DISRUPTING SPACE: HAPTIC AND DIGITALISED OPTICS

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The invention of artificial perspective in the early 1420s by the Florentine architect Filippo Brunelleschi has been cast as a mythic event in the history of western art because it marks the moment when, for the first time, the viewer became physically implicated in the image, the perspectival system effectively (re)constructing visual reality in two-dimensional form.[1] This powerful effect has led to perspective being understood as pivotal in the representational tradition of western painting, and western visualising more widely. Subsequent and ever-advancing image-making technologies, including photography and virtual reality, are understood within its terms and can be described as increasingly successful attempts to recreate the visual experience of three-dimensions. Indeed, perspective and its technologies have been critiqued as highly successful ideological means through which western imperialism, and the capitalism that generates the "reality" of consumer spectacle, were established in arguments first put forward approximately forty years ago.[2]

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[1] Hubert Damisch argues that perspective does not merely reflect or replicate visual space as a mirror does, but has positioned itself so effectively within our consciousness that it continues to construct our visual space today, and that while we apparently live in a post-perspectival world, visual experience continues to be understood in perspectival terms. *The Origin of Perspective*, translated by John Goodman (Cambridge, Massachusetts and London: MIT Press, 1994)

[2] Perspective and photographic technologies were firmly linked to western capitalist ideology in the Marxist critique of 1970s and 1980s visual theorists. Influential arguments include, but are not limited to, John Berger, *Ways of Seeing*, (London BBC; Penguin, 2008), Victor Burgin, (editor), *Thinking Photography*, (Basingstoke: Macmillan, 1982), Laura Mulvey, *Visual and Other Pleasures*, (Basingstoke: Palgrave, 1989), Jean-Louis Baudry, "Ideological Effects of the Basic Cinematic Apparatus," (1970) in *Film Theory and Criticism: Introductory Readings*, edited by Leo Braudy and Marshall Cohen, (New York; Oxford: Oxford University Press, 2004), 345-355 and W. J. T. Mitchell, *Iconology: Image, Text, Ideology* (Chicago and London: University of Chicago Press, 1986)

However useful this technological trajectory is in the critique of western ideologies of scientific rationalism and capitalist spectacle it is also problematic because it ignores the complexities on which Renaissance perspective is founded and assumes the visual experience of the objects depicted, and the homogenous spatial arrangement in which they are arranged, as something fundamental and fixed. Visual representation is critiqued because of its effective imitating of "objective space" and this assumption of space as a "given" is simultaneously left unexamined. Geographer Doreen Massey sees this as problematic and instead suggests a disruption of these ideas:

> What I'm interested in is how we might imagine spaces for these times; how we might pursue an alternative imagination. What is needed, I think, is to uproot 'space' from that constellation of concepts in which it has so unquestioningly so often been embedded (stasis; closure; representation) and to settle it among another set of ideas (heterogeneity; relationality; coevalness…liveliness indeed) where it releases a more challenging political landscape.[3]

This essay explores how early pictorial space, which reveals an experimental approach to perspective and is grounded in a philosophical and cosmological context far removed from our own, can work as critique of ideologically-produced representational images, chiefly manifesting within contemporary screen-based digital technologies. I return to the moment when naturalism began to emerge in painting, to the work of artists from fourteenth- and fifteenth-century Italy whose painting was rooted in bodily and material affinities and whose perspectival constructions existed under very different, Aristotelian, conceptions of space. I ask what these works can bring to our own visual assumptions; whether returning to the visual past can draw out the difference lying at the heart of the familiar so as to reinvigorate our experience of representational images. Three artworks that engage with the spatial paradox of representational imagery and physical environment are explored in order to expand our reception of digitally-produced image-space, their historical framing emphasising a material and bodily affinity between viewer and image in a process whereby the usual idealising narrative forms are removed.[4]

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[3] Doreen Massey, *For Space*, (London: SAGE, 2005), 13
[4] This approach develops from theories that locate affect as prior to signification and as an "intensity" that is produced between bodies. Eric Shouse states, "Because affect is unformed and unstructured (unlike feelings and emotions) it can

The works discussed adapt forms of pictorial space that proceed from earlier periods in western visual culture, examining the problems of conceiving landscape as a primarily pictorial form, and how this reinforces the notion of space as representation. Landscape as a visual and visualized construction has been firmly linked to Renaissance perspective by influential geographers such as Denis Cosgrove, however the landscapes painted in the paintings at the time that perspective was being developed are thoroughly non-perspectival; instead they are incidental, fragmented and located as background.[5] By focusing on these *parerga*, it is possible to re-evaluate the imbrication of landscape and perspective, and how this informs and extends assumptions of painterly realism, space and representation.[6] In the painting of fourteenth- and fifteenth-century Italy, when the power of naturalism re-emerged in the work of artists such as the Lorenzetti brothers and Giotto, non-dominating effects are in play and the landscape, which was primarily used to construct the background setting, escapes the perspectival grid. By drawing from these paintings, the works examined here suggest a materially-aligned configuration of representation and its assumption of physical space. This focus actively ignores the narrative content of these images; the central, human-centric story that representation invariably serves and that landscape and perspectival technologies are used to frame. The process of removal identifies how visual representation – the iconic – has operated in terms of the linguistic; how vision and narrative have been allied since Alberti's

be transmitted between bodies. The importance of affect rests upon the fact that in many cases the message consciously received may be of less import to the receiver of that message than his or her non-conscious affective resonance with the source of the message." Eric Shouse, "Feeling, Emotion, Affect," *M/C Journal* 8 (6) (December 2005) http://journal.media-culture.org.au/0512/03-shouse.php. For as seminal text see Brian Massumi, "The Autonomy of Affect", *Cultural Critique*, No. 31, "The Politics of Systems and Environments", Part II (Autumn, 1995), 83-109

[5] His earliest articulation of this argument about landscape as a purely visual form can be found in Denis E. Cosgrove, "Prospect, Perspective and the Evolution of the Landscape Idea" in *Transactions of the Institute of British Geographers, New Series*, Vol. 10, No. 1 (1985), 45-62, Blackwell Publishing on behalf of The Royal Geographical Society (with the Institute of British Geographers)

[6] The "parerga" or supplement, sits in relation to the main "argument" of the painting, as the framing device that is often overlooked. Landscape, before its establishment as a genre in its own right in the sixteenth century, was considered as such. See Malcolm Andrews, *Landscape and Western Art* (Oxford and New York: Oxford University Press, 1999) also Jacques Derrida, *The Truth in Painting*, (Chicago: University of Chicago press, 1987)

humanist concerns for perspective and the Cartesian annexing of the visual within rational thought. By turning our attention towards the affective possibilities of the image that result from its material properties rather than from its iconographical or narrative content, it is possible to disrupt conceptions of space reliant on representation and build strategies of viewing that locate landscape and the visual experience of the screen beyond usual ideological restrictions.

Spectre

Spectre (Fig.) is an installation that explores screen-space and how this purports to the actual; how visual representation (in the form of painted or photographed space) interacts with the physical environment. The work superimposes a projected moving image in the form of high-definition digital video onto a projected static image of a fourteenth-century painted landscape, produced by the (increasingly obsolete) overhead projector. Historic or temporal linearity is collapsed as the moving image (a film depicting a two-metre long white paper boat spinning, drifting and eventually sinking in the Regent's Canal in London in the summer of 2012), becomes (never quite) integrated with the static image of Ambrogio Lorenzetti's *Castle by a Lake* (c.1340).[7] The tiny panel from Siena (measuring only 22.5 x 32.5 cm) is enlarged by the projector to fill and define the wall space of the installation (560 x 350 cm), inverting scale and allowing the small panel to occupy the installation space in a way appropriate to its landscape subject. This enables the projected image of the paper boat to apparently float and drift around Lorenzetti's lake and also, as the title suggests, to hover like a white ghostly presence above the painted boat moored at the shore. Its spectral manifestation within the painted image is made further incorporeal by the water of the canal, which turned the opacity of the paper translucent as the boat gradually sank and

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[7] This early panel painting and its pair (which depicts a small coastal town) are of disputed function and origin. Enzo Carli has suggested they were panels in a chest containing documents pertaining to the depicted topographies, see Enzo Carli, *Sienese Painting* (New York: Scala, 1983), 46. Other research understands that them instead as fragments that were part of a larger painting, perhaps the *Arte della Lana* alterpiece painted a century or so later and attributed to the Sienese artist Sassetta (c. 1392-1450). See Keith Christiansen and Carl Strehlke, *Painting in Renaissance Siena 1420-1500* (New York: Metropolitan Museum of Art, 1988), 64-67

disintegrated during the filming. But this paper materiality is not the only cause of the phantom-like effect. The layered images, both produced by light and positioned so that they appear one on top of the other, are given a translucency by the very nature of the technology.

Fig. Henrietta Simson, *Spectre*, 2013, layered photographic and looped video projection, 560 x 350cm, 12 min

The work maps historically distinct visual technologies on top of each other, making reference to their shared history but also, crucially, to their differences. The HD footage of the boat sinking on the canal creates a crisp image; the camera registers subtle contrasts between light and shade with ease, and different, sharply defined surface textures give the pixelated image a smooth cohesiveness and visual clarity. But this is only in relation to the projection of Lorenzetti's small wooden panel which, when increased to such a large size, reveals the cracks and chipped imperfections that have appeared as a result of its passage through time. The glitches and scratches of the overhead projector combine with the painting's own disfigurements, reminding the viewer of the digital image's inescapable journey toward obsolescence and the frailty of technologies in the face of time, and that one day its own technology will no longer be assumed to equate to visual reality. Instead of the three-

dimensional equivalence associated with representation, the three images (the painted landscape itself, and those produced by the overhead and digital projectors) layered on top of one another present space as fragmentary and not at all unified. The space of Lorenzetti's panel is non-perspectival and the viewer enjoys a birds-eye view of the scene. This sense is reinforced by the overhead projector's orthographic enlargement of the image, increasing the scale of the landscape so that the viewer's body is implicated within it and the installation space is therefore brought into play, while the digital projector inserts a horizontally orientated moving image into the whole. This "collaged" spatial arrangement pushes at the boundaries of the apparent realism produced by photographic technologies which in fact, as Jonathan Crary has shown in *Techniques of the Observer*, relies on an underlying abstraction despite our assumptions of visual "truth" when looking at photographically produced images.[8]

Crary argues that an abstraction of the visual realm occurred during the nineteenth-century under the cultural conditions that also produced the Industrial Revolution and an early form of consumer capitalism. The photographic camera was embedded within these processes of change, and its images contributed to an economy based on exchange value and the commodity. As such it cannot be seen as a continuation of what he refers to as "a Renaissance-based mode of vision," as it is often cast – a continuing technological development "in which photography, and eventually cinema, are simply later instances of an ongoing deployment of perspectival space and perception."[9] For Crary, primary confirmation of this abstraction is evidenced by the fact that image production and money both become symbolic during this period. Paper money replaces gold, and paper photographs proliferate and circulate as an effective visual currency. These photographs represent a fundamental break from the earlier forms of image production instituted within philosophical models defined by the ideal and eternal, and expressed in perspective's unwavering horizon or in the light images of the camera obscura. This previously stable visual experience is shattered by the industrialisation of the nineteenth-century; abstracted and made "exchangeable and mobile" through new kinds of images which are akin to the new kind of money. Both float freely, attached to their referents in new, exclusively symbolic ways:

> Both are magical forms that establish a new set of abstract relations
> between individuals and things and impose those relations as the real. It is

[8] Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (Cambridge, Massachusetts; London: MIT Press, c1990)
[9] Crary, *Techniques of the Observer*, 4

through the distinct but interpenetrating economies of money and photography that a whole social world is represented and constituted exclusively as signs.[10]

Crary argues that previous perspectival modes were grounded in a form of vision shaped by tangibility; indeed the viewing subject is positioned by the perspectival image, and the two are united in a physical relationship shaped by perceived space and thus impervious to the abstraction he associates with photographic "realism." The free-floating photograph, which only relates to the mechanics of the eye itself, is not a product of the eye functioning as part of a somatic and sensory whole. Although Crary understands this mechanisation as instituted within the cultural forces that shaped the nineteenth-century, its proliferations are continued by the ubiquitous digital screen of our own visuality, which creates an increasingly dislocated optical realm:

> This autonomization of sight, occurring in many different domains, was a historical condition for the rebuilding of an observer fitted for the tasks of "spectacular" consumption. Not only did the empirical isolation of vision allow its quantification and homogenization but it also enabled the new objects of vision (whether commodities, photographs, or the act of perception itself) to assume a mystified and abstract identity, sundered from any relation to the observer's position within a cognitively unified field.[11]

Contemporary consumer images are inserted into the environment via billboards or LED screens, while television and the Internet bring increasingly hyper-real images into the living space. All contribute to the reality of a visual realm that is dislocated and fractured, not tied to any specific physical or temporal location, and thus able to impose the distraction associated with spectacular forms of capitalism. *Spectre* confronts this abstraction directly, by layering different image-types on top of each other so that painting, photography and digital video merge in projection to produce a single yet fragmented image, constructing a space whereby the illusion of the screen's overtly visual, a-temporal and hyper-real "beyond," is critiqued. The work explores how images circulate in our digital contexts, and reminds us that the screen – rather than being a historically-generalised and neutral "window" through which to experience reality – has a specific past which requires articulation if we are to wrest control from the flow of images that populate the consumerist visual landscape. The digitalised image has no intrinsic link to the material body of that which is represented and its parts can be re-ordered again and

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[10] Crary, *Techniques of the Observer*, 13
[11] Crary, *Techniques of the Observer*, 19

again, configuring images in any way imaginable. At the same time these images become rendered in increasingly higher definition, their pixelated nature progressively disguised. What Crary terms the "relentless abstraction of the visual" is symptomatic of this form of image production; hyper-real in its visual manifestation, its alluringly distinct replication of "reality" disguises its abstract structure.[12] Consequently, this visual paradigm makes earlier image-forms "other" providing them with critical distance from the digital and preventing the whole from being overpowered by a technological hyper-fluency. In this sense the ghost in *Spectre* is Lorenzetti's landscape, which re-emerges in the context of digital space only to resist it. Equally, the spectral and ghostly – that which exists as something between the material and the immaterial – can become a metaphor for the circulating world of the digital, which with its tendency towards evermore highly defined screen-images, presents things simultaneously as dematerialised and hyper-real in their precisely focussed screen-based "objectness". This virtualised visual world – lustrous and alluring – moves away from embodied experience, while making Crary's questions more pertinent:

> How is the body, including the observing body, becoming a component of new machines, economies, apparatuses, whether social, libidinal, or technological? In what ways is subjectivity becoming a precarious condition of interface between rationalized systems of exchange and networks of information?[13]

Spectre explores these questions through its fragmented and layered structure. The representational basis of contemporary screen-space is exposed through the work's temporal layers, the idealised and eternal space of the digital is confronted by the past – through the presence of Lorenzetti's pre-perspectival landscape – and by the present – through the enlarged scale of the landscape image that forces its relation to the viewing space of the installation. Crary sees the possibility of freeing vision from its past ordering within the rule-bound modes of the perspectival image in the modernist, abstracted space of the photographic, but this requires an observer who has not been distracted by capitalist spectacle. *Spectre* indeed utilises the abstract nature of the hyper-real image by presenting a fragmented landscape space, and can therefore invite the viewer to question the spatial assumptions behind the illusionistic screen image. In doing so the work explores the possibilities

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[12] Crary, *Techniques of the Observer*, 2
[13] Crary, *Techniques of the Observer*, 2

that arise when technology's ideological hold over vision is rejected, presenting the landscape image as material rather than idealised and disconnected. The spatial is also recalibrated, and is realised as relational, with the interplay between the different spatial registers within the work highlighting a more "bodily" encounter with the image.

After-Image, Arena Chapel

After-Image, Arena Chapel develops these ideas by problematising the hyper-real digital image and its crisp, high-resolution illusionistic rendering of visual reality, setting it within the context of a bodily and material experience of paint as colour (**centrefold**). The work consists of a circular chamber, approximately 240cm x 175cm in diameter, constructed from paper which is painted with deep ultramarine pigment and stretched within a wooden frame (Fig.). The ceiling of this blue chamber is a screen onto which an animation of the interior space of the Arena Chapel in Padua is back-projected, so that the image can be seen from inside the chamber when looking up. The animation comprises a rotating panoramic photograph of Giotto's frescoed chapel walls, which highlights the expanse of ultramarine blue of his barrel-vaulted ceiling. The video and the blue walls of the chamber are reflected in the clear acrylic dish that rests on a stand positioned centrally within the chamber. Placed directly below the projected image it acts like a mirror in the darkened chamber, reflecting it and its blue environment. The work probes at the relationship between the visual and the physical, exploring vision as idealised (belonging in the mind of Cartesian philosophy) and as sensual (belonging in the body and not privileged above the other senses). Its structure allows a direct comparison between digital technologies and the camera obscura, and alludes to the vanishing point and the ideological trappings of perspectival technologies under capitalist spectacle. (This includes an understanding of perspective as a mirror that reflects "natural" images of the world to the observer who passively receives, rather than actively constructs, these images.) The work juxtaposes the material and the digital, the physical and the virtual in an unhinged architectural and image-based experience that is shaped by the colour blue. It sets up a dialogue between prevailing visual effects and Giotto's own representational and architectural concerns (often seen as the dawning of the search for perspective and which, crucially, blend pictorial and physical space in the Arena Chapel). To quote John White: "The general configuration in Giotto's case is that of a steadily increasing harmony

between the flat wall and an ever more ambitious spatial realism."[14] The computer animation re-imagines the architectural and painterly space through the innovations that have developed within digital technologies over the past decade or so. The interior space of the chapel, shaped by Giotto's paintings and his concern to blend painted and architectural space (and documented here in 360° panoramic photography) slowly rotates and reduces in size, falling towards the centre of the screen as if disappearing into a vanishing point. The physical structure of *After-Image*, *Arena Chapel*, with its doubling of the image into the mirroring dish below, emphasises the binary nature of perspectival construction - not only its twinned viewing and vanishing points, but also in terms of the gaze with its specular characteristics and dominating/dominated capacities. Indeed, as Damisch has shown, perspective is a paradoxical formulation precisely because it purports to reflect passively like a mirror but is, in fact, an actively constructed formulation consisting of mathematical procedures:

> Perspective is, in effect, doubly a matter of *showing*: on the one hand, it provides rules for the diminution of objects in accordance with the distance at which they show themselves; on the other, it lends itself to demonstration, by means of a mirror.[15]

Representational images have long been associated with reflections, whether in Platonic idealism in the form of shadows, the study of optics or, indeed, in Marx's characterisation of ideology. The camera obscura has served as a device for exploring (and as a metaphor for understanding) human vision since the seventeenth century but it is its relation to painting that is the focus here, via the structure of the viewing chamber. This chamber, unlike the camera obscura, is not required to produce "natural images" but rather to destabilise the idea of the natural image and its relation to painting. As Crary discusses, within the context of Cartesian epistemology, the camera obscura was consistently seen as a stable, fixed means through which it was possible to understand the relation of the observing/thinking subject to the world:

> During the seventeenth and eighteenth centuries the camera obscura was without question the most widely used model for explaining human vision, and for representing the relation of a perceiver and the position of a knowing subject to an external world.[16]

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[14] John White, *The Birth and Rebirth of Pictorial Space*, (London: Faber, 1987), 65
[15] Damisch, *Origin of Perspective*, 97
[16] Crary, *Techniques of the Observer*, 27

Fig. Henrietta Simson, *After-Image, Arena Chapel*, 2015, digital animation, pigment on paper, wood, acrylic dish 175 x 243cm, 4 min

Paradoxically, the "natural images" produced by the camera obscura were understood both in terms of an objective world of truth within empirical schools of thought and as idealised images within rationalism. Its structure, which projected the world "out there" onto an interior surface, served as a model for the human mind as well as validating the absolute separation that supposedly existed, as Descartes had surmised, between *res extensa* and *res cogitans*. However, as Crary posits, the idea of a fully objective construction is ultimately unstable and became problematic under the conditions of the nineteenth century. To consider the camera obscura's instability rather than to see it as a machine that proves an unassailable truth is a valuable and necessary exercise. Indeed, Crary's argument demonstrates the complexities and interrelations of this, and the machine's relation to definitions of experience and knowledge:

> Perhaps the most important obstacle to an understanding of the camera obscura, or of any optical apparatus, is the idea that optical device and observer are two distinct entities, that the identity of observer exists independently from the optical device that is a physical piece of technical equipment. For what constitutes the camera obscura is precisely its multiple identity, its 'mixed' status as an epistemological figure within a discursive order and an object within an arrangement of cultural practices.[17]

After-Image, Arena Chapel seen as an iteration of the camera obscura pertinent to our own visuality, projects an external image into the enclosed space by way of the back-projection screen that constitutes its ceiling (Fig.). However, rather than describing an objective visual truth, the digitally-constructed image instead warps and twists in a way that explicitly negates any notion of the "realism" current visual technologies are designed to produce in highest definition and visual clarity. The reflections—inverted images within the passive mirror below—doubly enforce this effect, and the viewer is caught up in a disorienting world of image and reflection, bounded by a somatic blue space. This dizzying effect is a result of the digital unfixing of the stabilised representational image (which Giotto's Chapel is seen as inaugurating) and echoes that recounted by Stephan Oettermann in his discussion of eighteenth-century experiences of the horizon:

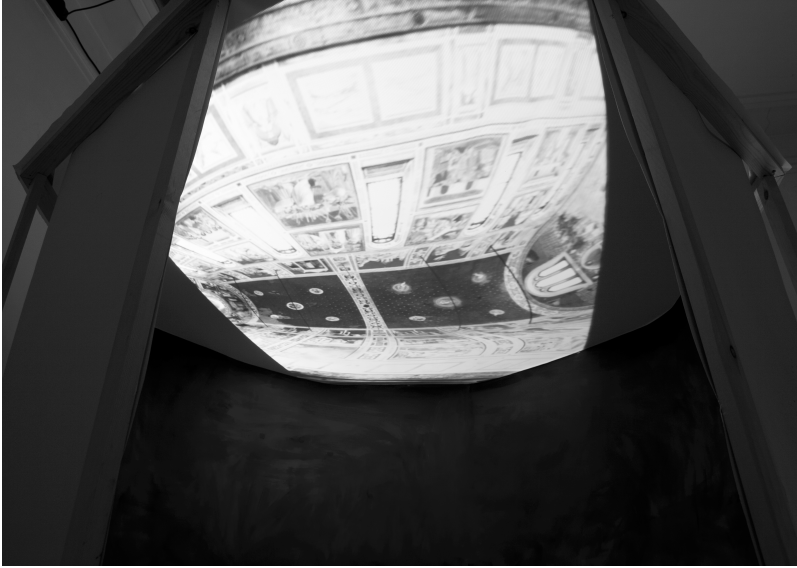
[17] Crary, *Techniques of the Observer*, 30

Fig. Henrietta Simson, *After-Image, Arena Chapel*, 2015 (detail showing view of internal ceiling)

> The experience of taking something to the limit was…[a] reason for climbing the towers and mountain peaks and visiting their surrogate, the panorama…The limits of the human body's endurance that manifest themselves in sensations of giddiness were in part limitations of human vision, and the notion that these limits should be challenged and overcome was prevalent.[18]

In the previous sensibilities of the Enlightenment, the "giddiness" should be overcome by rationality. Here, however, it is the materiality of the coloured chamber walls that enable the viewer to "overcome" the effects produced by the panoramic digital image; the technological image disrupted by the physical sensation of colour as pigment. In this way the installation exaggerates in order to reveal the effects of technologies otherwise co-opted by ideologically-driven spectacle. The contrast between the rickety paper and wooden structure of the viewing chamber with its dry pigmented walls and the slick technology that produces the

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[18] Stephan Oettermann, *The Panorama: History of a Mass Medium*, translated by Deborah Lucas Schneider (Cambridge, Massachusetts: MIT Press, 1997), 12

image enforces this. This physical structure implies embodiment, and contrasts with the disembodied, twisting visual image and its reflection. It is important for this reason: the materials "enunciate" their physical presence rather than quietly support the concepts behind the work.[19]

The inverted images of the camera obscura's darkened chamber provided Marx with a metaphor for ideology, for the "false understanding" that entraps the proletariat in a detrimental illusion. Its dialectical force is described by W. J. T. Mitchell:

> This is the point Marx captures in his stress on ideology as a kind of optical inversion. In one sense, the inversion makes no difference at all; the illusion is perfect. Everything is in the proper relation to everything else. But from a contrary point of view the world is upside down, in chaos, revolution, mad with self-destructive contradictions.[20]

Cultural critics working in the Marxist tradition have repeatedly highlighted the ideological effects of perspectival technologies precisely because of the illusionistic and affective power they wield with their ability to produce "natural images." Mitchell suggests that in order to dispel this illusion – to "get outside it so as to struggle against it" – it is necessary to employ a critical hermeneutics that refuses to rest at the misleading surface-image and instead proceeds with awareness through it's deceptive "reality" in order to understand the depths of its ideological structures.[21] *After-Image, Arena Chapel* is set up to enable this interpretative procedure, by recasting the fusion of spaces employed so dazzlingly by Giotto within the Arena Chapel into a digital context. In doing so it alludes to the procedures of the camera obscura (and of the perspectival paradigm more widely), and explores the hierarchy of sensory and rational vision through its specific and contrasting materialities.

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[19] Crary considers the camera obscura a Deleuzian "assemblage" defined in *A Thousand Plateaus* as, "simultaneously and inseparably…machinic…and an assemblage of enunciation." The "assemblage" articulates (and is articulated by) its technological moment. Here the construction critiques this as well. Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, translated by Brian Massumi (Minneapolis: University of Minnesota, 1987), 504, quoted in Crary, *Techniques of the Observer*, 31

[20] W. J. T. Mitchell, *Iconology: Image, Text, Ideology* (Chicago and London: University of Chicago Press, 1986), 172

[21] Mitchell, *Iconology: Image, Text, Ideology*, 172

Ghiberti Removed

Ghiberti Removed exploits the paradoxical properties of perspectival images: their relation to, and shaping of, notions of space (Fig.). Four gilded gesso panels form a loose relief and outline of the projected image – a sculpted and gilded counterpart, paralleling what art historian Paul Hills has referred to as the "mimetic function" of the medieval punchwork and *pastiglia* found in gilded panels around halos and other objects. This form of low relief gesso modelling "creat[es] a pictorial equivalent to a real object"[22] and its mimesis works in the opposite way to a flat, homogenous, perspectival spatial illusion, the modelled material forming an indexical double of the painted, or in the case of *Ghiberti Removed*, filmed image. Its co-existence with early forays into perspectival illusion suggests that a different conception of the relationship between illusionistic images and physical space existed to the modern assumptions about this time, and that Renaissance perspective occurred in painting alongside these more direct mimetic effects throughout the fifteenth century. Although perspective was developed within a philosophical context (within an understanding of space and cosmology that was very different to our own), it established a conviction that prepared for, and eventually spawned, the Cartesian geometric space of three dimensions.[23] Art historian James Elkins argues that *plural* Renaissance perspectives were conceived in terms of mathematical proof and not in the terms of physical space that we might recognise in our own modern understanding of perspective. He suggests that "[t]heir notion is 'object orientated' and the modern concept "space orientated."[24] *Ghiberti Removed* taps the

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[22] Paul Hills, *The Light of Early Italian Painting*, (New Haven, London: Yale University Press, 1987), 108

[23] In spite of the fifteenth-century's development of rational perspectival systems, it was not until the seventeenth-century that understanding shifted entirely and according to Paul Feyerabend's (counter) method, this was not a straightforward transition in any case). See Paul Feyerabend, *Against Method*, 4th edition, with an introduction by Ian Hacking (London: Verso, 2010), 103: "The reader will realize that a more detailed study of historical phenomena such as these creates considerable difficulties for the view that the transition from the pre-Copernican cosmology to that of the 17th century consisted in the replacement of refuted theories by more general conjectures which explained the refuting instances, made new predictions, and were corroborated by observations carried out to test these new predictions."

[24] James Elkins, *The Poetics of Perspective*, (Ithaca: Cornell University Press, 1994), 15

paradoxical status of these early perspectival images (a spatial illusionism that is tripped up by attention to material body) in order to provide an historical framing for the dominant perspectival forms that direct contemporary notions of image-space.

The projection is a static filmed image, a close-up of the background landscape in the *David and Goliath* panel of the East doors of the Baptistry in Florence, which were completed by Ghiberti in 1452 after twenty-one years' work. The image flickers as the film, while recording, registered the changing ambient light – the weather and the time of day – across the surface of the gilded bronze doors. The projected light at the same time reflects and bounces off the gilded surface of the panels, creating a double light effect and "unfixing" the image. This "doubling effect" is reinforced by the recorded sounds of an early spring morning in Florence combining with the sounds in and outside the gallery space. Standing in the dark in front of the work is disorienting; it is difficult to know what exactly is being looked at, and how it should be understood in terms of what is being heard. In this way, the work "re-triangulates" the relationship between the viewing subject, his or her experience of image-space and the latter's correlation to linear time that is generally assumed to be constant. The work questions the idea of presence and non-presence and the film's relation to the world it records.[25] The viewing subject is therefore 'repositioned' and the stationary (but not fixed) vision of Ghiberti's panel forces an accommodation of the presence of time into the image through the "overlappings" that constitute the work. The use of gold was prevalent when the materiality of painting was valued for its sacred and spiritual function. Ghiberti gilded his bronze doors to the Baptistry. In *Ghiberti Removed* the gilded surface functions as an ineffectual mirrored surface. Rather than revealing the filmed image, it breaks down the visual clarity. Materiality critiques the idealising projection. With the eye unable to rest on or recognize the nature of the image seen, the mirrored doubling draws the gaze inwards, highlighting the act of perceiving, rather than revealing what is perceived.

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[25] Cinema works in a very different way, propelling the viewing subject into the fantasy of the filmed narrative. Here, there is no narrative and the image is purportedly static. In *Present Continuous Past(s)*, 1974, Dan Graham investigates related ideas through differing means. See Christine Ross, "The Projective Shift Between Installation Art and New Media Art: From Distantiation to Connectivity", *Screen/Space: The Projected Image in Contemporary Art*, edited by Tamara Trodd (Manchester: Manchester University Press, 2011) 184-205
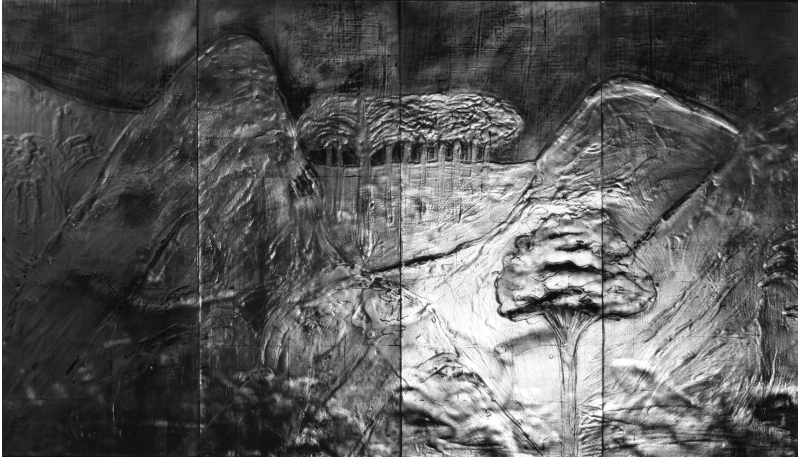
Fig. Henrietta Simson, *Ghiberti Removed,* 2008, looped digital video projection onto gilded gesso panels, 200 x 112.5cm, 20 min

Hills has argued that the increasing prevalence of an Albertian view of what constituted a good painting in the fifteenth century meant that, rather than pictorial construction being liberated as it was brought closer to visual experience, both became closed down and static as Alberti's rational method emphasised "a fixed centre and certain position of lights." This intersection, chosen by the painter, acts as a "fixed boundary, and the frame is like a window that defines its forward-most limit; what is seen through the window will not change for every viewer but is fixed for eternity both in its perspective and in its lighting."[26] In contrast, Hills suggests that the reflective material of the gold surface establishes a very different relationship between image space and viewing space to the fixing qualities of perspective, a quality that is exploited in *Ghiberti Removed*, as the metal surface upsets the illusory nature of the projected image.

Renaissance ideas about perspective were very different from our assumptions about them, in part because of a differing understanding of how objects and space operate. Early perspective did not dominate in the way that we might suppose, and in the fourteenth and fifteenth centuries, Aristotelian definitions of *place*, rather than space (as extension) endured. Places and bodies were bounded so that the existence of *void* – a place with no body – was not possible. Similarly, the principle of space as

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[26] Hills, *Light of Early Italian Painting*, 18 quoting Leon Battista Alberti, *On Painting* (London: Penguin, 1991), 48

systematic and "empty" was also impossible. Although problems of homogenous and geometric space were identified, space was not conceived of as extensive, as in Descartes' terms, or as a space-time continuum as Einstein has since proved. [27] Indeed, it was seen as continuous of, dependent on and attached to objects.[28] It was not until Descartes' mathematical studies and development of the idea of space as an absolute and isotropic continuum in the 1600s that ideas of space altered more fundamentally. Until then, Aristotle's doctrine held sway. Indeed, Aristotle had seen that "space exists only in a discontinuous state in attachment to solid bodies" and so Renaissance perspective was very much concerned with the depiction of objects, as opposed to creating an empty "set" for these objects to be placed, and to operate, within.[29] With this in mind, *Ghiberti Removed* attempts to expand the possibilities of rationally-presented image-space. The surface light is fixed by the light from the projector, but then breaks free of this fixity through the combination of gilded surface and ambient light recorded at the moment of filming. In this way, the work highlights the conflicting and contradictory elements associated with a perspectival visuality - its inception and historical development - and attempts to hold them all together in one time and place. The idea of "removal" implied in the title alludes to the appropriation of Ghiberti's image, and its placement within a space that incorporates and mixes the sounds of its original setting (but not of its "original" time) with its new environment and then removes the whole again, away from the gallery site and back to its place of origin. As a result, the work floats, spaceless and timeless, between these two sites.

This essay has considered the materiality of the artwork as it problematises ideological formulations of Renaissance perspective in various ways. Late medieval and early Renaissance paintings, re-imagined as contemporary art objects (and conversely contemporary art objects re-

[27] For an opposing argument see Branko Mitrovic, "Leon Battista Alberti and the Homogeneity of Space", *Journal of the Society of Architectural Historians*, Vol. 63, No.4 (December 2004), 424-439. Mitrovic claims (with Panofsky and Edgerton) that Alberti's writing shows that he understood space as homogenous and extensive. However, although Alberti theorised perspective, the latter rationalises visual space and was not a theory of space *per se*. During the fourteenth- and fifteenth-centuries Aristotelian space was not homogenous, the sublunar realm being changeable and susceptible to corruption, and only beyond this were the spheres harmonious and regular.

[28] Aristotle *Physics*, translated by Robin Waterfield (Oxford and New York: Oxford University Press, 1996), Book IV, chapters six-eight (or 6-8?), 90-99

[29] Marvin Trachtenberg, *The Dominion of the Eye,* (Cambridge: Cambridge University Press, 2008), 151

thinking the materials of art history), act as a means of recovering our subject-position within the perspective paradigm's technologies of vision and definitions of spatial representation, retrieving it from the ideological imperatives of our culture's visuality. By revisiting these early perspective paintings and drawing out their material spatiality and association with objects – to an idea of space as "substance" not *res extensa* – the phenomenological, embodied nature of visual representation is emphasised. The paradoxes that arise from a more material formulation of Renaissance perspective are productive and more useful than conceiving it as the "beginnings of" an ideologically controlling visual paradigm. Rather than privileging the material over the image however, these works exist in an oscillating "inbetween-ness" that highlights the relatively neglected embodying aspects of perspective painting. In doing so they redress a balance that is lost in the images of screen-based capitalism.[30] Via the combination of their overtly optical structures (panoramic photograph or filmed image) and their less optical, more haptic forms (the glitches and scratches of material bodies, the gold and pigments that construct their surfaces), they straddle two modes of vision; drawing out the haptic from the optical mode of picture-making and seeking a balance between the two. This is what Laura Marks understands as essential, as our visuality veers evermore toward the virtual:

> I intend to restore a flow between the haptic and the optical that our culture is currently lacking. That vision should have ceased to be understood as a form of contact and instead become disembodied and adequated with knowledge itself is a function of European post-Enlightenment rationality. But an ancient and intercultural undercurrent of haptic visuality continues to inform an understanding of vision as embodied and material. It is timely to explore how a haptic approach might rematerialize our objects of perception, especially now that optical visuality is being re-fitted as a virtual epistemology for the digital age.[31]

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[30] In their introductory essay to *The Affect Theory Reader*, Gregory Seigworth and Melissa Gregg claim that affect arises "in the midst of inbetween-ness", which in terms of the arguments made here is revealed through the works' focus on the landscape backgrounds of the referenced works and a perspectival process that is not allied to narrative subject. Gregory J. Seigworth and Melissa Gregg, "An Inventory of Shimmers", *The Affect Theory Reader*, edited by Seigworth and Gregg (Durham, North Carolina: Duke University Press, 2010), 1

[31] Laura U. Marks, *Touch: Sensuous Theory and Multisensory Media*, (Minneapolis; London: University of Minnesota Press, c2002), xiii

The works discussed here all explore the possibilities that arise when the overtly digitalised screen-based spaces that furnish the contemporary (and specifically, in this case, received notions of the landscape image), are opened up to their genealogical past. Perspectival ideologies that assume an equivalence between the illusionistic image and a physical reality in their presentation of "natural" vision are contested, and the physical reality of their materiality is instead put into play with the illusionism of the image. The resulting, more materially, aligned configurations of visual representation facilitate an encounter with the image that is bodily rather than abstracted and singularly optical. The early spatial illusions of Lorenzetti, Ghiberti and Giotto all demonstrate an affinity with the material, which is accessed by my artworks, this materiality drawing out a haptic presence from the visual image that has been suppressed by perspectival ideological illusionism. The underlying assumptions of visual representation that leave space as a static container, are dismantled and these screen-spaces open up to "relationality" both in terms of their history and in terms of the viewer and the physical space of the viewing environment. They shift the notion of distance from the spatial-visual to the temporal, a material background brought close or a distant past made present. This process provides a counterpoint to the excessive illusionism of the images shaped by global capitalism and spectacle that surround us and through which we navigate our contemporary realities.

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