LEA

LEONARDO ELECTRONIC ALMANAC

VOL 19 NO 3 VOLUME EDITORS **LANFRANCO ACETI, STEVE GIBSON & STEFAN MÜLLER ARISONA**   EDITOR **ÖZDEN ŞAHİN**

Live visuals have become a pervasive component of our contemporary lives; either as visible interfaces that re-connect citizens and buildings overlaying new contextual meaning or as invisible ubiquitous narratives that are discovered through interactive actions and mediating screens. The contemporary re-design of the environment we live in is in terms of visuals and visualizations, software interfaces and new modes of engagement and consumption. This LEA volume presents a series of seminal papers in the field, offering the reader a new perspective on the future role of Live Visuals.

LIVE VISUALS

LEONARDO ELECTRONIC ALMANAC, VOLUME 19 ISSUE 3

Live Visuals

VOLUME EDITORS
LANFRANCO ACETI, STEVE GIBSON & STEFAN MÜLLER ARISONA

EDITOR
ÖZDEN ŞAHİN

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Leonardo Electronic Almanac
Volume 19 Issue 3

When Moving Images Become Alive!

"Look! It's moving. It's alive. It's alive… It's alive, it's mov-
ing, it's alive, it's alive, it's alive, it's alive, IT'S ALIVE!"
Frankenstein (1931)

**Those who still see – and there are many in this
camp – visuals as simple 'decorations' are living in
a late 19th century understanding of media,** with
no realization that an immense cultural shift has hap-
pened in the late 20th century when big data, sensors,
algorithms and visuals merged in order to create 21st
century constantly mediated social-visual culture.

Although the visuals are not actually alive, one cannot
fail to grasp the fascination or evolution that visuals
and visual data have embarked upon. It is no longer
possible to see the relationship of the visual as lim-
ited to the space of the traditional screens in the film
theater or at home in the living room with the TV. The
mobility of contemporary visuals and contemporary
screens has pushed boundaries – so much so that
'embeddedness' of visuals onto and into things is a
daily practice. The viewers have acquired expecta-
tions that it is possible, or that it should be possible,
to recall the image of an object and to be able to have
that same object appear at home at will. The process
of downloading should not be limited to 'immaterial'
digital data, but should be transferred to 3D physical
objects. [1]

Images are projected onto buildings – not as the tra-
ditional trompe l'oeil placed to disguise and trick the
eye – but as an architectural element of the building
itself; so much so that there are arguments, including
mine, that we should substitute walls with projected
information data, which should also have and be
perceived as having material properties (see in this

volume "Architectural Projections" by Lukas Treyer,
Stefan Müller Arisona & Gerhard Schmitt).

Images appear over the architecture of the buildings
as another structural layer, one made of information
data that relays more to the viewer either directly or
through screens able to read augmented reality infor-
mation. But live visuals relay more than images, they
are also linked to sound and the analysis of this link-
age provides us with the opportunity "to think about
the different ways in which linkages between vision
and audition can be established, and how audio-visual
objects can be composed from the specific attributes
of auditory and visual perception" (see "Back to the
Cross-modal Object" by Atau Tanaka).

iPads and iPhones – followed by a generation of
smarter and smarter devices – have brought a radi-
cal change in the way reality is experienced, captured,
uploaded and shared. These processes allow reality
to be experienced with multiple added layers, allow-
ing viewers to re-capture, re-upload and re-share,
creating yet further layers over the previous layers
that were already placed upon the 'original.' This lay-
ering process, this thickening of meanings, adding of
interpretations, references and even errors, may be
considered as the physical process that leads to the
manifestation of the 'aura' as a metaphysical concept.
The materiality of the virtual, layered upon the 'real,'
becomes an indication of the compositing of the
aura, in Walter Benjamin's terms, as a metaphysical
experience of the object/image but nevertheless an

experience that digital and live visuals are rendering
increasingly visible.

"Everything I said on the subject [the nature of aura]
was directed polemically against the theosophists,
whose inexperience and ignorance I find highly
repugnant. . . . First, genuine aura appears in all things,
not just in certain kinds of things, as people imagine." [2]

The importance of digital media is undeniably evident.
Within this media context of multiple screens and sur-
faces the digitized image, in a culture profoundly visual,
has extended its dominion through 'disruptive forms'
of sharing and 'illegal' consumption. The reproducibili-
ty of the image (or the live visuals) – pushed to its very
limit – has an anarchistic and revolutionary element
when considered from the neocapitalistic perspective
imbued in corporative and hierarchical forms of the
construction of values. On the contrary, the reproduc-
ibility of the image when analyzed from a Marxist point
of view possesses a community and social component
for egalitarian participation within the richness of con-
temporary and historical cultural forms.

The digital live visuals – with their continuous potential
of integration within the blurring boundaries of public
and private environments – will continue to be the
conflicting territory of divergent interests and cultural
assumptions that will shape the future of societal en-
gagements. Reproducibility will increasingly become
the territory of control generating conflicts between
original and *copy*, and between the layering of *copy*
and *copies*, in the attempt to contain ideal participa-
tory models of democracy. The elitist interpretation of
the aura will continue to be juxtaposed with models of
Marxist participation and appropriation. [3]

Live visuals projected on public buildings and private
areas do not escape this conflict, but present interpre-
tations and forms of engagements that are reflections

of social ideals. The conflict is, therefore, not solely in
the elitist or participatory forms of consumption but
also in the ideologies that surround the cultural behav-
iors of visual consumption.

Object in themselves, not just buildings, can and may
soon carry live visuals. There is the expectation that
one no longer has to read a label – but the object can
and should project the label and its textured images
to the viewer. People increasingly expect the object
to engage with their needs by providing the necessary
information that would convince them to look into
it, play with it, engage with it, talk to it, like it and ulti-
mately buy it.

Ultimately there will be no need to engage in this
process but the environment will have objects that,
by reading previous experiences of likes and dislikes,
present a personalized visual texture of reality.

Live visuals will provide an environment within which
purchasing does not mean to solely acquire an object
but rather to 'buy' into an idea, a history, an ideology
or a socio-political lifestyle. It is a process of increased
visualization of large data (Big Data) that defines and
re-defines one's experience of the real based on previ-
ously expressed likes and dislikes.

In this context of multiple object and environmental
experiences it is also possible to forge multiple individ-
ualized experiences of the real; as much as there are
multiple personalized experiences of the internet and
social media through multiple avatar identities (see
"Avatar Actors" by Elif Ayter). The 'real' will become
a visual timeline of what the algorithm has decided
should be offered based on individualized settings of
likes and dislikes. This approach raises an infinite set
of possibilities but of problems as well.

The life of our representation and of our visuals is our 'real' life – disjointed and increasingly distant from what we continue to perceive as the 'real real,' delusively hanging on to outdated but comfortable modes of perception.

The cinematic visions of live visuals from the 19th century have become true and have re-designed society unexpectedly, altering dramatically the social structures and speeding up the pace of our physical existence that constantly tries to catch up and play up to the visual virtual realities that we spend time constructing.

If we still hold to this dualistic and dichotomist approach of real versus virtual (although the virtual has been real for some time and has become one of the multiple facets of the 'real' experience), then the real is increasingly slowing down while the virtual representation of visuals is accelerating the creation of a world of instantaneous connectivity, desires and aspirations. A visuality of hyper-mediated images that, as pollution, pervades and conditions our vision without giving the option of switching off increasingly 'alive' live visuals. [4]

The lack of 'real' in Jean Baudrillard's understanding is speeding up the disappearance of the 'real' self in favor of multiple personal existential narratives that are embedded in a series of multiple possible worlds. It is not just the map that is disappearing in the precession of simulacra – but the body as well – as the body is conceived in terms of visual representation: as a map. These multiple worlds of representations contribute to create reality as the 'fantasy' we really wish to experience, reshaping in turn the 'real' identity that continuously attempts to live up to its 'virtual and fantastic' expectations. Stephen Gibson presents the reader with a description of one of these worlds with live audio-visual simulations that create a synesthetic

experience (see "Simulating Synesthesia in Spatially-Based Real-time Audio-Visual Performance" by Stephen Gibson).

If this fantasy of the images of society is considered an illusion – or the reality of the simulacrum, which is a textual oxymoron at prima facie – it will be determined through the experience of the *live visuals becoming alive.*

Nevertheless, stating that people have illusory perceptions of themselves in relation to a 'real' self and to the 'real' perception of them that others have only reinforces the idea that Live Visuals will allow people to manifest their multiple perceptions, as simulated and/or real will no long matter. These multiple perceptions will create multiple ever-changing personae that will be further layered through the engagements with the multiple visual environments and the people/avatars that populate those environments, both real and virtual.

In the end, these fantasies of identities and of worlds, manifested through illusory identities and worlds within virtual contexts, are part of the reality with which people engage. Although fantastic and illusory, these worlds are a reflection of a partial reality of the identity of the creators and users. It is impossible for these worlds and identities to exist outside of the 'real.' This concept of real is made of negotiated and negotiable frameworks of engagement that are in a constant process of evolution and change.

The end of post-modernity and relativism may lead to the virtuality of truism: the representation of ourselves in as many multiple versions – already we have multiple and concurrent digital lives – within the world/s – ideological or corporate – that we will decide or be forced to 'buy into.'

It is this control of the environment around us and us within that environment that will increasingly define the role that live visuals will play in negotiating real and virtual experiences. The conflict will arise from the blurred lines of the definition of self and other; whether the 'other' will be another individual or a corporation.

The potential problems of this state of the live visuals within a real/virtual conflict will be discovered as time moves on. In the end this is a giant behavioral experiment, where media and their influences are not analyzed for their social impact *ex ante facto*; this is something that happens *ex post facto*.

Nevertheless, in this ex post facto society there are some scholars that try to understand and eviscerate the problems related to the process of visuals becoming alive. This issue collects the analyses of some of these scholars and embeds them in a larger societal debate, hinting at future developments and problems that society and images will have to face as the live visuals become more and more alive.

The contemporary concerns and practices of live visuals are crystallized in this volume, providing an insight into current developments and practices in the field of live visuals.

This issue features a new logo on its cover, that of New York University, Steinhardt School of Culture, Education, and Human Development.

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My special thanks go to Deniz Cem Önduygu who has shown commitment to the LEA project beyond what could be expected.

Özden Şahin has, as always, continued to provide valuable editorial support to ensure that LEA could achieve another landmark.

Lanfranco Aceti
Editor in Chief, Leonardo Electronic Almanac
Director, Kasa Gallery

1.   3D printing the new phenomenon will soon collide with a new extreme perception of consumer culture where the object seen can be bought and automatically printed at home or in the office. Matt Ratto and Robert Ree, "Materializing Information: 3D Printing and Social Change," *First Monday* 17, no. 7 (July 2, 2012), http://firstmonday.org/ojs/index.php/fm/article/view/3968/3273 (accessed October 20, 2013).
2.   Walter Benjamin, "Protocols of Drug Experiments," in On Hashish, ed. Howard Eiland (Cambridge, MA: Harvard University Press, 2006), 58.
3.   " The point here is not to issue a verdict in the debate between Adorno and Benjamin, but rather to understand the debate between them as representing two sides of an ongoing dialectical contradiction." Ryan Moore, "Digital Reproducibility and the Culture Industry: Popular Music and the Adorno-Benjamin Debate," Fast Capitalism 9, no. 1 (2012), http://www.uta.edu/huma/agger/fastcapitalism/9_1/moore9_1.html (accessed October 30, 2013).
4.   Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 1997), 97.

NEW PHOTOGRAPHY

A Perverse Confusion Between the Live and the Real

by

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A B S T R A C T

This paper focuses on the use of photographic images in performance. Specifically, it explores notions of liveness, realness, and place within a black-box performance space. The paper starts with a discussion of the noeme*, or essence, of Photography and its relationship with the live and the real. It then discusses issues of 'New Media' and how social and networked media have changed the act of viewing photographs, but not the essence of photography. The paper presents case studies where the author shot thousands of photographs and used live, digital techniques to give these images movement reminiscent of the original performers and locations combined with either live music, or live dance performance and asks how the use of real-time interactive media has changed the experience for the performers and the audience, why the collaborators wanted to go beyond simply presenting 'slide-shows,' how the liveness of the still images animated the individual performances, how the politics of representation can direct which images are used and finally asks how photography and our experience of photographs is changing in our highly networked society.*

1. LIVE, REAL, NEW OR OLD AFTER CONVERGENCE

One element which sets photography apart from other visual media is its link to the physical world. Nearly 200 years have passed since Nicephore Niepce made his first photographs. Over that time, numerous questions have been asked about the essence of photography: is a lens a necessary element of a camera? Is a camera required to generate a photograph? Most of these questions are beyond the scope of this paper. However, for this special issue on live visuals, I would like to focus on what Roland Barthes referred to as the "noeme," or essence, of Photography; the fact that one must be present to take a photograph, but an audience must be absent to view it.

This essence of photography is summarised by Barthes when he writes, "In Photography, the presence of the thing (at a certain past moment) is never metaphoric… For the photograph's immobility is somehow the result of a perverse confusion between two concepts: the Real and the Live: by attesting that the object has been real, the photograph surreptitiously induces belief that it is alive, because of that delu-

sion which makes us attribute to Reality an absolutely superior, somehow eternal value; but by shifting this reality to the past ('this-has-been'), the photograph suggests that it is already dead." [1]

Barthes wrote *Camera Lucida* in an attempt to come to terms with what he named the "punctum," or the feeling of being punctured he experienced when he discovered a photograph of his mother after her death. He asked why this image had such a different impact on him after her death, and why he did not feel as strongly about other photographs. He was aware that the photograph acted as document of proof, of the reality of her existence. In other words, in order to create the photograph, his mother must have existed to reflect light onto the sensitised surface of the film in the camera. His mother must have stood in front of

a camera in order for the photograph to be created. At the same time, Barthes was aware that a photograph is never viewed at its creation. Photographic processes guarantee that the photographic image is always a record of the past. These records are always viewed after their creation, and most frequently, in a different physical location.

Barthes is not the only author who explores this distance and closeness between the live act of viewing the past. Phillip Auslander, opens his book *Liveness: performance in a mediatized culture* with an anecdote about the band *The Doors* wanting to watch themselves 'live' on television after having taped an appearance for a variety show. The band was performing, 'live' on the night the television program was being broadcast so the band "requested that a set be placed

in their backstage dressing room... Because their segment had not yet come on [air] when they were ready to begin their concert, they took the television set onstage with them, perching it atop an amplifier with the volume turned off. When *the Doors* finally appeared on the television, they stopped playing midsong, turned up the television volume, and sat on the floor of the stage watching themselves, their backs to the audience. When their segment was over, they resumed playing." [2]

Auslander uses this example to question what is thought of as live. Was the act of recording the live event? Was the broadcast the live event? Or, was the viewing the live event? Auslander's *Liveness* goes into great detail in its exploration of the relationship between live performance and television because television was the dominant form of media when the book was written in the late 1990s. In an afterword to a collection of essays on performance and technology published in 2006, Auslander cites Alain Busson in discussing how each new medium struggles for cultural territory with existing media [3] and how, according to Marshal McLuhan, "a new medium is never an addition to an old one, nor does it leave the old one in peace. It never ceases to oppress the older media until it finds new shapes and positions for them." [4]

At first glance, photography appears to be an 'old' medium – particularly when discussed in terms of the utterly anachronistic 'New Media.' However, it can be said that photography has never been richer, more vibrant than at this point in the 21st century as demonstrated by Facebook announcing in March 2012 that 300 Million photos were being uploaded daily to its servers. [5] But in this world of Google+, Twitter, and Instagram, the way we create and view photographs has changed drastically. The role of photography as a social media has become even

clearer with the iPhone becoming the most popular camera used for photographs on Flickr in 2012. [6]

At the same time, new audiences are looking for new methods to view or 'interact' with images. The iPhone, and all the myriad of touch screen devices which followed allow us to not only collect, store, and access thousands more images than possible in the past, but they allow us to zoom in and walk around within an image. Technical research in cameras has shifted from the development of films with a single surface to new manners of recording the path or rays of light. Computational photography techniques such as epsilon and light field photography have already yielded new cameras, such as the Lytro, allowing viewers to move around inside an image after it has been captured – zooming and focusing on different elements of the 'light field' captured by the camera. [7]

New Media is a curious concept in that it is not actually a medium. It's become a term used to express the convergence or transformations occurring as older media have been digitised. In their new digital forms, old media can be 'consumed' (another, now meaningless anachronistic term) or 'interacted' within new manners. This act of digitisation has changed both how we create and view photographs. The act of viewing is now more active. Viewing has always been a live event, but now it is even more so as we swipe through thousands of images, zoom into and walk around panoramas, animate slideshows on our desktops, and explore new methods of navigating the hundreds of millions of images streaming to us from social media platforms.

This paper explores Photography's relationships between the Real and the Live through the lenses of new, digital, or converged media and performance. The paper focuses on three live performances using images on stage. It explores the history of projecting

photographs, the relationships between the images and the rest of the performance, the techniques used to animate or bring the images to life, and finally, it reflects on how both Photography and live performance have evolved.

2. A HISTORY OF PROGRAMMING PROJECTIONS

The projects discussed in this paper focus on the presentation of images to an audience in a social or performative setting. These projects build on a tradition of performing with projected images, methods of which have been explored for centuries. The techniques and apparatus were already very well established long before photography began its journeys of discovery in the 19th century, and these early techniques and technology have had a great influence on how we view images. Therefore, it is helpful to discuss their development before looking at how new digital technologies allow us to break with their traditions.

The most famous of these early projection systems, the *Magic Lantern*, is often erroneously attributed to Athanasius Kircher in 1640. Siegfried Zielinski, our first media archaeologist, presents a much more nuanced and detailed history of projected images when he clarifies that, "more then two centuries before *Ars magna lucis et umbrae* was published, there were attempts to project figures. The Venetian Giovanni da Fontana, rector of the Padua art academy and an enthusiastic pyrotechnist, was the artist of an outrageous sketch, ca. 1420, of a lantern projecting an obviously female devil, complete with pubic hair, onto a wall... In the first edition of *Ars magna lucis et umbrae,* Kircher is essentially reporting on the state of the art." [8]

Kircher and his book became exceptionally influential in the early 17th century by documenting and disseminating information about optics and the creation of different projection systems. Others picked up and further developed these techniques, including some who referred to themselves as Lanternists, artists at projection, often using entire batteries of lanterns in a single presentation. According to Zielinski, "[b]eginning with the second half of the nineteenth century the development of the magic lantern began to split off in different direction: aided by highly imaginative

and cunning techniques, the development of the show business tradition became ever more lavish and appealing to the senses, reaching the very threshold of cinematography – with kaleidoscopes, revolving slides, pull-type moving slides, mask, toothed wheels, and lever systems, rough illusions of movement, and changes in time and place, were produced to opulent acoustic accompaniments. Finally, it ended as reduced sized lanterns and mass produced for the mass market." [9]

As Zielinski further explains, "the first seventy years of the nineteenth century gave expression to the growing need and technical ability to grasp and appropriate the visible surface of the world, through its re-visualisation and the ability to play around with it: the cinematisation of the eye and of perception as a counterpart and complement to the extensive acquisition of natural and technical processes for other areas of the production of commodities and meaning. At the same time, demands on the quality of the images were growing continuously. With the trend toward ever more perfect approximations of real surface phenomena in the drawings and paintings on the slides, it was a natural consequence that, as of the end of the 1840s, the first photographic slides for the magic lantern came into use." [10]

Figure 1. Triple lantern slide projector, 1886, W. Clowes, advertisement in 1886 Colonial and Indian exhibition catalogue, available from Open Library https://openlibrary.org/books/OL23288128M/, CC0.

The use of magic lantern slides increased drastically throughout the late 19th century. Figure 1 shows a three slide projector from the 1886 Colonial and In-

Figure 2. Ford New Car Announcement Show, 1987, Partial setup for programming of screen control for the 1987 Ford New Car Announcement Show, Detroit, MI. From left: Brad Smith, art director; Sung Soo Lee, creative director/producer; Bob Kassal, executive producer; Paul Jackson, programmer/producer, available from http://en.wikipedia.org/wiki/File:Ford_Show_1987.jpg, CC0.

dian exhibition. [11] Lanterns such as this were precursors of the moving images which came with cinema. All three lanterns would be focused on a single point allowing images to be transitioned or dissolved between lanterns. The triple lantern allowed a lanternist to swap a slide in one lantern while transitioning between the other two without pausing to create a live, continually changing, show of photographic images.

As cinema, and cinematic films came to prominence, they displaced the earlier magic lanterns as the primary projection technologies. However cinema presentations were both more and less live. The form of the presentation was less flexible. The projectionist rolled the film onto reels and projected it with little influence over the process. As cinema film developed, one firm, Eastman Kodak realised there was still a desire for the older, more direct form of slides. After releasing their 35mm Kodachrome transparency film for cinema in 1935, Kodak realised the great interest and potential in using the film not only for cinema, but for smaller still cameras such as the original Leica. In order to view and present the individual still images being created with these cameras, Kodak released a new Kodaslide carrier and projector in 1940. In 1960, Kodak followed this with the Carousel system capable of storing and automatically projecting up to 80 -140 images.

These new multi image carousels allowed visual performances to be prepared and created, live, before an audience in manners not possible with the linear presentation of images through film and cinema. Throughout the 1960–70s, performers developed methods of triggering and controlling projectors, synchronising them with audio recording, increasing the speed of transitions between and varying the speed of dissolves. The creation of large scale, Multi-image slide shows became a staple of performance as demonstrated in the partial setup for Ford's annual Detroit Car Show, in 1987 depicted in Figure 2. [12] In the foreground of Figure 2 can be seen the new tools used to control the increasingly complex performances. As the speed and complexity with which the photographs could be combined increased, the individual lanternist or 'slide programmer' adopted a new tool, a 'micro computer' was used to control the increasingly complex array of 'old media' including lights, sound, banks of slide and film projectors.

Eventually, video and digital projection technologies became more popular and Kodak discontinued the slide projector in 1994, even though only now, more than 25 years later, are we able to purchase video projectors of similar colour fidelity and resolution and to the slides used in those multi-image or multi-media

shows. But the aesthetics of varied perspectives and close-up and panoramic vistas of the same subject side by side, which came to prominence through the multi-image slide shows are now frequently used in an attempt to fill the high-resolution displays on our desktops, the high definition displays in our theatres, and the projects described in this paper. These include the screen savers in Apple's OS X, 10.8, Mountain Lion, which offer the user numerous options for bringing multiple images onto the screen, and moving them around as shown in the screen grab in Figure 3.

3. CASE STUDIES OF LIVE PHOTOGRAPHS IN PERFORMANCE

The previous section of this paper describes how, even before photographs were digitised and digitally projected, computers, new, and digital techniques were used to combine and present photographs in performance. The three case studies in this section explore the role of photography in an increasingly digital and converged culture. They look at different aspects of photography and use its essence to animate the black box spaces we use for live performance. All three pieces were performed live as parts of collaborative performances. During the development of

Faceless the author of this paper acted as the live photographer on stage during a work-in-progress presentation developing the concept and direction of the piece. For *Chaining* the author explored photography as a method of locating the performer and referring the audience to a location outside the theatre. The third project, *Concerto X: Guimarães*, was a large collaboration between seven composers and the author, as the solitary visual artist creating 'visuals' linking the performance to images of the surrounding city of Guimarães and its changing mood while hosting the European Capitol of Culture in the midst of political turmoil surrounding austerity cuts. The case studies detail explorations of photographic techniques on stages as well as exploring how the essence of Photography is changing or remaining.

In all three case studies, the photographs were animated, or brought to life, in different manners. The photographs in *Faceless* were animated by the actions of the photographer on stage in front of the audience. The audience could see how the photographer moved, the creation of the images, and how the flow of the images on the screen in front of them changed as the photographer followed and reacted to the dancers. The whole performance was a live, enclosed ecosystem. However, the other two performances used
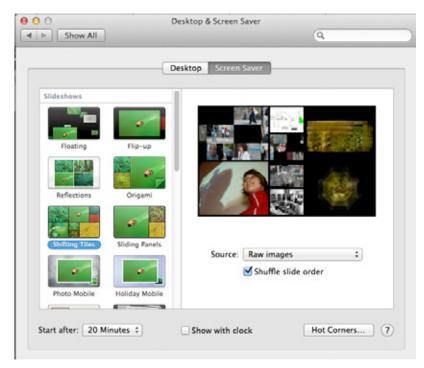

Figure 3. Apple OS X 10.8 screen saver preference panel, 2012, K. Woolford, showing several options for displaying photographs on a high-resolution display. © Kirk Woolford, 2005. Used with permission.

Figure 4. *Faceless,* Kirk Woolford, 2005. One dancer posing for a camera, while another camera captures a second dancer looking on. © Kirk Woolford, 2005. Used with permission.

Figure 5. *Faceless*, Kirk Woolford, 2005. The photographer caught in the act of hunting the dancers. © Kirk Woolford, 2005. Used with permission.

images which were removed, both physically and temporally from their origin. Simply projecting slideshows, as done using the older techniques described in the previous section, was possible, but the collaborators wanted to use digital and interactive techniques to both explore new methods of combining and animating images. The *Chaining* performance explored artificial-life programming methods to allow the images to grow, change, and evolve over the duration of the performance, while the images from *Concerto X*, became, essentially, an audio-visual instrument to be played, live, together with the musicians during the performance.

3.1: *Faceless*, Posing, and the Act of Hunting Photographs

Faceless, a live dance performance choreographed by Keren Levi, explored another aspect of photography. Levi was intrigued by the movements of a photographer as he photographed one of her performances. She felt he was conducting a performance of his own as he moved around between the dancers, changing body positions to change viewpoints, and became fascinated by the manners in which her dancers posed for the photographer, and was referred to *Camera Lucida*, or *La Chambre Claire*, to use its original French title. In

summing up her project, Levi states: "The experience of becoming photographed as a process of becoming an image. When his portrait was taken he suffered 'a sensation of inauthenticity, sometimes of imposture" which he associated with a small death: I become a ghost…' and as we read it: imageless, faceless." [13] Or to cite Barthes directly, "…once I feel myself observed by the lens, everything changes: I constitute myself in the process of 'posing,' I instantaneously make another body for myself, I transform myself in advance into an image, This transformation is an active one: I feel that the Photograph creates my body or mortifies it, according to its caprice." [14]

Levi invited several photographers, including the author, Kirk Woolford, to explore the act of photographing and being photographed in front of a live audience. During the research phase of the project, Woolford realised that the new generation of Digital Single Lens Reflex (DSLR) cameras, could be connected directly to a projector so the audience could see the frozen, still images from the photographers point of view. At the same time, a videographer, Tamuz Binstock, connected her video camera to a second projector and amplified the movements of the photographer in the

midst of the dancers. Figures 4 and 5 describe the relationships between dancers and photographer in the piece. The performance explored notions of liveness and point of view. For the performance, Woolford used an early Nikon the D1H, with a powerful flash and a combination of lenses, which created another layer of performance in the creation and presentation of the images. The loud shutter and flash on the camera alerted the audience that a photograph had been taken. Because the early DSLRs had limited processing power and a large mirror which had to be moved out of the way of the shutter before an image could be created, the camera would black out during the actual act of taking of a photograph. The video signal from the camera to the projector would go dark as the camera autofocused and the new photograph would take up to 2 seconds to appear after the flash and shutter had tripped. This created a sense of anticipation. The switching of lenses created more stillness and pauses in the performance. The whole process highlighted Barthes' offset in time, between the creation and the viewing of the photograph, but also called to mind Vilem Flusser's writings about the act of the act of stalking, of hunting photographs such as these lines from *Towards a Philosophy of Photography*:

If one observes the movements of a human being in possession of a camera (or of a camera in possession of a human being), the impression given is of something lying in wait. This is the ancient act of stalking, which goes back to the Palaeolithic hunter in the tundra. Yet photographers are not pursuing their game in the open savannah but in the jungle of cultural objects, and their tracks can be traced through this artificial forest. The acts of resistance on the part of culture, the cultural conditionality of things, can be seen in the act of photography, and this can, in theory, be read off from the photographs themselves. [15]

Flusser also wrote specifically about the manner in which the settings on an SLR, "divide time and space into rather clearly separated areas. These areas of time and space are distances from the prey that is to be snapped, views of the 'photographic object' situated at the centre of time and space. For example: one time and space for extreme close-up; one for close-up, another for middle-distance, another for long-distance; one spatial area for a bird's-eye view, another for a frog's-eye view; another for a toddler's perspective; another for a direct gaze with eyes wide

open as in olden days; another for a sidelong glance. Or: one area of time (shutter speed) for a lightning-fast view; another for a quick glance, another for a leisurely gaze, another for a meditative inspection. The act of photography has its movement within this time and space..." **16**

Faceless opened up the act of taking or hunting photographs by turning the creation of the photograph into a live event witnessed and shared by an audience. The final minutes of the performance consisted of Woolford, standing in the middle of the stage with one dancer looking over each shoulder as they revisited the entire performance by flipping through the photographs on his camera. The performers viewed themselves, live as photographs, while the audience looked on.

3.2: Chaining, Documenting Place

Returning to Barthes notion of a photograph being a confusion between the real and the live, but always firmly connected to a referent, a place, and a time, still photographs were used extensively during the development of *Chaining*, a live dance exploration of a specific site in the Morecambe Bay Estuary in Northwest England. For this piece, choreographer, dancer, and photographer, and Woolford spent several days working on the tidal flood plain as the water came in and changed the shape of the landscape. Initially, the trio walked and danced around the site observing the perilous ebb and flow of the tide, performing movement experiments to, literally, get the feel of the site, and photograph the contours of the location depicted in Figure 6.

These photographs and experiences were brought back into the studio and used in the creation of a performance. One of the strongest impressions/

Figure 7. *Chaining*, Kirk Woolford, 2005. Rebuilding the site of the performance for the theatre using tiles taken from different sections of the site at different times of day. © Kirk Woolford, 2005. Used with permission.

memories the trio carried away from the site was of becoming stranded as the waters in the estuary rose faster than expected. The trio wanted to explore not only how photographs could be used to refer to the specific site, or how photographs could, metaphorically, transport the audience to the site, but they also wanted to animate the images with qualities of the location where they were created: to give them life and through some of the qualities of the water coming in and changing the face of the flood plain, and the stage in front of them; to give the photographs adventure according to Barthes:

> If [a]... photograph interests me powerfully, I should like to know what there is in it that sets me off. So it seemed that the best word to designate (temporarily) the attraction certain photographs exerted upon me was advenience or even adventure. This picture advenes, that one doesn't... The principle of adventure allows me to make Photography exist. Conversely, without adventure, no photograph... suddenly a specific photograph reaches me; it animates me, and I animate it. So that is how I must name the attraction which makes it exist: an animation. The photograph itself is in no way animated (I do not believe in "lifelike" photographs), but it animates me: this is what creates every adventure. **17**

Particular landscape features on the flood plain such as banks of dirt, deep stretches of streams, the location of a sheep's skeleton, etc., were photographed, the spatial relationships between them calculated using an early Roman measuring system of chains, and all of this was plotted on maps. At the same time, physical qualities and movement affordances of the locations, such as the softness of the ground or the flow of water were recorded for each location.

Back in the theatre, the relative locations were plotted on the stage floor for the performance. The choreographer and dancer explored the movement qualities invited by each of these locations while the Woolford developed custom software using Processing to tile the images, cluster, overlap, and move them in conjunction with the same movement qualities the dancer was exploring as in Figure 7. The final result re-imagined the experience of moving through the site not only through the look and sound of the location, but through the flows of air and water, as well as the slower movements of mud.

Chaining used photographs to recall the original location of Morecambe Bay in the blackbox theatre. It used the photographs if not to transport the audience to the location, at least to refer the audience to
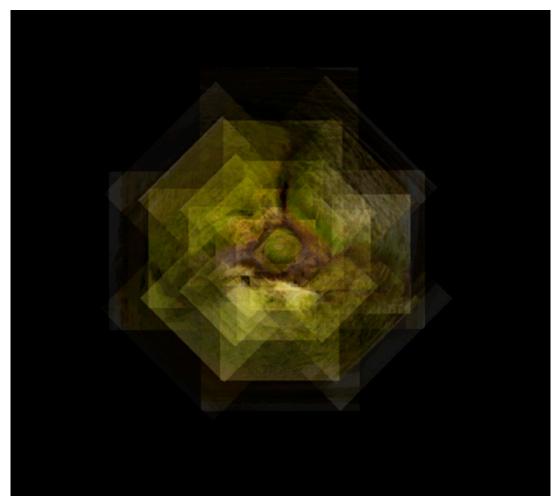

Figure 6. *Chaining*, Kirk Woolford, 2005. Dancer exploring the movement qualities of the tidal estuary in Morecambe Bay. © Kirk Woolford, 2005. Used with permission.

Figure 8. *Chaining*, Kirk Woolford, 2005. Initial Test of image tiles for Chaining. © Kirk Woolford, 2005. Used with permission.

it or to re-present the original location. It drew upon not only Barthes' essence of a photograph as proof of existence, the requirement that the photographer must have been in that place to make the image, but also the photograph's ability to disappear and allow the viewer to see through it to the location to which it refers, or, as Liz Wells explains,

Barthes concludes that it is 'reference' rather than art, or communication, which is fundamental to photography. Central to his exploration is the contention that, unlike in any other medium, in photography the referent uniquely sticks to the image. In painting, for instance, it is not necessary for the referent to be present. Painting can be achieved from memory, (chemical) photography cannot... the photograph is always about looking and seeing. Furthermore, the photograph itself ... is

invisible. It is not it *that we see. Rather, through it we see that which is represented.* **18**

During the development of the *Chaining* project, the dancer and choreographer tested movement sequences in the estuary, to see how the landscape intervened and changed the movement. They then attempted to recreate the effects of the landscape in the theatre in an effort to evoke the missing landscape, and/or transport the audience to the same time/place. Woolford attempted to use photographs not only to allow the audience to see the original site as the generation of the movement as explained by Barthes and Wells, but also allow the images to exhibit movement similar to what the audience would have perceived had they been present in the place. Woolford developed a dynamic system, which could perform duets with the dancer. The system created photo-graphic

images which echoed the colours, textures, and movements of the original environment. In order to develop this system, Woolford experimented with various methods of both shooting the landscape, and combining images for the performance. Figure 8 shows the result of shooting 64 images, in 8 paths, radiating away from a set point in the landscape. This is a shooting pattern frequently used for creating panoramas, but the geometric effect created by overlapping the images was decided to be too distracting, so Woolford shot the photographs in loose grid patterns, walking across the landscape. The fact that the landscape was not even caused each image to be more-or-less out of alignment with the others, and added an element of movement as well as linking the resulting visuals more closely to contours of the original landscape. Figure 9 shows how this worked by generating an uneven grid around a channel cut by water flowing across part of the estuary.

In order to animate the images for the live performance, Woolford developed an artificial life system with each tile having its own characteristics. Each tile gathered and consumed energy at different rates, and was either attracted to other tiles or repelled by them. The performance was broken into 8 sections – corresponding to the 8 locations documented in the estuary. For each of these sections, a collection of

images was chosen for the tiles, and the team decided how the image tiles should perform in order to best synchronise, or contrast with the movements of the dancer. A collection of tiles were positioned on screen to surround the dancer or prepare a location for the dancer at that point in the performance. Each set of tiles was given a pre-determined amount of energy, movement, and intensities. During the performance, the system was triggered to change states as the dancer moved from one location to another. Exactly how the system changed, precisely what images it created, or how they would respond was unknown, until it ran, live. The photographs allowed the original location to enter into a dialogue or duet with the dancer.

3.3: Concerto X and the Social Image
The sheer number of cameras, photographers, and photographs has drastically changed our relationship to images and locations in the 20th century. The *Chaining* project explored relationships between performer and location with little reference to politics. However, when Woolford attempted to use the techniques developed for Chaining for *Concerto X: Guimarães*, a live performance commissioned for the European Capital of Culture 2012 in Guimarães in the middle of the political turmoil generated by the European Union's financial crisis and the increasingly difficult austerity actions, and hostile debate about the

Figure 9. Chaining, Kirk Woolford, 2005. Offsets in image tiles created by walking across uneven terrain. © Kirk Woolford, 2005. Used with permission.
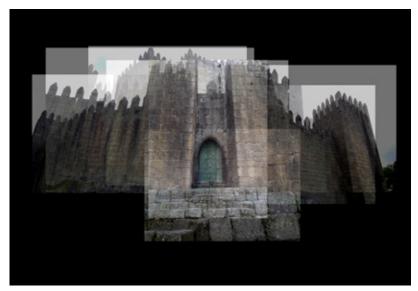
Figure 10. *Concerto X: Guimarães*, Kirk Woolford. 2012, Original visuals celebrating the castle as the first Royal residence when the Kingdom of Portugal was founded 1139. © Kirk Woolford, 2012. Used with permission.

Figure 12. *Concerto X: Guimarães*, Kirk Woolford, 2012, Max Patch using audio analysis to drive the flow of images based on music played by orchestra members. © Kirk Woolford, 2012. Used with permission.

future direction of the country, the political aspects of photographs became impossible to ignore. Again, Barthes helps to explain, "Here is where the madness is, for until this day, no representation could assure me of the past of a thing except by intermediaries; but with the photograph, my certainty is immediate: no one in the world can undeceive me. The Photograph then becomes a bizarre medium, a new form of hallucination: false on the level of perception, true on the level of time; a temporal hallucination, so to speak, a modest, shared hallucination. (on the one hand 'it is not there', on the other 'but it has indeed been): a mad image, chafed by reality." [19]

Concerto X: Guimarães was a site-specific collaboration between seven Portuguese composers and a single American/British photographer/visual artist (Woolford). During the performance, the city of Guimarães was explored both aurally and visually. Culturally relevant locations in the city were recorded and mixed into both visual and aural compositions and performed live in a number of different manner throughout the 70 minute performance for a, primarily Portuguese, audience of 800.

For this performance, Woolford developed a complex system in Max/MSP and Open Frameworks running on multiple computers to analyse the sounds created by the live musicians and conform the changes and flows of the of the photographic imagery. Initially, Woolford wanted to explore a distributed image of

the city of *Guimarães*, by downloading images from Flickr, Facebook, and other social media sites and mixing these with images he had taken on his first visit to the city. The original intention was to show the audience how the city was 'imaged' or 'imagined.' However, between the beginning of the project in 2010, and the actual performance in October, 2011, the international recession deepened and began to take a severe toll on the Portuguese cultural climate. The Portuguese composers did not feel it was appropriate to present a tourist-friendly image of the city and asked Woolford to take his camera out into the city the days before the performance to document the current feelings and impressions of frustration, anger, and decay varying from hope to resignation. At the same time, Woolford worked with the composers to develop new performance interfaces for the software to allow the flow of images to vary between snapshots of individual Portuguese people getting on with day-to-day life to a cacophony of unreadable images of decay, graffiti, and 'celebration' of *Guimarães* in its year as a European Capital of Culture as in Figure 11.

The initial plans for the visuals called for building on the artificial life techniques developed for *Chaining* by using a Max/MSP external [20] to monitor elements of the orchestra's performance and use this to feed and excite the image tiles during the performance, by sending OSC controls to the computer generating the visuals. Figure 12 shows the control
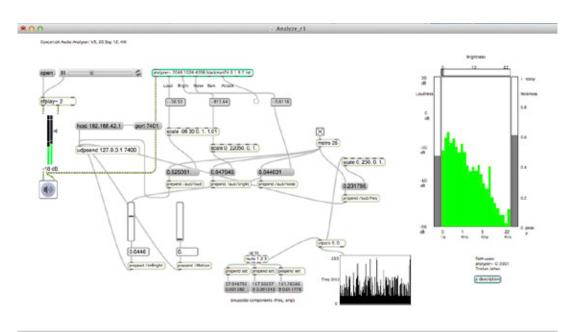
patch. Again, the plan was to configure the visual system, trigger section changes and let it run on its own.

However, as the cultural climate changed during the development of the piece, the composers asked for more direct photographs of local people. Most of the performance had been very carefully scored, so in

Figure 11. *Concerto X: Guimarães*, Kirk Woolford, 2012. Following large demonstrations against the Portuguese government the week before the performance, the composers asked to have the emphasis moved away images celebrating the city and asked for visuals which more closely expressed the current state of Portugal as part of the European Union © Kirk Woolford, 2012. Used with permission.

Figure 13. *Concerto X: Guimarães*, Kirk Woolford, 2012. Visual "instrument", collection of images which could be "played" similar to playing musical notes by changing attack, duration and decay of images. © Kirk Woolford, 2012. Used with permission.

Figure 14. *Concerto X: Guimarães*, Kirk Woolford, 2012. *New Concerto X* interface created to allow images to be "played" as an instrument. © Kirk Woolford, 2012. Used with permission.
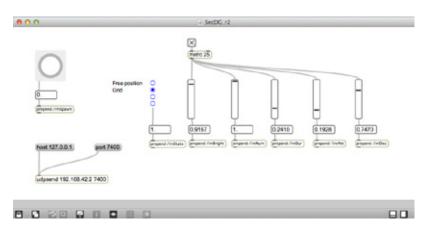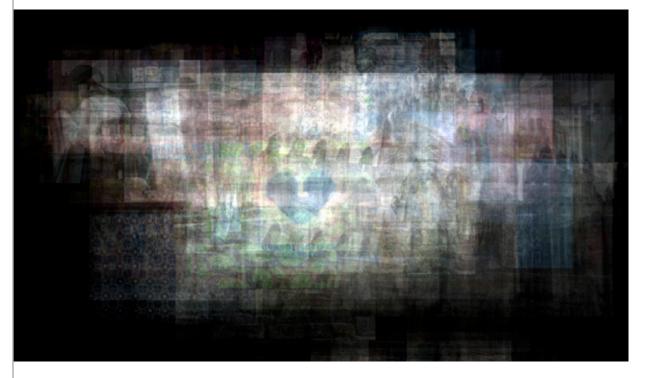

Figure 15. *Concerto X: Guimarães*, Kirk Woolford, 2012. Final breakdown of grids, borders, and images with the castle and the heart-shaped *Guimarães* 2012 logo still identifiable. © Kirk Woolford, 2012. Used with permission.

addition to the segments, which had originally been planned as improvisations, they asked to be able to trigger specific images, or sets of images in time with the music. Woolford developed a new renderer and Max-based interface to allow images to be 'played' or 'performed' similar to the manners the composers used to perform with audio samples. The projection area was gridded into 12 sections, so up to 12 images could appear at once. Originally, this system worked with only 12 images, but it was decided that this was too limiting, so the system was re-programmed to allow any of 96 images to be displayed in any location as long as each tile was displaying a different image. Each of the images had it's own duration and position, but the system used globally defined attack and decay parameters to change the speed with which images appeared and disappeared in synch with the orchestra's performance. Finally, toward the end of the performance, the system was moved into a different state which broke the grid by randomly placing images on the screen an mixed in tiles from the castle as the speed of the image changes increased. Eventually, the images became complete noise (Figure 15) as they

cycled 60 times per second, and faded out to the final swell of the orchestra.

The cacophony of the final images allowed the performers clearly express their feelings of the situation of Portugal in both audio and visual manners without relying upon words or text. It also allowed them to use photographs from the streets surrounding the concert hall to discuss the current state of the city with more authority than if they were simply stating their own opinions.

Figure 16. *Concerto X: Guimarães*, Kirk Woolford, 2012. The orchestra and several of the composers during a rehearsal for Concerto X. © Kirk Woolford, 2012. Used with permission.

4. NEW MEDIA OLD PHOTOGRAPHS, A CONCLUSION

Roland Barthes' *Camera Lucida* was first published shortly before his death in 1980. Barthes was already clearly aware of the madness of the mediatized world at the end of the 20th century when he asked us to "Consider the United States, where everything is transformed into images: only images exist and are produced and consumed … What characterizes the so-called advanced societies is that they today consume images, and no longer, like those of the past, beliefs; they are therefore more liberal, less fanatical, but also less 'authentic' – something we translate, in ordinary consciousness, by the avowal of an impression of nauseated boredom." [21]

Barthes' words sound prescient, having been written more than 30 years ago. This is even more fascinating when one learns that Barthes was paraphrasing a text from the 1843 edition of *The Essence of Christianity* in which the author observes that 19th century society "prefers the image to the thing, the copy to the original, the representation to the reality, the appearance to being." [22] These comments put questions about photography and new media into clearer focus. Throughout Photography's history, spanning the 19th, 20th, and 21st centuries it has been surrounded by discussion of Western society preferring images to the objects or experiences they depict. However, as Susan Sontag explains, "the images that have virtually unlimited authority in a modern society are mainly photographic images; and the scope of that authority stems from the properties peculiar to images taken by cameras. […] While a painting, even one that meets photographic standards of resemblance, is never more than the stating of an interpretation, a photograph is never more than the registering of an emanation (light waves reflected by objects) – a material vestige of its subject in a way that no painting can be." [23]

This, then is core of photography, its essence, its 'noeme': something which cannot be changed by its adoption or mutation by digital or new media. A photograph is a certificate of evidence – proof that the photographer was present at a location, time or event.

Returning to the original discussion of live visuals, despite the ability of fast computers and powerful software to generate dynamic images, performers still return to photographs – whether still or moving, to provide a link to an original object, location, or event. The three case studies in this paper demonstrate how Photographs can be viewed, or screened, live, as part of a performance. *Faceless* opened up both the process of creating and viewing photographs. *Chaining* explored the use of photographs to refer to a location and real-time techniques to animate the images to evoke a stronger, more embodied experience of the original environment. When *Concerto X* attempted a similar strategy of celebrating the location of a performance, the political power of Photography forced the performers to think carefully about what they were depicting, and re-image, or re-imagine the city in which their performance took place.

Photography has always been linked to technology. How we view or interact with photographs changes drastically as we develop new imaging technologies. Henry Fox Talbot's paper negatives made it possible to create multiple prints from a single photograph. Twitter and Facebook make it possible to send a photograph to a hundred thousand 'friends' or 'followers' in a fraction of a second. This drastically changes the live act of viewing the photograph. As photographs are stored in digital format, they are more easily manipulated, changed, made to lie. Photographs have always lied, they have always told the tale the photographer, editor, family member wanted them to tell. However, the photograph has always hinted that there was some truth, some documentation to back up these lies, these stories. This is why they are used in performance: to provide evidence, to document, to show something more than random code processes or a single person's imagination. They allow us to show the world through our own points of view, our own lenses, no matter how those lenses are constructed and no matter how we capture the light coming through them. ∎

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The MoCC Pavillion

MoCC
Museum of Contemporary Cats

la Biennale di Venezia

Arte
Architettura
Cinema
Danza
Musica
Teatro
Archivio Storico