The Construction of a Graduate Identity: Data-Mining the Student Archive

Kelly McErlean

Abstract

In 'The Stereoscope and the Stereograph' Oliver Wendell Holmes envisioned libraries of images – images of everything, where the original construct is no longer needed. 'Matter in large masses must always be fixed and dear; form is cheap and transportable.' The physical original gradually degrades and is lost. Yet there are 'duplicates' (images, text, video, drawings) in libraries all over the world that describe the 'original' in detail. Images have different meanings depending on where and how they are stored and 'the archive governs the meaning of the images inside it.'

'Collective Memory' by Maurice Halbwach. Memory 'is not preserved but is reconstructed on the basis of the present.' The archive is the source of this collective activity of 'shaping' the past.

Walter Benjamin's 'aura.' Inscriptions that describe art are a testament to 'its unique existence at the place where it happens to be.' Educational insitutions in the UK have merged many times over the last 100 years. They selectively archive significant works that were created in-situ. This is a manipulation of the institutional history. The resulting narrative is a construct, created by a storyteller to suit contemporary political and commercial needs.

The New York Times called the Magnum archive a 'collective photobank of modern culture.' Yet Magnum largely created the majority of these images. The Magnum archive is one of many image collections that is being meta-tagged. The tagging of images with descriptive metadata will allow future researchers to data mine the content. However, the architecture of the meta-dating system will have great influence over what is discovered.

Netflix uses the proprietary 'Netflix Quantum Theory' – a micro-genre system of microtagged film elements to personalise recommendations for individual viewers. This is also used to identify trends in the viewing habits of specific demographics and ultimately leads to the commissioning of audiovisual product.

Contextual operating systems for archives will operate in a similar manner and will only direct you to 'appropriate stuff' that it has 'decided' you will be interested in. Google Glass expected to have a contextual OS in 2015.

Much of the institutional memory of educational centres resides within the graduate archive, where key historical works are selectively collected and classified. Yet the archive is a codified construct, a narrative created by an author or series of authors. Over time, it is edited to present a specific perspective on the institutional alumni, archival elements are lost or removed due to lack of space, they are re-categorised in terms of their significance, they become dated and slip in and out of fashion. The digitisation of

archives is allowing more complex archival analyses to take place. Yet what influence does the system of element tagging have on the ability of future researchers to investigate without bias?

We need to consider how archives are constructed and interpreted. Gregory Barker interviewed archivist and photographer Christian Patterson about his juxtaposition of representative artifacts and photographs in his photo-essay 'Bottom of the Lake.' Patterson revisited and photographed his home town of Fond du Lac after an absence of many years, 'we experience life through different materials, using our different senses; a multi-faceted approach feels natural to me. It's only important that the materials feel right together; that they inform and reinforce each other. [...] They're all part of the same experience[1]', Patterson's images are both scientific study and archival record. 'Bottom of the Lake' includes images of original artefacts in-situ, reproductions of artifacts and location shots. The visual elements combine to create a narrative of his experience of returning home, a representation of his memory of what the place once was, and what it means to him now.

We isolate significant elements within the visual image to record a specific memory of them, '[We tend to remember photographs not for everything contained in the frame, but for the most poignant detail[2].' This method of recall creates a hierarchy of visual elements within a single image, important details that, for the viewer, gives the image its meaning. This is like the creation of an archive, where the archivist chooses to classify and codify images depending on his/her personal perspective, these selected images will be viewed repeatedly over many years, 'In the visual arts, the topic of originality has moved center stage[3].'

Georges Perec stated that he was trying 'meticulously to retain something, to cause something to survive; to wrest a few precise scraps from the void as it grows, to leave somewhere a furrow, a trace, a mark or a few signs[4].' Perec recorded the 'infra-ordinary,' the insignificant details of life. He highlighted the fact that archival records generally record only the significant and extraordinary events, as experienced by the 'author.' Perec noted the importance of individual archival elements and their capacity to bring about the memory of much more, 'just as a word brought back from a dream can, almost before it is written down, restore a whole memory of that dream[5].'

Michael Schirner's 'Pictures in Our Minds' exhibition images feature a simple black box with inserted white text. The text describes an existing well-known photograph that is part of the 'collective unconscious[6].' The reader recognises the description immediately and pictures the image in their mind. Here Schirner is referencing existing visual memories, citing well-known photographs where an audience will quickly identify the reference in the textual description. 'The twentieth century has integrated the viewer as a productive, even creative authority into the work itself. [...] Creating now mainly involves staging, arranging, editing, and repeatedly treating new subjects[7].' The viewer works to create the visual in their mind. Yet the building blocks of the image are a constructed memory, a facsimile of reality that is largely incorrect.

Lev Manovich visualises archived digital data in order to represent it as a bigger picture, '[M]edia visualization methods give us new ways to understand the history of photography, to compare content and aesthetics of millions of photographs being created today[8].' Manovich considers the process of digital image creation and storage, and the skill set and knowledge that is required to work with digital data, '[I]f we want to think about photography today, we should consider its new condition as data organized in data structures and data bases, and the interfaces and the logic of popular software used to access, edit, and distribute this data[9].' The interfaces of software packages use a common architecture. This ensures users can adapt quickly to new functionality that is embedded within a recognisable display. Digital images are tagged with metadata that describes and classifies them [...] all media now share the condition of "searchability". The degree of searchability depends on the type and amount of metadata stored with the objects[10].' The person tagging the data is making informed choices on the relevance of their selections, personalising the process and leaving their archival mark for future researchers.

Manovich questions the definition of photography that includes both the traditional and new media, '[I]t is hard for me to accept that Daguerreotypes and contemporary photography belong to the same medium. Perhaps there was never such a thing as photography. It was just a series of different media lumped together[11].' Is Manovich questioning the meta-tagging of traditional photographic images, in comparison with digital images where metadata is attached at the moment of creation?

In 'The Stereoscope and the Stereograph' Oliver Wendell Holmes envisioned libraries of images – images of everything, a record of every architectural detail, where the original construct is no longer needed.

> *'There is only one Colosseum or Pantheon; but how many millions of potential negatives have they shed,—representatives of billions of pictures,—since they were erected! Matter in large masses must always be fixed and dear; form is cheap and transportable. We have got the fruit of creation now, and need not trouble ourselves with the core. Every conceivable object of Nature and Art will soon scale off its surface for us. Men will hunt all curious, beautiful, grand objects, as they hunt the cattle in South America, for their skins, and leave the carcasses as of little worth[12].'*

The physical original gradually degrades and is lost. Yet there are 'duplicates' (images, text, video, drawings) in libraries all over the world that describe the 'original' in detail. Images have different meanings depending on where and how they are stored and 'the archive governs the meaning of the images inside it[13].'

> *'The consequence of this will soon be such an enormous collection of forms that they will have to be classified and arranged in vast libraries, as books are now. The time will come when a man who wishes to see any object, natural or artificial, will go to the Imperial, National, or City Stereographic Library and call for its skin or form, as he would for a book at any common library[14].'*

The archive of information effectively replaces the original object, and offers detailed images plus analysis and commentary. In 'Collective Memory' by Maurice Halbwach, memory is described as being 'not preserved but [...] reconstructed on the basis of the present[15].' The archive is the source of this collective activity of 'shaping' the past, yet 'all those unpublished, neglected, and forgotten photographs, and all the data they preserve, allow us to glimpse how photojournalism failed then and... continues to fail today[16].' The authored archival construct, is reconstructed by the reader.

> *'But what we call the collective framework of memory would then be only the result, or sum, or combination of individual recollections of many members of the same society. This framework might then serve to better classify them after the fact, to situate the recollections of some in relation to those of others[17].'*

Walter Benjamin's 'aura' described the uniqueness of a work in a specific place, and noted the failure of the reproduction to capture its originality and authenticity. Inscriptions that describe art are a testament to 'its unique existence at the place where it happens to be[18].' Educational institutions in the UK have merged many times over the last 100 years. They selectively archive significant works that were created by students. This is a manipulation of the institutional history. The resulting narrative is a construct, created by a storyteller to suit contemporary political and commercial needs. Therefore we need to consider the perspective of the archivist when considering the content of libraries of images.

'The New York Times called the Magnum archive a "collective photobank of modern culture"... events and celebrities were largely *created* by the media, and Magnum contributed to the process in important

ways[19]. The Magnum archive was built around commercial needs. It is now one of many image collections that is being meta-tagged. The tagging of images with descriptive metadata will allow future researchers to data mine the content. However, the architecture of the meta-dating system will have great influence over what is discovered.

Netflix uses the proprietary 'Netflix Quantum Theory' – a micro-genre system of microtagged film elements to personalise recommendations for individual viewers. This is also used to identify trends in the viewing habits of specific demographics and ultimately leads to the commissioning of audiovisual product. The archive structure is about creating new commercial content for demographically targeted audiences, not simply organising data for research purposes.

> *'Netflix has created a database of 76,897 micro-genres that offer a peek into the American psyche, The Atlantic senior editor Alexis Madrigal has discovered, using a program called UBot Studio to scrape every single one of them and then deconstruct the system.. Using large teams of people specially trained to watch movies, "Netflix has meticulously analyzed and tagged every movie and TV show imaginable,"... "They possess a stockpile of data about Hollywood entertainment that is absolutely unprecedented[20]." '.*

Contextual operating systems analyse your online search activities and make predictions about what you are looking for. The OS can start downloading content ahead of your research decisions. Contextual OS for archives will operate in a similar manner and only direct you to appropriate content that it has calculated you will be interested in. Google Glass is expected to have a contextual OS in 2015,

> *'No contextual filtering. When I'm standing on stage, why does Glass give me Tweets? Why can't it recognize that I'm at a conference at least and show me only tweets about that conference? Hashtag style. But it can't because Google's contextual OS isn't done and probably won't be done until 2015. Google Glass desperately needs those contextual signals to know when to show you appropriate stuff[21]'.*

The OS's knowledge of your behaviour, likes, dislikes, current interests and the intention of your search activities, will enable it to data mine archived content, perhaps in conflict with the original archivists organisation of the data and their personal classification and codification system.

At the National Media College, Dublin, we created an archive of photographs, films and new media content over 14 years. The archive existed in various forms online, digital storage and physical prints. Photography students were particularly concerned with archival methods and preferred printing their portfolio images rather than storing them digitally. Optical storage discs proved to be the least successful and some work was lost over the years when back up media degraded and became inaccessible. High quality hard drives were compromised by inappropriate use – drives were turned off without unmounting the disk. Solid state drives were the most effective and dependable, although a cloud-based storage system looked to be the most promising of all. Digital images were printed using archive quality Hahnemühle paper. Important photoshoots were shot using colour negative film instead of high resolution digital cameras. 16mm film projects were very rare. Where once students preferred to shoot on film stock due to quality considerations, they gradually chose to work on digital film cameras which offered high quality output and a streamlined workflow from camera to edit, grading, effects and distribution. Only completed works were archived, not rough cuts or original footage.

The College featured an online photographic gallery to present student work to the public. This was built using WordPress to allow tagging of individual images. Also, as WordPress pages propagate very quickly

through Google and other search engines, they increased the institutional profile and dissemination of student work. Live action and animated films were distributed using Vimeo and YouTube. We made use of the 'embed' functionality offered by these sites to feature these works within the College web pages.

Over the years the archive moved online. Where once, students would view the archived work in the classroom, it was later published as web-based content to be made available to the general public. Work was only published online with student approval, although it was unusual for a student to not want to showcase their work in this way. Due to the highly creative nature of the courses taught, staff also published images and films. In this way, the institutional archive became a blend of both student and tutor output, academic and creative.

Digital archives are growing exponentially. Storage issues are being resolved through the digitisation of content. The traditional process of selecting only significant works for archive will be replaced by a system of storing and meta-tagging 'everything' created by students, for future researchers to data-mine, influenced in turn by their contemporary social mores.

Biography

Kelly McErlean has developed graduate and post-graduate programmes for local and international delivery. He has successfully delivered eLearning and on-site contracts for international broadcast organisations (Romania, Bulgaria, Egypt) on behalf of the European Broadcasting Union, Geneva. Kelly regularly lectures on new media technologies and is an Associate Lecturer at the Bradford Whistling Woods International Film School.

He has won several awards including a Golden Spider Award and a Digital Media Award for film and photographic works. He holds a PhD in Visual Culture from National College of Art & Design, Dublin.

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Notes

[1] Gregory Barker, "*Interview with Christian Patterson, Bottom of the Lake.*" Hotshoe: Contemporary Photography. Issue 186. Hotshoe International Ltd, Winter 2013, p. 45.
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[2] Jorg Colberg, "*Eye and Artifice: Interview with Alex Prager 'Compulsion.*" No. 31 Foam Magazine, Summer 2012, p. 168.
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[3] *Ibid.*, p. 166.
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[4] Georges Perec, "*Species of Space and Other Places.*" Penguin Classics, 2008, p. 92.
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[5] *Ibid.*, p. 22.
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[6] Hans Ulrich Reck, "*Creative Iconoclasm. Interview with Michael Schirner. Pictures in our Minds.*" No. 31 Foam Magazine, Summer 2012, p. 147.
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[7] *Ibid.*, p. 148.
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[8] Gloria Sutton, "*Visualizing the Digital Universe. Interview with Lev Manovich.*" No. 27 Foam Magazine, Summer 2011, p. 19.
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[9] Ibid., p. 19.
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[10] Ibid., p. 19.
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[11] Ibid., p. 20.
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[12] Oliver Wendell Holmes, "The Stereoscope and the Stereograph" in The Atlantic, 1st June 1859 (On line). URL: *http://www.theatlantic.com/magazine/archive/1859/06/the-stereoscope-and-the-stereograph/303361/* Accessed 8th October 2014.
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[13] Mary Panzer, "*The Meaning of the Twentieth-Century Press Archive.*" Aperture Foundation, Aperture 202 Spring 2011, p. 49.
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[16] Mary Panzer, "*The Meaning of the Twentieth-Century Press Archive.*" *op.cit.* p. 50.
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[18] Walter Benjamin, "T*he Work on Art in the Age of Mechanical Reproduction*" in *Illuminations.*" Pimlico, 1999, p. 214.
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