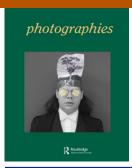


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Haidy Geismar

POST-PHOTOGRAPHIC PRESENCES, OR HOW TO WEAR A DIGITAL CLOAK

This article explores some of the tensions that digital processing introduces to our understanding of photography by focusing on digital images of a Māori cloak from New Zealand held in the UCL Ethnography Collections. The complex, energetic/electrical networks established not only by digital communication technologies but also between Māori people and their taonga (treasured possessions) expand the understanding of both photographic indexicality and Runia's definition of presence. The wairua, or spiritual energies, channelled in Māori relationships as they are transmitted through important cultural treasures creates a profound experience of copresence in which objects are understood as simultaneous links to the past, present and future. The article argues that the experience of co-presence in both Māori engagements with important museum objects and the experience of networked digital communications technologies (including digital photographs) allows us to develop an expanded understanding of provenance, or where objects come from (and who they belong to) in museums.

Introduction

Runia formulates presence as an antidote to theories of representational signification, writing: "Presence —being in touch with reality — is, I believe, just as basic as meaning. Whereas meaning may be said to be the connotative side of art . . . presence is the denotative side" (5). This focus on presence allows us to understand photographs, and other images, not just in terms of what they represent, or show us about reality but, following Barthes, as affective experiential domains. In this short essay, I explore some of the tensions that digital processing introduces to our commonplace understanding of photography. I focus on a collaborative project to create digital environments and digital images of a beautiful Maori cloak held in the University College London Ethnography Collections. I argue here for an understanding of the digital images as instantiating a complex, social network that forges a powerful experience of co-presence. This perspective builds on both contemporary theories of (digital) photography and social media (e.g. Ito), and on Maori worldviews that understand people and things (including images) as interconnected, perpetually drawn into webs of relationship filled with cosmic, spiritual, political and social energy (see Brown).



Photographies, 2015

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Exploring presence

Accounts of digital images (made with digital devices, processed with computer software, and experienced through screens) are divided between those that understand digital photography to depart from the indexical, and to have an absence of reference (e.g. Mirzoeff; Ritchin) and those who understand digital images to be overloaded forms of evidence of what is "really there" constructed through a computer-eye lens on the world (e.g. Hochman and Manovich). Lister argues against naïve oppositions between these differing views of the digital, reminding us that

where photography is concerned, analogue or digital, we should remember to keep its plurality or multiplicity of forms and uses in view; we should keep its indexicality within strict critical limits; we should be aware of the enormous weight of the representational conventions that it embodies while insisting on its (historical as well as current) hybridity and promiscuity with other technologies and practices. (3)

In this account of a museum object and its (digital) images I explore the interpretive issues that structure the reception and use of digital images of museum collections where many tensions arise between photographic imaginaries of evidence and indexicality in regard to digital images, and the ways in which the social experience of looking is increasingly understood to be part of the digital image (the hallmark of images embedded within social media which is an increasing part of museum digitization projects). In the conservative context of museum imaging, photography is still a primary reference for the authority of digital visualization. However, the opening up of museum collections to new communities of care and engagement allows us to understand digital images of museum collections within the context of a more affective sociality.

The anthropology of photography has long argued for understanding photographic images in terms of their social composition (see Edwards this volume, pp. 235–252; Buckley; Edwards; Strassler, Refracted Visions). I argue here that we can use this awareness of the sociality of images to expand Runia's notion of presence — which he defined as the affective sense of connecting to reality engendered by photographic technologies. The digital images I have been working with constitute a powerful experience of co-presence — the recognition that image making and viewing are also intensely social activities, and that the image draws and holds together the subject and viewer across both time and space. The experience of co-presence effected by images embedded within social media draws our attention away from a conventional understanding of photographic space-time, in which the original moment is frozen, to be endlessly relocated in the present day act of looking, towards a more emergent spacetime of diverse networked communications media (see Ito; Miller and Sinanan; Miller). Indeed as McQuire notes, "the real transformation produced by digital photography . . . is less about the demise of referentiality or the loss of evidentiary value than the integration of photography into the network milieu" (224; see also Van Dijk; Gitelman, "Raw Data"). Within the predominantly visual (but also sonic) co-presence facilitated by social media technologies such as webcams or platforms such as Facebook, digital images are defined not simply by the ways in which they index singular moments in time and space but by their ability to project those moments through time and across space in a communicative milieu that incorporates a multiplicity of sights, sounds, places and people.

Te Ara Wairua

The project I am using to think through these issues here is called Te Ara Wairua: Pathways of the Intangible. Te Ara Wairua is an ongoing collaboration between myself, Maori artist Kura Puke, interaction designer Stuart Foster (both working at Massey University in New Zealand), and Te Matahiapo Research Organization, based in Taranaki, New Zealand. The project focuses on a cloak (Figure 1) held in UCL's ethnography collection and aims to explore the capacities of digital technologies to reconnect the cloak to people in New Zealand. We have experimented with three primary digital frames. The first is an immersive environment in which we have used broadband and cellular connections, iPads and platforms like Facetime and Skype, to bring people in Aotearoa New Zealand into direct engagement with the cloak and with people at UCL. The second is an experimental virtual environment linked to this realtime connection in which light and sound from New Zealand is processed through a DIY open-source interface that converts sound into light (through a solar panel/LED interface) and back into sound. The final frame is an exploration of the capacity of 3D imaging technologies to create a virtual or digital surrogate of the cloak, with the intention that this data can recirculate back into New Zealand. This essay presents our experiences within the third frame. Our work to create digital images of the cloak is as much an exploration of the capacities of digital imaging technologies as it is of the nature of the cloak itself.

The cloak (in Māori kakahu) in question was, at the start of our project, considered to be of "unknown provenance". She (Māori cloaks are considered to be ancestral forms and are always women) is small, perhaps made for a child, and woven of fine



Fig. 1 Tukutuku roimata, 1.0013 Oceania/New Zealand. Flax, Dog Hair, Wool. This image licensed by Creative Commons.

flax (harikeke), with a dyed black woven wool border (taniko). The border is fringed with wool and the body of the cloak is decorated with tassels made from the hair of the Polynesian dog (Kuri) which we know became extinct around the time of the signing of the Treaty of Waitangi between some Māori tribes and the British Crown in 1840 (the treaty that brought into being the modern-day nation of New Zealand). Fine cloaks with dog hair tassels are generally known as korowai and are considered to be great cultural treasures (taonga) imbued with ancestral power, mana (spiritual authority) and wairua (spiritual efficacy and energy).

The cloak was initially purchased by the Wellcome Institute, based up the road from UCL on the Euston Road, and classified as part of their non-medical collection. This alternative Wellcome collection was dispersed to various universities and museums in the UK and beyond during the middle of the twentieth century and it was at this time (c. 1946) that the cloak became part of the UCL Ethnography collections, housed in the Anthropology Department in Bloomsbury. For many years the cloak remained boxed away, too large and fragile to be used regularly in classes such as "Primitive Technology" taught by anthropologists such as Darryl Forde and Mary Douglas. Over the years it has been visited several times by weavers doing research in European museum collections but has been viewed little in the context of the department itself. The cloak was brought out of storage again in 2013 during a collaborative project focused on the ethnography collections, between UCL anthropologists and artists working in the School of Material and Visual Culture at Massey University in Wellington, New Zealand. During a preliminary Skype conversation Maori artist Kura Puke was intrigued by my characterization of our collection as comprising many "orphaned" objects, without context, or history. Discovering the cloak through her survey of all the Maori objects in our collection, Kura decided to use her research methods and artistic practice — connecting to communities and to Māori knowledge through the creation of immersive digital sound and light installations — to (re)create a provenance for the cloak and to reactivate the spiritual pathways, the wairua, that all Māori taonga instantiate. Working with another Massey researcher, a spatial and interaction designer called Stuart Foster, we embarked on a year-long exploration of the capacities of digital technologies to encode Māori values, to extend community to the cloak and to imagine her within new representational and relational frameworks.

The nature of digital images

I focus here on our attempts to create digital (3D) images of the cloak and to experiment with the capacities of the digital scanning and processing to explore our assumptions about photographic indexicality and presence. Our aim was to create new digital objects and collections that were able to represent the knowledge and experience that is also embodied, or present, within the cloak.

The initial question framing the process of creating digital images of the cloak was "Can you wear a digital cloak?" This question tapped into the current zeitgeist of digitization projects in museums which assume that technology can provide engaged experiences equal to, or even better than, the experience of viewing the "real" object.

Given the conservation risks of handling the delicate cloak, we were interested in exploring whether a digital image could in fact be interacted with in a more corporeal way than was permissible with the original artefact. We wanted to explore how digital technologies might facilitate access that transcended the limitations of the cloak's size and fragility and the protective rules of conservation which ensured that we could only display the cloak horizontally, that we could not touch her with bare hands, and that we could not wear her as she was meant to be worn. We started the project with the assumption that the best kind of digital artefact would be a three-dimensional representation of the cloak, so flawlessly photographic that it could be understood to be the most perfect form of simulation, and that we might be able, using avatars and virtual reality, to wear it (visually at least).

In my initial meetings with technologists at UCL, such as those working with the 3D Petrie project (a collaboration with a commercial hardware company to work at the cutting edge of 3D scanning with the UCL Egyptology collections²), I began to observe two competing understandings of the process of digitization that intersect and internalize different aspects of photography. My discussions with 3D specialists working to animate UCL's collections demonstrated that digital objects are viewed in two ways: as repositories of information about the form and structure of objects and as visual representations of collections. All too often the latter is the frame through which the former was accessed. It soon became apparent that a photographically oriented understanding of these digital files dominated museum imaging projects — and that the language used to describe them was fundamentally drawn from the photographic lexicon, even as the process used to construct the images went far beyond that of photography. Following a more expansive position on digital images, gleaned from both anthropology and the interpretive frameworks brought to the project by Kura and our other interlocutors in New Zealand, our digitization process increasingly moved away from this visual, photographically inclined orientation, towards the capture of alternative haptic states and the incorporation of Maori ways of engaging with objects which were not focused on the visual but understood images to be located within wider spiritual and social relationships. I articulate this expansive domain as shifting the lexicon of how we understand digital images from terms such as index and presence, towards a discourse of co-presence.

Design and engineering technologists working to constitute three-dimensional images of museum collections see their work as generating accurate or "real" representations of the object aiming for what they term the status of "digital surrogates" (Hess, Robson et al.; Hess, Millar et al.). Digital surrogates not only represent the geometry and measurement of an artefact but also its perceptual qualities. They privilege the visual as the way to generate knowledge about objects. The process of making these digital objects starts photographically, with the construction of point clouds generated by laser scanning, or of large numbers of photographs through the process of photogrammetry, both of which capture data by taking information through light reflected directly from the surface of an object. However, the subsequent processing of this data uses photography as a reference point in terms of texture, colour and so on but departs radically from analogue photographic technologies, using specialist software to create a simulation or model of a photograph (or a simulation of indexicality rather than an indexical simulation). These images look like photographs,

in fact it might be argued that they seem to be more photograph-like than many photographs — i.e. they seem to be perfect techno-visual light captures of the object. However, the process used to fabricate them is in fact much more akin to that of model-making. The craft of stitching together data and working from photographs to create a digital simulation that effaces the process of its own fabrication is intensively skills based, and it is it often commented on by software users in museum projects that it is possible to recognize the idiosyncratic hand of the technologist in these perfectly fabricated images. For instance, Figure 2 shows two digital images, one a screen grab of the three-dimensional rendering of a mummy foot cover in the Petrie collection, the other the regular digital catalogue photograph. The curator of the 3D Petrie project, Margaret Serpico, drew my attention to the simulation of the gold leaf toes, emphasizing her efforts in post-processing to depict a more effective screen simulation of the shining original. The images present the golden toes in quite different ways.

Like the famous natural history dioramas that create a photographic reality effect in three dimensions through the diverse artisanal skills of artists, scientists and taxidermists (Anderson; Haraway; Rader and Cain), 3D digital images should also be understood as models in which creative decisions, grounded in a skilled practitioner knowledge base of understanding materials, enables the production of a new form of second order mimesis — of photography as well as the original artefact. 3D digital images are in many instances almost entirely crafted from within a computer to generate visual authority through the production of a photographic aura that evokes rather than denotes direct contact with the object itself.

Despite the success of these images at simulating both the technical process of photography and the museum object, the materiality of the digital image is opaque and ambiguous. Unlike dioramas, or even archival images, which can be recognized as complex artefactual assemblages, and in museum terms are now recognized as genres



Fig. 2 Left: catalogue photograph of Egyptian footcover, UC45893. http://petriecat.museums.ucl.ac.uk/detail.aspx#>.

Screen grab of the 3D image of the footcover, with enhanced gold leaf, as developed by Giancarlo Amati and Margaret Serpico. http://www.ucl.ac.uk/3dpetriemuseum/3dobjects/UC45893.

of material culture in their own right, there is no singular object for a digital image, merely the simulation of one. The three-dimensional likeness that is viewed on the screen gives way to multiple data sets, mediated by several different software platforms and depends on a varied hardware ecology for its realization. In order to render a digital surrogate as an objective visual fact, engineers have worked hard to develop protocols and standards for the preservation and documentation of these digital forms. The act of creating a 3D model is in fact a process of photographic purification, in which photographic metaphors are stripped of their own ambiguities in order to construct evidential natural objects — the product of a neutral and objective technological process of visualization. Intensive work goes into producing this kind of photographic effect, stripping away the subjectivity of the curator and programmer, and erasing the perspective of the human eye that lies behind the camera and scanner.

This complex process was drawn to my attention during our project partly because of my own amateurism and lack of skill in creating these kinds of images. My own attempts to use both laser scanning and photogrammetry resulted in images that were sadly lacking in photographic veracity (Figures 3 and 4).

By the criteria of most museum digitization projects these images are failures—there is no way that they could be used as "surrogates" for the original objects in an exhibition or a website oriented towards visualizing collections. However, the process of making these undeniably partial representations raised many questions for me regarding photographic modes of inscription, the crafting of digital artefacts, and the interpretive frameworks we use to understand digital images. Alongside my own technical limitations, the cloak itself raised a number of challenges to the production of a "perfect" digital image. The dog hair tassels render the surface difficult to scan using a laser scanner and the flat uniformity of textiles in general

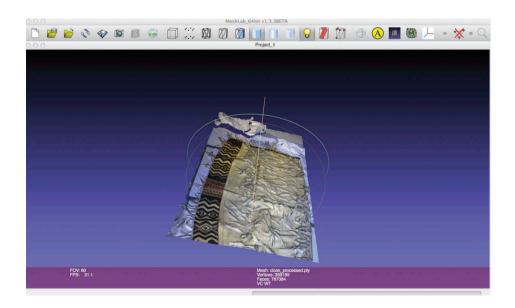


Fig. 3 screen grab of a visualization of a scan undertaken with a handheld kinect laser scanner.

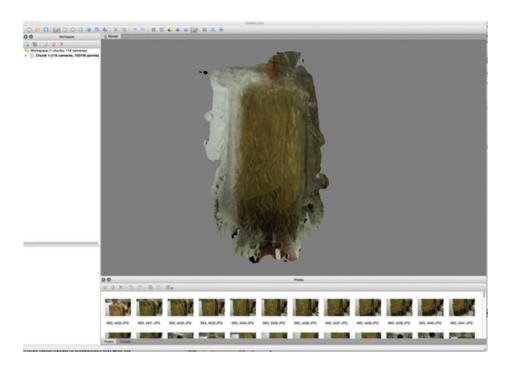


Fig. 4 Software visualization presenting the attempts of the software to stitch together more than 50 photographs of the cloak using the technique of photogrammetry.

makes them difficult to reconstitute using photogrammetry. The flexible material qualities of the cloak as an object made to be worn in the round, but stored as an almost two-dimensional fabric, challenged the capture of a whole object. The uniformity of the finely woven flax is also a challenge to the capacities of the laser scanner that needs variation in order to generate meaningful point clouds whilst the nature of the dog hair tassels, complex three-dimensional forms made of fine hair, also posed challenges to the capacities of the digital imaging machines and technologies (scanners, cameras and processing software).

Alternative cultures of the digital image

The cloak challenged our understanding of the process of digitization in a number of different ways: as a complex artefact that resists the process of digitization and as a Māori treasure that demands a representational frame that is not fully encapsulated by the ways in which we currently define the predominantly visual experience of photography (which cannot capture the intangible aspects of an object's character). Indeed, following W.J.T. Mitchell's exhortation to ask "what do pictures *really* want?", we found a ready series of answers to the question of the cloak's needs, not in the positivism of 3D digitization as a technology of perfect visual replication but in the

ways in which digital technologies are in fact located within broader networks of social engagement.

A major focus of the anthropology of photography is to insist on a broader frame of reference points for understanding photography, frames that transcend the medium itself. Pinney's work with Indian photography places it within a social world of circulating images that includes chromolithographs, sculpture and other images of the gods (Camera Indica; Barthes, Photos of the Gods). The social experience of Indian photography is also framed by local corporeal engagements with visual culture, for instance the Hindu practice of darshan —the worshipful experience of engaging with the deity by looking directly at its image, but also being seen yourself (by the gods, through the image). Similarly, I have argued previously that photographs may be understood through the lens of Malanggan (Geismar, "The Photograph and the Malanggan: Rethinking Images on Malakula, Vanuatu"). Malanggan are complex funerary sculptures used as objects of memory within the ritual economy of New Ireland, Papua New Guinea. Both unique images, and widely reproduced, like photographs, Malanggan are understood to connect indexically to the real world through their status as reproducible images. They are also understood to be creative emanations of the mind. Within local understandings of Malanggan there is no binary opposition between the evidential (a disembodied depiction of what is there) and the experiential (the embodied perception of what is there).

Our attempts to digitize the cloak ran alongside a number of other projects, also mediated simultaneously by digital technologies and Maori worldviews. We held a virtual mihi (welcoming ceremony) at UCL's Octagon Gallery in which a real-time cellular connection allowed Te Matahiapo Research Organization in Taranaki, New Plymouth, to construct a virtual marae (meeting ground), welcoming UCL Museums and Collections and Ngati Ranana (the London Maori Club) as their guests (Figure 5). The screen-based projection of Te Matahiapo elders created an immersive environment of light and sound, surrounding the cloak with song, chant and spiritual energy (wairua). Our focus in this part of the project shifted our thinking away from visual representation towards an understanding of the fields of digital communication as channels for social and spiritual relationships. The visual component of the digital image is therefore one part of a broader field, not simply representational, but of developing techniques and technologies of co-presence. The activation of a new social environment for the cloak, using social media, channelled through both light and sound, opened up our understanding of digital images to understand them more in these terms as connective environments.

Provenance revisited

This project started with our desire to reanimate and reconnect the cloak to a Māori community, to fight against the bald declaration that the cloak was unprovenanced because of a seeming lack of supporting or contextual information defined only by the terms of our collection's catalogue and archive. Whilst we may not have yet discovered who originally made or wore this ancestral cloak, we have certainly generated a great deal of new information and data. In this section I want to explore



Fig. 5 Series of stills from the Virtual Mihi, UCL Octagon Gallery, transformed into a virtual marae, 17 June 2014 showing Te Matahiapo in Taranaki, New Plymouth, representatives from Ngati Ranana (the London Club) and UCL Museums and Collections. Images by Charlie Mackay (London) and Pip Gurthrie (Taranaki). Reproduced with Permission

why this expansive (Māori inflected) notion of co-presence has helped us not only to better understand how digital images work, but has also provided a way to generate a new understanding of provenance for the cloak, opening up a different answer to the question about wearing a digital cloak. Kura and Stuart's visit to UCL ended with another digital hook-up to New Zealand. Through this digital portal, the cloak was given a name by Te Urutahi Waikerepuru of Te Matahiapo: *Tukutuku Roimata*, which means "the tears of the ancestors from the spiritual realm interwoven and connecting with us of the physical realm through the *korowai*" (translation by Kura Puke). In naming the cloak, Te Urutahi re-engaged the cloak within Māori genealogy and reactivated the cloak as a channel of communicative and spiritual energy.

At the end of our exhibition project at UCL Puke and Foster left a small version of their DIY interface for the cloak. A small strip of LED lights connected to a solar panel, speaker, and an input jack ensures that at any time people from New Zealand (most especially Te Matahiapo) can dial into the cloak, bathing it with sound and channelling the digital sound frequency into light. The capacities of digital technologies to translate and convert information, to render different representations analogous (the conversion of energy into sound or light) became an important way of connecting to the Māori definition of *taonga* in which these treasured possessions are understood as embodiments of ancestral connections, channels for knowledge and for the vital energy required to maintain these webs of woven connectivity. Within this Māori framework

the process of collecting relevant digital data was described by Te Matahiapo Research Organization not as a tool of hyper-visualization but rather as a process of harnessing spiritual energy and the establishment of reciprocal relationships of responsibility and connection to *Tukutuku Roimata*. In turn, the process of displaying digital data is a process of both cultural connection and warming, and a way of channelling this energy.

This cultural framework for understanding digital technology is well established in New Zealand. Deirdre Brown describes the ways in which 3D objects are drawn into existing discourses about *taonga*, a category that spans the tangible and intangible, practice and object. Writing of a project to create a virtual *Patu* (club) in Christchurch, she describes how "and national cultural heritage institutions already treat moving and still images of objects, people, and environments as if they embody the same original qualities" (Brown 79). In another digital project, a Māori community organization, Toi Hauiti, based on the east coast of the North Island, has developed an alternative classificatory framework with which to structure its tribal database and import catalogue information from collections housed in other parts of the world. Most radically, they propose to substitute the category of "object" with the Māori term "*Mea*", which they used as a top level category to encompass all other classifications of both the material and the immaterial world, including people, land, sea, objects, houses, projects, ancestors (Salmond 15). 3D scans will be an important component of this new artefactual landscape.

The networked digital images we worked with in our project engendered a striking experience of co-presence. The wairua, or spiritual energies, contained in Maori relationships as they are channelled through important cultural treasures (taonga) constitute a profound experience of co-presence in which objects are understood to be experiential links to the past, present and future. Maori curator and scholar Paul Tapsell has argued that important taonga whether they remain in communities or museums represent relationships across space and time and between people. He draws on two key metaphors. The first is the delicate tui bird that soars up and around us, weaving up and down between the fabric of space/time for a specific community. Tapsell uses the tui to evokes the sensibility of taonga as part of a living community. The second is the comet that reveals itself on special occasions evoking global awe. The comet is used to suggest the ways in which important museum taonga continue to resonate for their communities of origin and for others. The framework of whakapapa (loosely glossed as genealogy) enables Maori people to recognize the interconnections between all beings (animate and inanimate). Important objects and images contain wairua (spiritual energy) and they become energetic channels that continue to produce and reproduce important social relationships (Mead; Henare). I argue here that the experience and understanding of copresence that both digital technologies and Maori definitions (and experiences) of taonga engender not only helps us to understand photography (both analogue and digital), transcending the binary between representation and affect (index and presence), it also in fact might help us to expand museum definitions of provenance (or understandings of where objects come from and who they belong to).

The emergent Māori theories of digital images use the relational and translational qualities of digital media to formulate and represent a worldview: a complex articulation of classificatory values that links the material and immaterial, the past and the present. As a woven taonga, *Tukutuku Roimata* sits at the heart of this worldview — not simply as an image

of it but as an active participant in its fabrication. Māori discourses understand weaving as a process that is both technological and cosmological. The Māori terms for weaving map onto terms that describe genealogical connection and ancestral power. The phrase *To kanoi* means both to weave and to trace ancestry, and cloaks were used traditionally at key lifecycle events including both birth and death (Henare). Cloaks are described as objects that warm both the body and the heart. Indeed, woven objects around the world are used a metaphors of relationality (Guss). The "woven world" draws together disparate components of warp and weft into a cosmological and material whole.

Given that the significance and power of cloaks is their metaphorical and literal association with relationships, both in the present and traced back through ancestral time, I am proposing that we take this particular view of woven materials and cultural treasures and extend it back into the digital domain in order to expand our understanding of the digital image. If we consider digital energy to be a form of energetic connection (like wairua) and a cultural process invested with cultural meaning (like whakapapa), rather than a more detached process of visual simulation, we might imagine the forms we created in very different terms to that of photography. For in fact, if we leave behind the emphasis on the visual in the process of digitization, rather than trying to create a simulated environment which by necessity can only be apprehended visually, we might think of digital data as cultural information that might be able to connect up to other methods of gathering, storing and presenting information. In this vein, our imperfect images are not failed visualizations — they became routes for us to understand digital technologies as more than just mimetic technologies of visual replication but as experiential domains that can be entered into in order to affect co-presence between people, and between people and things across time and space. Here, Maori expectations mesh with the cutting edge of digital image processing. We are now experimenting with converting the digital images into sound files to be heard in an immersive environment and we are also using gaming software to convert the scanned data into topographical representations, or landscapes that the viewer can fly over and through (Figure 6).



Fig. 6 Screen grab of the kinect scan of tukutuku roimata run through gaming software, to be both presented and experienced as a landscape.

From presence to co-presence

In a recent essay, Karen Strassler ("Seeing the Unseen") argues that photography is essentially defined by the perceived quality of indexicality rather than determined by technological apparatus. Describing the powers held by a painted portrait of Ratu Kidul, a spirit queen in Indonesia discovered on the internet, Strassler argues for an image world that transcends any specific medium through the perceived connection between images and the spiritual domain of religion. My own encounters with digital imaging both agree with Strassler and reverse her argument. I have experienced how photographic technologies and materiality have become the reference point for many other kinds of image production, most especially digital imaging. The photographic process is crystallized as a technology that visually constitutes an indexical experience in which the visual becomes a privileged site for an evidential experience. Yet, as the Indonesian experience of the deity in visual form shows, photography is also elevated beyond its medium to become a toplevel interpretive metaphor for understanding many other kinds of images. In the final words of this article I contemplate the notion of the post-photographic in relation to the more expansive understanding of co-presence I have developed in order to challenge us to unpack the places where photography becomes naturalized as an interpretive frame for digital images. The process of digitization is more than just a technological intervention to an older technical method and epistemology. Rather it can also expand the ways in which we understand the qualities and effects of any photographic image.

In a recent piece written for the *New Republic* Geoff Dyer analysed a photograph of a stumble and fall experienced by the former Prime Minister of the Netherlands on a visit to the US in 2014 (Figure 7). The image was from a series of stills, taken close together, each of which, Dyer argues, shows more than a video of the same event, because of the immanence of photographic indexicality. Dyer argues against the common perception that the increasingly compressed time between images in digital photography is essentially changing photography into film: "still photography will then become purely ex post facto, entirely a matter of editing". Such post-photographic thinking undoes almost a century of thinking about photography which has focused on the emergence of a singular image, an index of a photographic moment, composed by the triangle of subject, photographer and camera. However, Dye makes the point that the singular image still has a role to play in generating meaning.

Thinking of photography in these emergent terms alters many of our robust notions of indexicality, representation and even presence as they are developed within the image. Rather than dwell on whether it might be better to think of photography within an expanded temporality suggested better by moving images (see Hözl), I want to highlight that digital images provide reality effects in a similar fashion to analogue photographs (just as photographs are in fact crafted simulations of the real as much as they are indexical representations). Both analogue and digital images are in fact imitations of a clear idea about photographic indexicality that in reality is much more complicated. Digital photographs hide some of the other qualities and affordances of the digital which is to translate and render analogous different orders of information in a new media infrastructure (see Geismar, "Defining the Digital"). By extending our awareness of digital imaging away from the ontologies of image-based interpretations we open up our

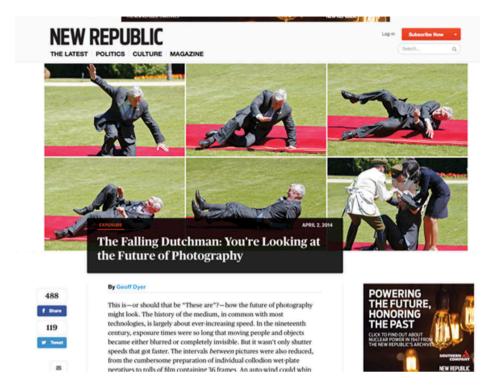


Fig. 7 Screen Grab from piece about the future of photography by Geoff Dyer, New Republic, http://www.new republic.com/article/117234/photo-prime-minister-netherlands-tripping, accessed October 23, 2015.

interpretive toolkit. The project to digitally mediate the Maori cloak *Tukutuku Roimata* demonstrated the combined efficacy of digital technologies as communicative media, as visual aesthetics, as simulations of indexicality and as instigators of a co-presence all of which have the power to redefine the museum artefact. In our project, digital technologies worked not to create digital surrogates, but rather to expand the status of the artefact, most fundamentally from unprovenanced to provenanced by the creation of alternative contexts, knowledge networks and affective experiences and no less through the generation of large amounts of new data. These meanings, still primarily apprehended through the viewing of the digital image, are not so much post-photographic, as the photograph continues to exert power as both an analytic model and a material reference point. Rather the shift has been a transformation in our experience.

As Gitelman has demonstrated in her work on new media (Always Already New) there is an inherent conservatism within our understanding, if not also our use, of new technologies. They burst forth, heralding an age of new capacities and affordances, but are often used to silently reproduce the representational conventions and expectations of earlier media forms. 3D digital images in museums seem like photographs but in fact are hand-made, hand-stitched models that mimetically evoke the veracity of photographic indexicality in order to simulate the original collection. These images are produced in software environments as much as through the mechanical capture of light. The notion of co-presenc can expand our understanding of technologies away from a narrow,

techno-deterministic mode of analysis, towards a more expansive, culturally broad focus on social experience. I have shown here that understanding digital representations in terms of co-presence rather than presence might subvert the dominance of the visual by the reduction of different information into code that may then be experienced in many different ways. The notion of co-presence further challenges the nature and process of indexical representation by a focus on the hand-made rather than mechanical forms of replication and reproduction. I have shown how this process, of unpacking representation in the context of affective experience, is mirrored by the experiences and discourses of my Māori interlocutors. By understanding co-presence as what is produced between people and images within a networked domain, I present a perspective on the role of technology in photography that is not determined only by process and medium but that co-opts both objects and images into broader cross-cultural and social networks of meaning and emotive experience. *Tukutuku Roimata* through the proliferation of networked digital connectivity, has a new community of guardians, based in New Zealand, but digitally co-present within the ethnography collections in Bloomsbury.

Disclosure statement

No potential conflict of interest was reported by the author.

Notes

- 1 This is the next iteration of the project, projected for 2016.
- 2 See ≤http://www.ucl.ac.uk/3dpetriemuseum>. The project has now ended.
- 3 http://www.newrepublic.com/article/117234/photo-prime-minister-nether lands-tripping.

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