safe" matter for the museum; it might be. It also came at a time when specialists were still trying to figure out if the objects destroyed were the originals or copies; so it rather looked like a hasty reaction. I am more interested, though, in understanding if this was a one-time reaction or the first act in a concrete, long-term policy of acknowledging and assuming the museum's civil-political-cultural responsibilities. It would be great if it was the latter, time will tell.

**BUILDING  
COMMUNITY:  
WHO/HOW/WHY**

**NINA SIMON**

**SANTA CRUZ MUSEUM OF ART & HISTORY**

After years of research and projects on participatory engagement experiences in exhibitions, which resulted in the international acclaimed reference book *The Participatory Museum*, Nina Simon took over as Executive Director of the Santa Cruz Museum of Art & History (MAH) in 2011.

The following text, published in Museum 2.0 blog, is about the challenges of running a museum relevant to a community.

For years, I've been associated with the idea of "visitor participation." When I became the director of the Santa Cruz Museum of Art & History four years ago, I took this work with me. We invited community members in, to be active contributors, collaborators, and co-creators in our museum space.

We had incredible success transforming our institution into a vibrant cultural center. But when people told us what they loved about the museum, they didn't use the word "participation." They talked about community building.

I don't think there is a way to directly build community. We can't sit down and say, "let's go build some community."

Participation is one (of many) tactics for building community. As time has gone on, my attention has shifted from the tactic of participation to the outcome of building community. And so today I want to talk about building community: the who, the how, and the why of it.

## **WHO**

"Community" is not an abstraction. Communities are made of people, not rhetoric. You can define a community by the shared attributes of the people in it, and/or by the strength of the connections among them. When an organization is identifying communities of interest, the shared attribute is the most useful definition of a community. The second is a quality of the community (strong vs. weak) as defined. How much does the strength of connections among members matter to the definition of community? It matters in degree but not in kind. A strong community engenders fellowship

among members, advances specific social norms, and has identifiable leaders. Weak communities are more diffuse, with members who may not even be aware of each other. These differences are useful when considering how and who to reach out to when trying to get involved with a new community. But the community exists whether it is strong or weak.

The most important first step for any institution that seeks to “engage community” is to be specific about WHO you are talking about.

At the Santa Cruz Museum of Art & History, our community starts with geography. We exist for people who live in Santa Cruz County. We are unapologetic about focusing local. Even though Santa Cruz is a tourism destination, we mostly ignore tourists. Tourists can't help us build community in Santa Cruz County if they are only in town for a day.

Focusing local helps us define our community by identity. We have partnered with The Community Assessment Project (CAP) to learn more about the demographics, interests, and needs of local residents.

In some ways, we do a good job engaging people who reflect our whole County. Our audience's income diversity matches that of the County. We're connecting with people across all age segments in our County. Right now, we're working hard to empower Latino residents to see themselves in our museum. We live in a City that is 19% Latino, in a County that is 33% Latino. Our visitors are about 8% Latino. If we want to reflect the identities of our community, we've got to focus on changing that.

At the same time, “identity” doesn't always mean demographics. For example, in Santa Cruz there is a huge community of creative

people who identify as artists in non-traditional media. That's why we partner with fire sculptors, knitters, graffiti artists, and bonsai growers. They are artists whose experience deserves a home in our institution alongside painters, photographers, and sculptors.

Finally, we define our community by affinity. We focus on people who are culturally curious, actively creative — but may not see a traditional arts institution as a place for them. We're unapologetic about connecting people with history and with art in new ways, even if those ways are sometimes in conflict with more typical museum practice.

We think about this redefinition of affinity not just in terms of our programming but our internal structures as well. Some of our best volunteers come from the County court referral system. We're a place you can work off your traffic ticket.

And that means we get volunteers who are [A] very motivated to complete their hours and [B] culturally curious but maybe not inclined to walk into a museum. They see "museum" on the list of options and they think: hey, I like history, I dig art, maybe this is a good option for me. We've hired amazing people out of this unorthodox volunteer pipeline.

Doing this work in partnership with our local community, in partnership with people who have an affinity for active cultural experiences, we've been able to grow rapidly and tremendously. Over four years, we've tripled our annual attendance and more than doubled our budget and staff and programs.

Last year, our board and staff came together to develop a "theory of change" that connects the activities we do to the impact we seek.

We decided as an institution to focus on just one impact statement: “our community grows stronger and more connected.” It feels amazing to be so aligned and clear about purpose. We’re making our focus on community more overt, tangible, and measurable.

## HOW

There are three “tracks” to our theory of change: individual empowerment, social bonding, and social bridging.

Let’s start with empowerment. We seek to empower our visitors to raise their own civic and creative voices. A lot of museum visits can actually be disempowering, making people feel they are not smart enough or cultured enough to get it. We want everyone to leave the museum feeling that they could become an historian or artist — a civic and/or creative agent of change.

Empowering people starts by involving and including them. Showing that their voice matters. This starts right when you walk into our museum, where you can share opinions about how to improve the institution on a comment wall. We work with people on programs in their neighborhoods, relevant to their stories, so that people get personally connected. And we look for pathways — whether inside or beyond the museum — for people to go deeper. This might mean taking on a project in our historical archives, starting a studio art practice, or getting involved in local issues and organizations.

Empowerment is the “individual” side of our theory of change. The other side is about building social capital through bonding and bridging.

These terms come from Robert Putnam, Harvard researcher and author of *Bowling Alone*. Both bonding and bridging contribute to building community. We bond with people who are like us. We bridge with people who are different from us.

Putnam and other researchers have collected lots of data demonstrating that in the past 50 years in America, bonding has increased and bridging has decreased. We live in an increasingly polarized world, with fewer and fewer opportunities to connect with people from different backgrounds and perspectives. We are more bonded than ever, and more segregated from each other in our respective bonded spaces as a result.

Museums are great places for bonding. Decades of research have shown that one of the primary reasons people go to museums is to bond with friends and family. While we welcome the people who come to our museum to bond, they don't need much help from us to do so.

Bridging is another story. If we don't focus on designing for bridging, it won't happen. So we spend most of our energy working on ways to bring people together from different walks of life in the museum. We bridge by bringing together unlikely partners — across artistic and historical practices, socio-economics, race/ethnicity, and age. Our programming isn't for target audiences. We strive to be a place where you will always meet someone new, someone who is not like you, in a positive environment.

I'm proud of the bridging work that we do. But it is so, so delicate. Bridging requires careful balancing of who is in the space. If any one bridged group starts to take over, it starts to become a bonded space. As the writer and activist Jane Jacobs noted, "self-destruction

of diversity is caused by success, not failure.” She was talking about gentrification of neighborhoods, but the idea carries over. When too many of the same kind of person flock to a place or program, it weakens the ability to bridge.

We’re struggling with this right now when it comes to family audiences. When I first came to the museum, it was not perceived as a family-friendly place. As we developed new 3rd Friday community festivals, we were careful to design them as intergenerational experiences. More and more families showed up. Now, families are dominant at 3rd Friday, and some adults feel like “it’s a kid thing.”

Keeping bridging alive requires constant attention and effort. But it’s worth it because of how important it is to building a stronger and more connected community.

## **WHY**

This vision of a museum working to build a stronger and more connected community is deeply important to us in Santa Cruz. But I don’t think that every museum should be doing this work. I don’t wish that every museum would be community-oriented. I wish that every museum would be clear about its goals, specific about its strategies and measures, and unapologetic about pursuing them.

I don’t think the challenge of museums is being community-oriented. I think the challenge is being authentic to what your institution is about, the community you work with, the vision you have. There is no one-size-fits-all template for that.

Clarity of goals, methods, and measures enables us to proudly and honestly pursue the work that we think is most important. I want all museums to have that.

I started my career as an engineer. One of the essays that inspires me most was this lecture that a computer scientist named Dick Hamming gave in 1986 called *You and Your Research*. Hamming was addressing the question of why more scientists don't do Nobel Prize-worthy work. He said:

*The average scientist, so far as I can make out, spends almost all his time working on problems which he believes will not be important, and he also does not believe that they will lead to important problems. If you want to have impact, if you want to change the world, you have to work on an important problem.*

So often, we focus on the tasks in front of us. The next exhibition. The marketing campaign. The big event. This work is useful. But if you aren't attacking a big problem through it all, what's the point?

There are many important problems that touch the museum field: building stronger communities, transforming the education system, the need for creative play and inspiration, social equity, artists as changemakers, education about global issues. And so on.

I don't care what important problem you choose. But I hope you are working on one. Important problems will keep you up late at night, but they'll also get you out of bed in the morning. They are the reason this work matters. They are the only way we will change the world.

# MUSEUMS... SO WHAT?

**ROBERT STEIN**

DALLAS MUSEUM OF ART

Deputy Director Robert Stein currently leads a small revolution at the Dallas Museum of Art. In 2013, Stein led the DMA in making a transition from paid to free general admission and in launching an innovative free membership program called DMA Friends to generate meaningful data about museum participation that staff can use to refine educational programming and public experience.

Prior to his role in Dallas, Stein was the Deputy Director for Research, Technology, and Engagement at the Indianapolis Museum of Art. While in that position, Stein founded a renowned technology program that piloted many of the most innovative technology initiatives in museums including ArtBabble.org, a content portal for digital video about art and artists.

In the following essay, published in CODE | WORDS, Stein brings an important discussion about public value. If we consider that museums are fundamental for society, why we have so much difficulty in producing data and evidence of this value?

In August 2013, the ethicist and contemporary philosopher Peter Singer wrote an op-ed piece for the *New York Times* that struck a nerve with me and with many in the arts community (Singer, 2013). In it he compares the relative value of giving to the arts with giving to charities that are actively working to cure blindness. Singer asserts that, "... it seems clear that there are objective reasons for thinking we may be able to do more good in one of these areas than in another." Furthering his argument, Singer offers a thought experiment implying that those who are willing to fund the construction of a new wing of your museum are, in essence, choosing to allow thousands to become blind. To Singer, this simple value comparison clearly favors a moral imperative to fund the tangible and immediate needs of global health and poverty over relatively frivolous cultural endeavors like museums.

You can imagine that the response to Singer's article from the cultural community was swift and loud. Dozens of articles and blog posts were written to highlight the logical flaws in his argument and to malign his brand of social philosophy; in essence dismissing the argument he presented. Certainly, I was mad too. His provocation was offensive to me. It is an affront to those of us who believe that art and culture do make an important difference. But somehow, many of those ardent responses from the cultural sector ring a bit hollow to me. While Singer's argument is directed squarely at art museums, it's easy to see how he would extend this critique to the broader cultural heritage sector as a whole.

Singer's logic is clear, compelling, and important. He brings data with him that supports his conclusion and with it; he documents a tangible benefit to a global public. This doesn't change the fact that I find his idea to be deeply flawed and easily refuted. I don't believe that he's right, but others do and that's what has

me worried. Singer highlights an emerging international movement called “effective altruism” whose proponents invest in charities that can deliver the biggest tangible benefits, believing that a disciplined method of investing in these causes will result in the greatest human impact for good.

Among these proponents is none other than Bill Gates, founder of Microsoft and among the most influential philanthropists of our generation. During a recent interview with the *Financial Times* (Waters, 2014), Gates echoes Singer’s op-ed and asserts that support of the arts and culture is “... slightly barbaric” using again the same flawed comparison of arts support versus curing blindness. Again, my initial response to the interview was to be angry and dismissive of these points, but as I reflected more on what was happening, I now have quite a different impression.

I have to admit some bias on my part. Bill Gates, the technologist, has not been among my favorite people. However, I must admit that Bill Gates, the philanthropist, has earned my admiration in ways I didn’t expect. When one day we reflect on Gates’ impact on the world, I’m quite certain that the lasting and permanent good he has done through his charitable foundation will far outstrip the impact he made on the technology industry. Gates brings a methodical, visionary, and principled approach to his philanthropic choices and it’s no wonder that a philosophy of “effective altruism” and its data-driven approach to giving appeals to him. Herein lies the problem. If a well-reasoned, well-meaning, and generous philanthropist like Mr. Gates is predisposed to believe that giving to the arts might be “slightly barbaric”, we’ve got a problem.

The effective altruism movement is not in and of itself a bad thing. In fact, a community of serious investors who are committed to

seeing true and demonstrable impact from their giving can hardly be faulted. The problem lies with the cultural sector's inability to mount a compelling case of evidence to convince these "effective altruists" that tangible and meaningful benefit does indeed result from investing in the arts and culture. Our impassioned arguments about how museums can change lives and bring communities closer together are all well-and-good, but they mean very little to a data-driven philanthropist if we cannot bring supporting evidence with us to prove our point.

### **Proving the Point, What Makes a Museum Good?**

Given that the year is now 2015, why is it acceptable for museums to tolerate such a lack of evidence for why we matter to the world around us? According to the American Alliance of Museums, the museum sector contributes \$21 billion to the US Economy every year. Considering that robust number, doesn't it seem strange that we still have difficulty putting our finger on the data that explains what important outcomes result from those efforts?

Stephen Weil raised the clarion call regarding the need for museums to define for themselves why they exist nearly 17 years ago, but I feel that we've still not taken him seriously. Why should our public even care if museums are succeeding or failing if we can't prove to them why we matter? Museums... So what?

*The good museum is neither a survival-driven institution nor a process-driven one. The good museum is a purpose-driven institution. Its leadership understands and makes manifestly clear that other, more conventional measures of success — a balanced*

*budget, approbation of peers, high staff moral, acquisition of important collections — all have to do with means and not with ends. They may be necessary to the good museum — adequate resources certainly are — but in and of themselves they are not sufficient to make a museum a good one. The things that make a museum good are its purpose to make a positive difference in the quality of people's lives, its command of resources adequate to that purpose, and its possession of a leadership determined to ensure that those resources are being directed and effectively used toward that end. (Weil, 1997)*

Weil goes on to poke his finger more deeply into the wound we're all afraid to walk up to. What if Peter Singer is right? What if there are some museums who don't matter, or those that matter less?

*The first necessary step — the bold one — requires that we publicly face up to the reality — and face up to it with a forthrightness that has hitherto been lacking — that all museums are not equally good and that, in fact, some museums that manage to remain solvent and go about their day-to-day business might really be no good at all. (Weil, 1997, p. 56)*

If we care about the change that good museums make in the world, we should be scouring the field for the tangible proof-points of museum impact. We should be among the first to volunteer our museums for studies that can begin to test whether we are actually making the impact we claim to be. Why do museums spend millions each year to host temporary exhibitions that will be gone in a matter of weeks, but only a fraction of that amount to study how

we might do a better job of changing the world? Now that museums are beginning to have the tools and expertise at their disposal to monitor, track, record, and analyze all the various ways that the public benefits from their work, the real task begins to redesign the process and program of museums and to embed impact-driven data collection into every aspect of our efforts.

### **The evidence is out there**

While the important impacts sought by museums are more difficult to observe and record than simply billions served or dollars at the till, the difficulty of the process does not excuse us from understanding how and why we make (or fail to make) a difference. As non-profits, museums are red-ink businesses with our most important outcomes often not well reflected in our financial bottom line. Unlike the corporate sector, museums that succeed financially may be just as likely to fail in generating meaningful impact as their cash-strapped counterparts. While the healthcare sector can count the number of lives they save, counting the number of lives changed by museums is a different task entirely.

As the value and relevance of museums is increasingly being called to question, the challenges of how best to document museum impact are questions worth answering. Increasingly, technology is allowing us to know our audiences in ways never before possible. I believe the time to model and monitor the intangible successes of museums with technology is right now. The possibility that we might crack the code in answering these questions about museum impact would be tremendously important to our field and the people who walk through our doors.

An important word of caution is required at this point. As cultural non-profits, we should be very careful to choose the right measures to document our truly unique impacts, or risk being bitten by a snake of our own making. Perhaps the most common knee-jerk reaction when Museums are pushed to make the case for their own existence is to turn to studies of economic impact. The hope is that our local constituents will embrace us with open arms if they only understand how good museums are at “pulling their weight” financially. I think we ought to be very careful not to put too much stock in this economic *raison d’être*.

Despite how true the supporting evidence may be about the economic impact of the cultural sector, the economic contribution of culture to a city does not reflect the true reasons why such a vibrant cultural community is important. By tying the value of museums to their financial footprint, we dodge the real issue at hand regarding the best and most important reasons museums should exist at all.

## **So what?**

Museums are ideally suited to generate social impact — uniquely so. Whereas every business can compete with the museum in respect to its economic muscle in the community, very few could hope to compete with the potential social impact museums are capable of making. Besides, why would we care to win a game that isn’t central to our reason for being? What happens when our city booms around us and the fiscal imprint of our museum is no longer significant to the same degree it once was? When our city is in financial trouble, does it see museums as primarily economic assets or cultural assets? When the next recession strikes and our revenues dip, does our commensurate value to the city dip as well? I hope not.

## **We need culture to solve global problems**

To be sure, issues of global poverty, chronic disease, human trafficking, and climate change are just a few of the serious challenges to our generation. The need for new solutions to these problems is ever-present. Spend long enough making lists of these pressing issues and you could easily be persuaded that the arts aren't worth your time and investment, but you'd be wrong.

To neglect the role of culture in the process of innovation, inspiration, and creativity is tremendously shortsighted. Consider the fact that no matter how brilliant the science or ground-breaking the discovery may be, the need to put these future innovations into practice requires working together with diverse people and cultures whose needs, concerns, and emotion demand a tolerant and empathetic camaraderie in order to make good on the promise of lasting change.

Harvard economic historian David Landes addressed this apparent dichotomy between finding solutions to these global problems and the appreciation of culture in his book *The Wealth and Poverty of Nations: Why Some are Rich and Some So Poor* (Landes, 1998). In it he emphasizes the intangible factors surrounding the economic challenges present in developing nations and surmises the following, "if we learn anything from the history of economic development, it is that culture makes all the difference." In this simple observation, Landes has keyed in on one of the very tangible impacts that the arts can bring.

To solve chronic global problems we need out-of-the-box creative solutions. When IBM surveyed 1500 CEO's about the skills they most needed in the next generation of leaders, creativity topped

the list as the most crucial skill required for future success (IBM, 2010). As repositories of the world's greatest creative endeavors, museums provide a tremendous workshop for exploring creative genius both past and present. If one were to look for a place where creativity could be learned, studied, examined, and replicated in all its forms, you could scarcely do better than by exploring the collections at your local museum.

Need proof for such an audacious claim? We need look no further than the famous scientists and scholars of our time. Max Planck, father of quantum mechanics and a devoted opera composer observed. "The pioneer scientist must have ... [an] artistically creative imagination" (Plank, 1949 pg. 8). Albert Einstein and Werner Heisenberg were musicians when they weren't challenging our concepts of the universe, and Richard Feynman was creating art in between rewriting the laws of physics. In fact, Michele and Robert Root-Bernstein studied the effect of cultural participation among the world's great scientists and found a striking correlation between arts participation and game-changing innovation in other fields:

*Almost all Nobel laureates in the sciences actively engaged in the arts as adults. They are twenty-five times as likely as the average scientist to sing, dance, or act; seventeen times as likely to be a visual artist; twelve times more likely to write poetry and literature; eight times more likely to do woodworking or some other craft; four times as likely to be a musician; and twice as likely to be a photographer. (Root-Bernstein, 2009)*

In one of my favorite examples, noted science fiction author Neal Stephenson famously chided his fellow scifi authors in an essay for

the *World Policy Journal*. He noted that generations of scientists had been inspired by the work of Arthur C. Clark, William Gibson, and others, but that the current generation of science fiction authors had given up on imagining a positive future world in favor of more dystopian tales:

*Good [science fiction] supplies a plausible, fully thought-out picture of an alternate reality in which some sort of compelling innovation has taken place ... The fondness that many such people have for [science fiction] reflects, in part, the usefulness of an over-arching narrative that supplies them and their colleagues with a shared vision... The imperative to develop new technologies and implement them on a heroic scale no longer seems like the childish pre-occupation of a few nerds with slide rules. It's the only way for the human race to escape from its current predicaments. Too bad we've forgotten how to do it. (Stephenson, 2011)*

Later in the essay Stephenson quotes Michael Crow, the President of Arizona State University, who prodded, "scientists and engineers are ready and looking for things to do. Time for science fiction writers to start pulling their weight and providing big visions that make sense."

Consider what could happen for a moment if Museums were able to document — like universities do — our creative alumni? With the technology currently at our disposal, why are we only so focused on patron management systems (CRM by another name) that track the money people donate to us? What if we focused instead on keeping a catalog and evidence of the creative imprint

our audiences are exposed to and the impact they make on the world. Such a catalogue could effectively illustrate the museum's imprint on the formation of creative ideas and creative professionals and their resulting innovation across a multitude of fields. This alumni creativity database could be a proof-text for the role of museums in the formation of creativity and a boon for fundraising linked to this important outcome.

## **A place for culture in the social framework of global communities**

Putting aside for the moment the litany of global problems, we cannot neglect to consider the human framework these problems reside in and the dramatic ways in which it is changing. Driven in part by the pace of global population growth, a report from the Guardian's Cities project tells us that by 2050, 70 percent of the world's population will live in an urban area. (Guardian, 2014) To reach that place, a city of one million people will be built each week from now until that date.

Clearly, the urban dynamic of this future-world will bring with it a whole host of new problems as people learn how to live in harmony so closely together. The need for engaged and tolerant future citizens is urgent, but as we look at how our own cities are evolving, we seem to see exactly the opposite taking place. A study by American's for the Arts looked at the important role civic dialog plays in the emergence of healthy democracies:

*Civic dialogue plays an essential role in the workings of democracy, giving voice to multiple perspectives on challenging issues; enabling people to develop*

*more multifaceted, humane, and realistic views of issues and each other; and helping diverse groups find common ground.*

*Yet there is growing concern that opportunities for civic dialogue in this country have diminished in recent years. Polarization of opinion along ideological, racial, gender, and class lines; exclusive social structures separating rich from poor and majorities from minorities; a sense of individual disempowerment; and the overwhelming nature of many of society's problems are all factors contributing to this sense.*

*Perhaps most fundamentally, the crosscutting nature of today's complex issues often places them outside of the traditional structures and settings, such as civic organizations, labor unions, and political parties, which have served in the past to organize civic discourse". (Americans for the Arts, 1999)*

The report goes on to suggest the many ways that arts and cultural organizations can play a role in encouraging civic discourse that defies these socio-economic differentiators and instead embraces the similarities we all share.

I met Lisa Junkin from the Jane Addams Hull-House Museum in Chicago at the 2012 Museum Ideas Conference in London. Although she probably doesn't know it, she really opened my eyes to all the opportunities we're missing regarding civic engagement in museums. I was struck by the way that civic dialog and social justice was knit deeply into the fabric of the Hull-House Museum and with

the programs that Lisa was designing and hosting there. The Hull-House Museum honors the legacy of Jane Addams, the pioneering feminist and social worker from the 20th century, and continues to live out her ideals.

In describing the museum's approach to civic engagement and social justice, Lisa makes the following observation in an interview for Museum ID magazine from 2012:

*Museums have always been an active part of civic life, helping to shape or confront cultural and political ideologies. This responsibility should never be taken lightly. The more radical museums today use their unique assets as trusted cultural institutions and repositories of history to inform and create dialogue and action around critical issues. The radical part of museum practice comes when institutions rethink their positions of authority. Staff must see their work as intensely ideological, political, and relevant to today's society.*

Today, museums have so many opportunities to embrace civic dialog as it integrates with their online presence, and many are doing so. But, the attitude and evidence for how this online discourse can change the fabric of our communities is mostly missing. Certainly, the face-to-face dialog that happens in real life at the museum is critically important, but I keep thinking about all the ways we could enhance and improve this dialog digitally and online. What if we considered how we might detect when meaningful discourse happens in our social media and online activities? How many of us are cataloging and archiving those discussions? Why not? Rather than settling for a "we'll know it when we see it" strategy, museums can easily design systems into our websites,

Facebook pages, mobile apps, etc... that surpass the simple analytics common to the web today and instead seek evidence of real attitudinal change. Why not use sentiment analysis to characterize the tone and nature of these discussions? Doing so could provide a quantitative index to the attitude shifts that occur in museum audiences over time. How about designing systems that solicit lightweight survey data to tell us whether our online visitors are changing their opinions, impressions, and passions along the way. Sure this is hard, but isn't it far more important and interesting than time on page, pages per visit, and session depth? Why are we abdicating digital metrics for museum impact to whatever Google Analytics decides it should provide to us? We might fail the first few times we try, but if we got it right those answers would change the field of museums.

## **Creating a Better Community**

Many of you reading this article will bring with you first-hand experience for the way that the arts can bridge cultural differences, but the cultural sector is still incredibly bad at making this case with data. Luckily a variety of recent studies have shown how arts participation can result in increased altruism, tolerance of others, and increased civic engagement.

If you sing, dance, draw, or act — and especially if you watch others do so — you probably have an altruistic streak, according to a study by researchers at the University of Illinois at Chicago.

People with an active interest in the arts contribute more to society than those with little or no such interest, the researchers found. They analyzed arts exposure, defined as attendance at museums

and dance, music, opera and theater events; and arts expression, defined as making or performing art.

“Even after controlling for age, race and education, we found that participation in the arts, especially as audience, predicted civic engagement, tolerance and altruism,” said Kelly LeRoux, assistant professor of public administration at UIC and principal investigator on the study. (Ranallo 2012)

In another study, University of Pennsylvania researchers have documented that a high concentration of the arts in a city leads to higher civic engagement, more social cohesion, higher child welfare, and lower poverty rates. (Americans for the Arts)

While our nation continues to struggle to provide a quality education for all students, a lack of funding and support for the arts flies in the face of the fact that arts participation has been linked time and again to increased academic performance.

In her examination of NEA data about student academic performance, IMLS Senior Statistician Deanne Swan recently published findings that indicated children who visited museums during kindergarten had reliably higher achievement scores in reading, mathematics, and science than children who did not (Swan, 2014). Furthermore, studies commissioned by the NEA show that “students with an education rich in the arts have higher GPAs, standardized test scores, and lower drop-out rates regardless of their socio-economic status. Students with 4 years of arts or music in high school average 100 points better on their SAT scores.” (Catterall, 2012)

In Dallas, I’ve been so excited to partner with a local education nonprofit called BigThought. BigThought is exploring education

innovation in a variety of ways including through partnership with dozens of local arts organizations. Part of what they've shown, is that students who participate in out-of-school arts activities here in Dallas exhibit more dedication to learning and better achievement scores than those students who do not. (BigThought, 2013)

BigThought is such a valuable partner to us because they have relationships with the Dallas Independent School District that individual museums and cultural organizations cannot. Those relationships provide BigThought with the data to measure and prove the real educational impact of cultural nonprofits here in Dallas. This summer, the DMA is partnering with BigThought and 50 other organizations in the city to pilot the Dallas Summer Learning Initiative. Modeled on the Chicago City of Learning project, the effort will track the participation of thousands of school-aged kids in Dallas as they participate in a wide variety of activities.

By using the BadgeKit opensource toolkit created by the Mozilla Foundation, the Dallas City of Learning project will record detailed data about cultural participation this summer. Can you imagine the power of coupling school achievement data with data about out-of-school participation? As pilots like these spring up across the country, Museums have a unique chance to participate in gathering real and meaningful data about how their program contributes to student education and well-being.

## **Putting the Muse in Museums**

Let's be clear, the evidence that museum participation can result in significant and tangible benefit to society is present and well documented. Still when compared to other non-profit sectors,

the cultural sector is not doing a good job of making the case. Compared to curing blindness, or saving babies, we would have a tough time convincing the Peter Singers or Bill Gates of the world that investing in museums is worth their money.

Why do we have so few studies initiated by, or partnered with museums that seek to put data to some of these crucial contributions we can and do make? I looked for significant longitudinal studies about the social impact of museums and found only a few, while similar searches in the medical sector would drown us in data.

Since we know that museums — regardless of discipline — derive so much of their annual revenue from philanthropic contributions, why do we invest so much time and money seeking box office revenues and comparatively little money on evaluation to prove and improve our long-term impact? Wouldn't it make more sense to spend more time (and money) studying how museums can generate more, better, faster, and deeper change?

The time has come for museums to get very serious about a clinical examination of their effectiveness at generating value. While the measurement of the intangible elements of museum participation remains challenging, advances in technology and the ability to analyze complex systems in ways not-before-possible have changed the ways we can understand our audience. The commercial sector is taking advantage of these advances to build and mine sophisticated consumer profiles with the purpose of understanding your buying patterns and future purchasing behavior. Predictive analytics based on these profiles is being applied with increasing accuracy for much less laudable purposes. The time has come for museums to join the fray and to use these methods to better understand our own practice and efficiency at generating our sought-after impacts.

At the Dallas Museum of Art, we have started early experiments to gain a better understanding of our visitors and our own performance at a very individual level. In 16 months we've welcomed more than 65,000 people in Dallas and around the country to join us as DMA Friends. In doing so, we are growing a dataset of user profiles with actual behaviors and discrete points of data and are approaching a moment when this data will become suitably large to tell us not only who comes, but what behaviors and factors predict whether or not they will engage with art on a deeper level. As we continue to develop this dataset and understanding of its implications on our museum's practice we will develop at least one longitudinal dataset about cultural participation. If we continue to grow at our current rate we will exceed 262,000 members in the program over the next 5 years and will finally know how THIS audience in Dallas relates to our museum and what specifically they choose to do with us. It is ridiculous to me that many museums have operated for 100 years or more knowing how many people showed up, but not a lick about why they came or what might entice them to come back. (Stein and Wyman, 2013, 2014)

While any company that operated in this fashion would quickly go out of business, museums have had the luxury of continued existence based on the good graces of well-meaning donors. As we learned during the economic recession of 2008-2009, and more recently with the tragic bankruptcy of the city of Detroit, unpredictable economic forces can dramatically impact the financial fortunes of museums. Those museums that can demonstrate their impact with data will stand a much better chance of thriving in uncertain economic times. Even more, those same museums can accelerate their impact by improving efficiency at producing these outputs.

Unless museums can adapt their staffing and decision-making processes to move more quickly than our local cultures, we will

invariably lack the ability to address the important issues facing those cultures. In order to do this, museums need to get better quickly at understanding the vast amounts of data that are available to us now as never before. Museum executives need to think of the museum as a vast interconnected system of activity, facility, and program that can be monitored, tweaked and tinkered with. Our museums already take this call and response relationship into account when we plan for exhibition attendance and box office revenue, why not apply similar stochastic modeling to more important efforts like participation, engagement, and learning? We're good at design; so let's design the WHOLE system, not just the parts that make us money.

As museums begin to gather sizable and complex datasets, we will need to employ data modeling, data mining, and statistics experts to help us. Existing museum professionals will need to augment their professional skill sets with a baseline proficiency at understanding data and using it to drive decision-making. Most importantly, serious museum professionals need to reject the glorification of and meaningless boasting about attendance and economic performance. As a field, we can no longer accept raw attendance alone as a valuable indicator of "making an impact".

Likewise, financial performance without social impact does not make a museum good. We should strive to know whether any lives were changed during the run of this exhibition. We should care enough to count whether any children who visited the museum gained confidence in their own ability to create and innovate. Do they seem themselves and their creative agency differently than before they visited? We should know whether two neighbors from our city came to understand each other in a new way while they visited this week. Only by measuring and counting the difference

we make in people will we live up to our potential to change lives. Without it, we risk being relegated to the periphery of contemporary society as mere treasure houses for the wealthy in need of a tax-break.

If we give up on the idea that we can know for sure that our museum makes a difference, then Peter Singer is right, we're not worth supporting.

Putting aside the statistics for a moment, I feel sad for Singer and Gates. While I appreciate their desire to invest resources in methods that advance the greater good more quickly and more efficiently, their dismissal of the intrinsic value of culture makes me think they've missed out on the way art can touch a part of the human experience that no piece of data can ever measure.

It seems to me that the connections between art and innovation, creativity and genius are inextricably linked. Is it possible they've missed entirely the Muse in Museums? A story about a young boy named Ben reminded me of this recently during a recent visit to our museum in Dallas.

Ben was born very premature and almost didn't survive. His mother and father, wrestled with the fact that their baby boy might not ever leave the hospital. His mother hoped simply for a chance to hold him and say hello and goodbye.

Thankfully, Ben survived this rough start and grew into a vigorous and curious 9-year old who loves to read and explore much like your kids and mine. While Ben overcame most of those early challenges, his eyes were damaged in a way no one could predict. While Ben has grown up with sight, he is slowly going blind.

As you can imagine, knowing for sure that someday soon you will never be able to gaze on another sunset would be a lot for anyone to handle, let alone a 9-year old boy. Ben's parents and family are a great support to him, but he clearly struggles with the fact that someday soon he won't experience the world visually any longer.

To try and make as many visual memories as possible during the time he has left, Ben and his parents have made a list. This visual bucket list is Ben's last chance at capturing memories that will last him a lifetime.

Along with seeing mountains and beaches, the Eiffel Tower, and the Pyramids, Ben wanted to seize the chance to see paintings by Vincent Van Gogh. The DMA was privileged to know about Ben and to welcome him and his family to visit the Museum before hours so that they could spend some quality one-on-one time with our painting of Van Gogh's *Sheaves of Wheat*.

Watching Ben drink in the sight of that painting for what may be the last time is a powerful experience. Through his tears, the museum provided a memory and experience that money can't buy. Who can say how that might impact Ben, his family, or those museum staff who were there with him? This simple kindness will have a profound and lasting impact. I know I won't ever be able to see this painting again without thinking of Ben. This binding of emotion, memory, and meaning to a piece of art is fascinating isn't it?

What if we could know how to succeed like this more often?

Wouldn't it be worth the effort?

Don't you want to figure it out?

When Singer or anyone else reduces the value of museums to a simple equation or efficiency rating, we risk missing out on something truly special.

## References

Americans for the Arts. *Animating Democracy—a role for the arts in civic engagement*. 1999. ISBN 1-879903-00-8

BigThought. *Enriching Minds. Growing Our Future*. 2013. <http://www.bigthought.org/sites/default/files/downloads/apcommunityreport.pdf> . Consulted June, 2, 2014.

Catterall, J. S., Dumais, S.A., & Hampden-Thompson, G. (2012). *The Arts and Achievement in At-Risk Youth: Findings from Four Longitudinal Studies*, Research Report #55. Washington, DC: National Endowment for the Arts.

Chamberlin, G. An interview with Lisa Junkin. *MuseumID*, Issue 10, pg 15. 2012.

Husock, H. Peter Singer's Seductive—And Dangerous—Anti-Charity Reasoning. *Forbes.com*. August 15. 2013. <http://www.forbes.com/sites/howardhusock/2013/08/15/peter-singer-seductive-and-dangerous-anti-charity-reasoning/>. Consulted May 20, 2014.

IBM. *Global CEO Study: Creativity Selected as Most Crucial Factor for Future Success*. 2010. <http://www-03.ibm.com/press/us/en/pressrelease/31670.wss>. Consulted June 1, 2014.

Landes, D. *The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor*. New York: W.W. Norton. 1998. ISBN 0-393-04017-8.

Plank, M. *Scientific Biography and other Papers*. (F. Gaynor, Trans.) New York: Philosophical Library. 1949.

Ranallo, A. B. *Interest in Arts Predicts Social Responsibility: Study University of Illinois at Chicago*. August 16, 2012.

Root-Bernstein, R., et al. *Arts Foster Scientific Success: Avocations of Nobel, National Academy, Royal Society, and Sigma Xi Members*. *Journal of Psychology of Science and Technology*. 2008.

Root-Bernstein R., M. A Missing Piece in the Economic Stimulus: Hobbled Arts Hobbles Innovation. *Psychology Today*. February, 2009. <http://www.psychologytoday.com/blog/imagine/200902/missing-piece-in-the-economic-stimulus-hobbled-arts-hobbles-innovation>. Consulted June 1, 2014.

Singer, P. Good Charity, Bad Charity, Published August 10, 2013. *The New York Times*. <http://www.nytimes.com/2013/08/11/opinion/sunday/good-charity-bad-charity.html>. Consulted May 20, 2014.

R. Stein and B. Wyman, Nurturing Engagement: How Technology and Business Model Alignment can Transform Visitor Participation in the Museum. In *Museums and the Web 2013*, N. Proctor & R. Cherry (eds). Silver Spring, MD: Museums and the Web. Published January 31, 2013. Consulted June 1, 2014 . <http://mw2013.museumsandtheweb.com/paper/nurturing-engagement/>

R. Stein and B. Wyman, Seeing the Forest and the Trees: How Engagement Analytics Can Help Museums Connect to Audiences at Scale. In *Museums and the Web 2014*, N. Proctor & R. Cherry (eds). Silver Spring, MD: Museums and the Web. Published February 1, 2014. Consulted June 1, 2014. <http://mw2014.museumsandtheweb.com/paper/seeing-the-forest-and-the-trees-how-engagement-analytics-can-help-museums-connect-to-audiences-at-scale/>

Stephenson, N. Innovation Starvation. *World Policy Journal*. 2011. <http://www.worldpolicy.org/journal/fall2011/innovation-starvation>. Consulted May 20, 2014.

Swan, D. W. (2014, April). The Effect of Informal Learning Environments on Academic Achievement During Elementary School. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA. <http://blog.ims.gov/?p=4792>

Wainwright, O. Guardian Cities: welcome to our urban past, present and future. Jan 2014. <http://www.theguardian.com/cities/2014/jan/27/guardian-cities-site-urban-future-dwell-human-history-welcome>. Consulted May 30, 2014.

Waters R. An Exclusive Interview with Bill Gates. *The Financial Times*. 2014. <http://on.ft.com/18Jatka>. Consulted June 1, 2014.

Weil, S. *Making Museums Matter*. November, 1997. ISBN 1-588340-00-7

# LINKS

## **CODE | WORDS**

<https://medium.com/code-words-technology-and-theory-in-the-museum>

## **Sharing is Caring**

<http://www.smk.dk/en/about-smk/smks-publications/sharing-is-caring/>

## **Museums and the Web**

<http://www.museumsandtheweb.com/>

## **Europeana**

<http://www.europeana.eu/portal/>

## **Let's Get Real**

<http://www.weareculture24.org.uk/projects/action-research/>

## **TrendsWatch**

<http://www.aam-us.org/resources/center-for-the-future-of-museums/projects-and-reports/trendswatch>

## **Nina Simon: Museum 2.0**

<http://museumtwo.blogspot.com>

## **Musing on Culture**

<http://musingonculture-pt.blogspot.com>

## **BadgeKit opensource toolkit**

<http://badgekit.openbadges.org>

## **Museum Hack**

<http://museumhack.com>

## **OrsayCommons**

<http://sites.google.com/site/orsaycommons>



This work is licensed under a  
Creative Commons Attribution-NonCommercial 4.0 International License.  
You must give appropriate credit, provide a link to the license, and indicate if changes  
were made. You may not use the material for commercial purposes.

### **Cover**

*Your rainbow panorama*

de Olafur Eliasson

ARoS Aarhus Kunstmuseum

Image shared by Michael Peter Edson

### **Portrait of Alida Christina Assink**

Jan Adam Kruseman, 1833

Image from Rijks Studio

[rijksmuseum.nl/nl/collectie/SK-C-1672](http://rijksmuseum.nl/nl/collectie/SK-C-1672)

**Editor** Julio Silveira

**Graphic design** Rara Dias

### **Get in touch**

*web* [reprograme.com.br](http://reprograme.com.br)

*email* [luismarcelomendes@gmail.com](mailto:luismarcelomendes@gmail.com)

*fb* [facebook.com/reprograme](https://facebook.com/reprograme)

*twitter* [twitter.com/reprograme](https://twitter.com/reprograme)

Reprograme is available for free download.

Visit [www.reprograme.com.br](http://www.reprograme.com.br)



PODER à palavra

[www.imaeditorial.com/motor](http://www.imaeditorial.com/motor)



Ímã Editorial | Livros de Criação

[www.imaeditorial.com](http://www.imaeditorial.com)