Photographic Meaning in the Age of Digital Reproduction*

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This article investigates one aspect of the process of digitising photograph collections. The features of a photograph identified in photographic theory as important include the materiality of the object and the context from which it gets its meaning. It is argued that these features are precisely the ones which are destroyed during the digitising process.

Digital images are produced without the intermediaries of film, paper or chemicals and as such "never acquire the burden of being *originals* because they do not pass through a material phase". (Bruce, 1994: 17) The invention of digital technology represents the first revolutionary change for photographic methods since the introduction of the negative/positive process which itself transformed the photograph from being a unique item to one that was reproducible. By the direct conversion of light into a digital format to create a

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stable image, photographs which only exist in the digital form can be seen in one context as a truer version of photography (writing with light) than those which require the creation of another physical intermediary to view the image in a material form. While the notion that an original photograph has a unique value precisely "because of its status as a physical object" (Bruce, 1994: 17) needs re-evaluation in the digital context, this paper looks at the effects of digitising photographs which in their *original* form are material.

The main issue I wish to address is how the digitising of pre-existing photograph collections affects what photographic theorists have identified as quintessential features of a photograph. To do this, it is important to discuss from where photographic meaning emanates, and to consider the relationship between the photographic original and its digital referent. There is a symbiotic relationship between photographic theory and the management and use of photographic collections. The implications of processes such as automation or digitisation serve as a reminder that such changes can have a profound effect on the way that the material can be both accessed and used.

Photographic Meaning

As Alan Trachtenberg writes, "a *formal* criticism, a set of analyses and arguments which attempts to delineate a general character of the medium, has yet to emerge," (Trachtenberg, 1980: xiii) and in trying to trace a single character within this diverse medium one can only conclude that "the intrinsic and universal properties of the photograph have never been established with complete satisfaction". (Bolton, 1989: ix) For example photographs can be understood from the perspective of the technology which created them, the processes by which the images are revealed, the object itself, the trail of ownership through which it has been preserved, and how the institutions have acquired it. Equally valid questions include when exactly was the moment when photography was discovered, what role photography has played in society and how the images by their uses have engendered change. In concluding that there is no single or right way to look at a photograph, or to understand the nature of photography or its role in society, the search for a single set of properties of a photograph belies the diversity of the medium and the vigour of the debate that this multifaceted nature brings. It is precisely the polysemic nature of the photographic medium which continues to engender a dynamic body of theory, practice and criticism. There are, however, important features of a photograph including the materiality of the photographic object, the concept of the original photograph, and origin of photographic meaning which are central to many debates on photography.

A photograph is the product of the confluence of the technology, the photographer's eye and the printer's hand; processes which have been described as containing "the aura of the alchemy" (Trachtenberg, 1989: 13) in deference to the combination of specific skills required to produce fine photographic objects - be they single daguerreotypes or multiple fine prints. Its materiality has been an integral feature of a photographic object since the earliest photographic processes from which there was only a single tangible item produced. Embedded within the photographic object are clues visible to the trained eye which reveal the subtle relationships between negatives, printing papers and processes used to physically

produce the image. The proportions of photographic objects are an indicator of the camera, negative size and date of production, and the textures and tonal ranges are clues as to the photographic processes used to produce the print. Equally, details including markings on the backs of the photographs lend additional information such as captions, retouching details, and cropping instructions. As Geoffrey Batchen writes, the photograph is an image that can have "volume, opacity, tactility and a physical presence in the world" (Batchen, 1997: 2) - in essence an aura of materiality or of "the thing itself " which emanates from the original photographic object. While present in original photographic objects and vintage prints, this quality which arises from its original material form is hard to replicate and often lost completely in photographic copies using modern materials.

The concept of 'the original' functions differently for photography than for other forms of documents or art works. In technical and photographic terms, the negative is the original as it is the medium which records what is in front of the lens at the moment of exposure. But as John Berger writes, "the very principle of photography is that the resulting image is not unique, but on the contrary infinitely reproducible". (Berger in Trachtenberg, 1980: 291) While the negative may in fact be "the truest record" of what was in front of the lens, perceiving this negative as the sole original in the photographic process "emphasises uniqueness over purpose". (Schwartz, 1996: 46) It can be said that while the negative may be seen as the original in photographic terms, the document which conveys the message is the print made from the negative.

The ease with which multiple prints can be photographically produced from a single "original" negative resulted in Walter Benjamin

conflating the notions of singularity with authenticity when he wrote that "from a photographic negative, for example, one can make any number of prints; to ask for an "authentic" makes no sense". (Benjamin, 1969b: 224) Rather as Schwartz writes "the fact that many prints made from a single negative or that a single print may be used repeatedly under different circumstances points to the possible existence of multiple original photographs". (Schwartz, 1996: 46) Multiple photographic originals with similar or identical image content cannot be assumed to be duplicates as each may contain subtle differences due to variations in printing styles and papers, be enlarged or cropped and survive in a range of contexts of equal importance. That these photographs may have been made at various times for a range of purposes therefore "demonstrates that the meaning of a photographic document lies not in the content or the form but in the context". (Schwartz, 1996: 46) A central feature of a photograph is the understanding of its functional context and it is this which transforms it from being merely an image to becoming a document. (Schwartz, 1996: 42)

In discussing the effects of the verisimilitude of the photographic image, Abigail Solomon-Godeau writes that "phenomenologically, the photograph registers as pure image, and it is by virtue of this effect that we commonly ascribe to the photograph the mythic value of transparency". (Solomon-Godeau, 1991: 180) While this perception of transparent photographic truth is implicit in the way many use photographs as a documentary record or as illustration, photographic theorists have rarely assumed that "optical precision ... is ... a guarantee of documentary neutrality". (Schwartz, 1996: 44) For John Tagg "what makes a photograph real is the fact that the photograph

is more than merely print and paper ... what is real is not just the material item, but also the discursive system of which the image bears its part". (Tagg, 1988: 4) Tagg challenges the notion of the neutrality of the camera and argues that while it "arrives on the scene vested with a particular authority to arrest, picture and transform daily life", it is the combination of the evidential force of an image with the "power of the state apparatus which is controlling both the content of the images and then their power to stand as evidence or register a truth". (Tagg, 1988: 62-3)

Through its life, the photograph can potentially move across several spaces and along with each change in ownership and context, new meanings are acquired. Nicholas Thomas writes that "as social and culturally salient entities, objects change in defiance of their material stability. The category to which a thing belongs, the emotion and judgement it prompts, and the narrative it recalls, are all historically refigured ... something which effaces the intentions of the thing's producers". (Thomas, 1991: 125) The photograph derives its meaning and evidential force from the contexts in which it is placed and once removed it becomes an isolated and partly meaningless object.

The way that photograph collections are documented in either the manual or electronic environment provides a meta-interpretation of how custodial institutions understand and interpret the origin and importance of photographic meaning. Barthes' empirical notion that the photograph is "indifferent to all intermediaries: it does not invent; it is authentication itself", (Barthes, 1993: 87) or that each photograph is perceived as a transparent "certificate of presence" (Barthes, 1993: 87) and therefore a singular object without broader

context, is manifest in a philosophy of management of these materials which focuses solely on the image content of the photograph. However, this philosophy is often a signifier for an approach which begins during the collection building process.

Susan Stewart writes that "once the object is completely severed from its origin, it is possible to generate a new series, to start again within a context that is framed by the selectivity of the collector". (Stewart, 1984: 152) Without documentation of the production or functional context, collections of essentially individual objects become a mere "territory of images". (Sekula, 1983: 194) Their unity and coherence comes from their single ownership which is derived from the collector who "constructs a narrative of luck which replaces the narrative of production," (Stewart, 1984: 165) or in fact a narrative of function. Placement in a collection with new and synthetic associations and dislocated from their original contexts of meaning and use, restores not what Thomas described as the original intention of the producer, but "an imaginary context of origin" relating to the projection of the new possessor. (Stewart, 1984: 150) The structure and organisation of photographic collections where image content is seen as of primary importance is such that images are isolated from their original contexts and relationships both with other photographs and related forms of material. However, they are homogenised with others into a collection which has been described as "a clearing house of meaning". (Sekula, 1983: 194) This new artificial metonymy of the collection emanating from the collecting patterns and criteria for collecting of the individual collector results in collections of singular objects obtaining an "aura of transcendence and independence". (Stewart, 1984: 159)

It is not uncommon for photograph collections to be managed as data banks of images. That is, they contain single photographs which are understood to be uncomplicated, transparent and passive representations of truth, and they are organised and retrieved by the subject content of the image. This approach to the documentation of collections does not take into account the polysemic nature of the photograph. Equally, as Allan Sekula writes, by their structure, "photographic archives maintain a hidden connection between knowledge and power. Any discourse that appeals without scepticism to archival standards of truth might well be viewed with suspicion". (Sekula, 1983: 198) In order to broaden the perception and use of photographs from being seen as images to being understood as documents and for research to be undertaken which can be sceptical about the veracity of a photograph, it is important to change the way photograph collections are documented. Schwartz argues that this will occur when managers of images "recognise that photographs, like maps, are linked to the exercise of government and business, and ask how they function as 'a silent arbiter of power', how they 'express an embedded social vision' and how they operate through the 'sly rhetoric of neutrality". (Schwartz, 1996: 45) In essence the challenge to those documenting collections is to move from understanding a photograph as a transparent representation of the truth towards an approach where the history of the truth of the image - the relationship between the structures which have served to create, authenticate and preserve an image - can be traced. Documenting collections to preserve the multiple functions of the photograph will then enable studies of the changes in meaning and context of images which defy the material stability of the photographic object.

Digital Reproduction Technology

In his prescient analysis of the effects of mechanical reproduction on art works, Benjamin sees that the existence of multiple reproductions of art works increased access to their image content, thus shifting the status and role of art works from that of ritual and elitist to being "based on another practice - politics". (Benjamin, 1969b: 224) Politics, in this context, is understood in relation to the development of an increasingly democratic process, and to the concomitant increase in access to the content of the art works once they are able to be reproduced. However, Benjamin fails to identify that it is the ownership of the printing press which determined the politics of the use of and access to the images, rather than the mere production and acquisition of multiple reproductions. With the increasing visual literacy of those who both produce and consume the images, the effects of an image-based culture are such that it can be argued, converse to Benjamin, that mechanical reproduction has allowed politics to develop a parasitical dependence on the image. While Benjamin applauds the increasing accessibility of art work which results from the availability of reproductions, he fails to understand the power relationships required to enable the transformation of status of an image from the artistic to the political arena - a power which has equal potential to be democratising and passive, or repressive and active. Like Benjamin, Tagg sees that the status of photography as a technology "varies with the power relations which invest it. Its nature as a practice depends on the institutions and agents which define it and set it to work". (Tagg, 1988: 63) However, Tagg studies mechanisms by which institutional power exploits the

verisimilitude of the photograph to engender social change in the context of repressive and juridical institutions.

While written in the 1930s in response to the increasing availability of mechanical reproduced images, Benjamin's thesis can be understood independently of a specific technology. Like its mechanical antecedents, digital reproduction technology can be seen at one level as democratic, fulfilling demands for increased access to collections while preserving the status of the original object. However, it can also be seen as an insidiously repressive technology by controlling what is made accessible, and with criteria as to what is appropriate to be made public through digitising rarely being discussed. While the debate regarding digital images has incorporated such issues as intellectual and legal control over the uses, and the fidelity of the digital images, there has been less discussion about what is lost in the process of digitising original photographs and the impact of this loss on research based on photographs.

The Digitising Process

Barthes expressed a popular understanding that the process of creating a photograph is an unmediated transformation from the actual to the image. Following this perception, digitising pre-existing photographs could be seen as merely changing the physical state of a photograph from the material to the pixel. However, because a photograph can be seen as more than an image, consequently digitising can be seen as more than simply a transformation of state, or a transliteration of tones. The process of digitising involves a more complex process of translation - or a change between forms of representation.

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If the process of digitising pre-existing photographs is seen as a translation, then questions as to the subsequent change in the nature of and relationships between the original and translation must be examined. In writing that "any translation which intends to perform a transmitting function cannot transmit anything but information - hence something inessential," Benjamin argues that all that is essential in a literary work is contained within its information. (Benjamin, 1969a: 69-70) While even this case is debatable for literary works, it does not apply to the quintessential nature of a photograph. As has already been discussed, photographic meaning is derived not from image content alone, but also from relationships which are external to the photographic object.

At the level of image content, the process of translating a photograph from a material to a digital form appears to be neutral, transparent and unmediated, albeit with some loss of image quality. That is, the image is simply transformed from one physical state to another. However, as Benjamin writes, "the extent to which a translation manages to be in keeping with the nature of this mode is determined objectively by the translatability of the original". (Benjamin, 1969a: 81) In determining the translatability of a photograph, it is necessary to investigate how "a specific significance inherent in the original" (Benjamin, 1969a: 71) survives the digitising process. These significances have already been identified as the materiality of the photographic object as well as its sources of meanings and contexts.

When writing that "no translation would be possible if in its ultimate essence it strove for likeness of the original," (Benjamin, 1969a: 73)

Benjamin accepts that fundamental change occurs during the translation process. Equally, successful translation serves to express the "central reciprocal relationship" between two products (Benjamin, 1969a: 72) and if an assessment of the relationship between the material photograph and its digital referent is based on image content alone, then the digital translation can be seen as a substitute for the material item. However, when comparing their materiality and sources of meaning, the dissonance of the relationship between the ethereal and liminal digital representation of its tangible and material source becomes more marked.

The Digital Referent

As Benjamin writes, "a real translation is transparent; it does not cover the original, does not block its light, but allows the pure language, as though reinforced by its own medium, to shine upon the original all the more fully". (Benjamin, 1969a: 79) Translating photographic images into digital form is, by necessity of the technology, a standardising process. Important visual cues embedded in original photographs are homogenised by digitising into a unity of a pre-determined size, quality and tonal range of the digital photograph. What were once three- or two-dimensional physical objects become one-dimensional and intangible digital surrogates. Along with the reduction in the subtlety of the material features of the individual photographic object and their requirement to be viewable on standard screens, the process of digitising raises questions about the fidelity of image content. Photographic sizes which lend additional meaning to the original object can be cropped to the proportions of standard computer screen formats and the

image content enhanced for aesthetic purposes without leaving visible traces of alteration.

Homogenising the diverse aspects of the materiality of the photograph forces a focus purely on the subject content of the digital image. This concentration is further emphasised by virtue of viewing the images through an intermediate and universalising technology. As a result, the aesthetics of the photograph tends to be privileged when selecting images for placement in a digital collection. Items are removed from their original or functional contexts, along with the concomitant loss of subtleties in photographic printing embedded within the photographic object. This results in their translation into a new digital inventory of objects which are isolated from the context from which their multiple meanings derived. It can be said that digitising photograph collections creates a database whose "philosophical basis lies in an aggressive empiricism, bent on achieving a universal inventory of appearances". (Sekula, 1983: 197).

While the digital medium privileges the aesthetic qualities and image content of a photograph, it obscures the subtleties of visual clues which originate from the materiality of the original photographic object. Equally the loss of context from which photographic function and meaning emanate, raises questions as to how the fidelity of meaning are retained in the process of translation. While the digitisation of photographs is being driven by the real need to increase access to image content of collections, the translation from the material to the digital image serves to change the nature of the photographs in contradictory ways. Photographs are isolated from their original contexts and replaced into a new digital context by the custodial institution. This creates an image bank of digital singular objects without reference to associated contexts or clues as to their previous physical embodiment.

During the process of selecting photographic images for placement in a digital collection the image is moved by its custodian into a new discursive space - into that of the marketplace. This new discursive space is created to exploit and commodify the aesthetic qualities of image content rather than to promote either the research potential or polysemic nature of the photographic object. The desire to capitalise on the revenue potential of the collections reflects the current economic imperatives and may involve a genuine attempt to make collections more accessible. Whether non-commercial organisations or custodial institutions should be complicit in reducing the material features of a photograph, removing the photograph from its production and functional contexts and subsequently creating a new entangled history of the photograph based on the commodification of its image content requires further discussion.

Each time any item comes into new ownership its meanings and contexts are transformed. This valuable provenance-based information enables the history of the object to be traced, and it is the history of the ownership and uses of the object which are of significance for researchers wishing to use the photograph as a document rather than as an illustration. As has already been discussed, there are material and contextual features which can distinguish two photographic documents produced from the same negative. However, as the process of translating a photograph into a digital image either homogenises, removes or ignores these features of a photograph, what were once variant multiple copies of photographic documents in a material form become digital duplicates of images.

So, while digitising enhances access to the image content of photograph collections, how far is it possible to reconstitute or replace either context or materiality lost during the digitising process? While the digital environment can facilitate enhanced access to the image content of photograph collections, it is important that the metadata associated with this material does more than simply replicate the ordering schemes of the past. The many understandings of a photograph can be documented so as to enable the study of the multifaceted nature of photography, and while still allowing the retention of traditional fixed sequential readings found in the linear arrangement of the card index, hypertext offers the opportunity to explore freely new associations resulting from relationships recreated within the ethereal sphere. In such an environment pre-existing photographic meanings are retrievable and new ones built from within the ephemeral electronic network. (Boyer, 1996: 50)

This approach to documenting photograph collections requires a transformation in the understanding of the nature of a photograph. Rather than seeing the photograph as an image and therefore as a passive object, it can be seen as a document which has played an active role in history. While creating robust metadata to incorporate the "equivocal status of the photographic object" (Nochlin, 1991: xiii) and to document the discursive systems of which it was originally part is an expensive process, this approach to preserving photographic meaning should be central to custodial institutions'

responsibilities. Equally, while the most common approach to digitising archival collections has been to concentrate on photography, the associative powers of hypertext can be further harnessed to rebuild old associations between different formats of material in which original photographic meanings were once embedded, but which have been subsequently lost through the separations throughout history.

As Eduardo Cadava writes, "like the photographer who must acknowledge the infidelity of photography, the Benjaminian translator must give up the effort to reproduce the original faithfully. Or rather, in order to be faithful to what is translatable in the original, the translator must depart from it, must seek realisation of his task in something other than the original itself. "No translation", Benjamin writes, "however good it may be, can have any significance as regards the original". (Cadava, 1997: 17) What is produced in the process of translating a photograph from the material to digital is not an "echo of the original," (Benjamin, 1969a: 76) but a mere shadow of its former being. This digital shadow obscures the carefully documented balance of power between the photograph, its materiality and its context which are critical to the determination of photographic meaning. During the process of translation it is the confluence of institutional power of the custodian in exploiting the aesthetic qualities and the transparency of the photograph which transforms the digital image into a new and marketable commodity. This confirms Benjamin's understanding that "not only does the aim of the translation differ from that of a literary work ... but it is a different effort altogether". (Benjamin, 1969a: 76) Seeing the digitising process in this way begs one to question the role of research institutions in defining photographic meaning by emptying the photograph of all but its image content.

Given the rising expectation that institutions will digitise their collections to increase access, it is therefore pertinent to ask "is the age of mechanical reproduction of images yielding to an age of digital dematerialisation of images" (Bruce, 1994: 17) and if this is so, what are the forces for and consequences of this change? With the imperative of the market economy encouraging custodial institutions to exploit their images in the digital marketplace, what are the implications for research of the devaluing the materiality of the photograph and photographic meaning through digitising? While the increased access to digital photograph collections is important to those interested in image content alone, is the loss of materiality and context of the photographic object too great a price to pay? Is, therefore, the digitising process hindering rather than facilitating the research process?

Conclusion

While a photograph filters what is in front of the camera lens into a material and transportable object, the process of digitising a preexisting photograph collection acts as a secondary filter over and above the distorted picture of the past that remains after time has taken its toll. Custodial institutions may try to minimise the value judgements they make in terms of what should be digitised. However, that they are to an extent complicit in the commodification of their photograph collections based on the aesthetics of the image content rather than archival context and research value represents a

failure to uphold the integrity of the historical sources they are charged with preserving. That what is being lost in terms of photographic meaning is being actively destroyed by the custodial institution charged with its preservation raises ethical issues which need to be addressed.

As Benjamin argued in the face of new mechanical technology, digitising can be seen as a democratising medium. However, the opportunity to manipulate both the subtle balance within and between archival collections and the image of the past that is presented through the digital collection is retained by those who control the means of production. By amalgamating the aesthetic content of photographs with the contemporary politics of the marketplace economy custodial institutions are complicit in creating new discursive systems which may obliterate previous meanings while lending their authority to a registering of the truth of the image in the new digital context. While digitising can be justified on the grounds of preserving the original by reducing handling while facilitating access to the image content, any short term investment afforded in pursuit of the current trend towards commercialisation of photograph collections should not be at the expense of long term preservation of the provenance of the collection or the physical object from which the digital source originates.

With the new discursive space of the marketplace actively contributing to the dematerialising, dehistoricising and decontextualising of the photograph, will the increased access that the virtual collection provides outweigh the experience of access to the original for researchers? Will the imperative to digitise photograph collections involve so much investment in creating access to the image content of collections that the considerable hidden investment required to prevent the physical disintegration of the original artefact will be placed in jeopardy? Will the creation of digital collections result in the ongoing preservation of the original by limiting access to originals to those for whom materiality is central to research, or will future generations become so focused on screenbased images that the original photographic object is seen as irrelevant by custodial institutions? If this is the case, how will the increasing availability of digital images affect the study of materiality and the entangled histories of and relationships between artefacts in which so much of the history is embedded?

In conclusion, it can be seen that the process of digitising original photograph collections reduces the multifaceted nature of the photographic object to a single unitary form and takes researchers "further away not just from the technology of making the image, but from the photograph's format as a material, cultural object - an object which was made in a certain way for a reason". (Edwards, 1997) In the process of becoming an increasingly image-based culture, the power to control and create the image that we see of the past and present rests with those who own the digital technologies. However, it is the responsibility of institutions whose role it is provide impartial access to material in their custody to respond to the challenge to ensure the survival of photographic meaning in the age of digital reproduction.

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