FRAGMENTATION OF THE PHOTOGRAPHIC IMAGE IN THE DIGITAL AGE

ROUTLEDGE HISTORY OF PHOTOGRAPHY

EDITED BY
DANIEL RUBINSTEIN

Fragmentation of the Photographic Image in the Digital Age

Fragmentation of the Photographic Image in the Digital Age challenges orthodoxies of photographic theory and practice. Beyond understanding the image as a static representation of reality, it shows photography as a linchpin of dynamic developments in augmented intelligence, neuroscience, critical theory, and cybernetic cultures. Through essays by leading philosophers, political theorists, software artists, media researchers, curators, and experimental programmers, photography emerges not as a mimetic or a recording device but simultaneously as a new type of critical discipline and a new art form that stands at the crossroads of visual art, contemporary philosophy, and digital technologies.

Daniel Rubinstein is Reader in Philosophy and the Image at Central Saint Martins, London, where he leads the MA program in Contemporary Photography: Practices and Philosophies.

Cover image: Susan Trangmar, Untitled, 2019. Copyright: Susan Trangmar 2019.

Routledge History of Photography

This series publishes research monographs and edited collections focusing on the history and theory of photography. These original, scholarly books may take an art historical, visual studies, or material studies approach.

For a full list of titles in this series, please visit:
https://www.routledge.com/Routledge-History-of-Photography/book-series/RHOP

Liminalities of Gender and Sexuality in Nineteenth-Century Iranian Photography
Desirous Bodies
Staci Gem Scheiwiller

Travel Marketing and Popular Photography in Britain, 1888–1939
Reading the Travel
Sara Dominici

The Pioneering Photographic Work of Hercule Florence
Boris Kossoy

Photography and Ontology
Unsettling Images
Edited by Donna West Brett and Natalya Lusty

Fragmentation of the Photographic Image in the Digital Age
Edited by Daniel Rubinstein

Photography and Imagination
Edited by Amos Morris-Reich and Margaret Olin

Fragmentation of the Photographic Image in the Digital Age

Edited by
Daniel Rubinstein

Routledge
Taylor & Francis Group
NEW YORK AND LONDON

First published 2020
by Routledge
52 Vanderbilt Avenue, New York, NY 10017

and by Routledge
2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

Routledge is an imprint of the Taylor & Francis Group, an informa business

Library of Congress Cataloging-in-Publication Data
Names: Rubinstein, Daniel (Writer on photography), editor.
Title: Fragmentation of the photographic image in the digital age / edited by Daniel Rubinstein.
Description: New York, NY: Routledge, 2020. | Series: [Routledge history of photography] | Includes bibliographical references and index. |
Identifiers: LCCN 2019025771 (print) | LCCN 2019025772 (ebook) | ISBN 9781138493490 (hardback) | ISBN 9781351027946 (ebook)
Subjects: LCSH: Images, Photographic. | Digital media – Social aspects. | Art and photography.
Classification: LCC TR222 .F73 2020 (print) |
LCC TR222 (ebook) | DDC 777 – dc23
LC record available at https://lccn.loc.gov/2019025771
LC ebook record available at https://lccn.loc.gov/2019025772

ISBN: 978-1-138-49349-0
ISBN: 978-1-351-02794-6

Typeset in Sabon
by Deanta Global Publishing Services, Chennai, India

Contents

Figures

Plates

1 Roma people/encampment/Paris
2 Ikea/refugee/shelter
3 From Topography to Topology @ Susan Trangmar
4 From Topography to Topology @ Susan Trangmar
5 From Topography to Topology @ Susan Trangmar
6 From Topography to Topology @ Susan Trangmar
7 From Topography to Topology @ Susan Trangmar
8 From Topography to Topology @ Susan Trangmar
9 Plenoptic camera image. Copyright © 2018. Adobe Systems Incorporated. All rights reserved
10 Plenoptic camera image. Copyright © 2018. Adobe Systems Incorporated. All rights reserved
11 *Raphaël Fabre*, Carte Nationale d'Identité (CNI), 2017
12 *School Days*, 2004. Copyright © Tomoko Sawada. Courtesy MEM, Tokyo
13 *Facial Signature* (detail), 2015. Copyright © Tomoko Sawada. Courtesy MEM, Tokyo
14 *Nests 01*. Detailed view, Jakub Geltner. Urban space installation, Vltava waterfront, Prague, Czech Republic, 2015
15 *Nests 05*. Installation view, Jakub Geltner. Urban space installation, sculpture by the sea, Aarhus, Denmark, 2015
16 Domenico Ghirlandaio, *Adoration of the Shepherds*. Cappella Sassetti, Santa Trinita, Florence. 1485
17 Sassetti is looking at the altar piece. Domenico Ghirlandaio, Cappella Sassetti, Santa Trinita, Florence. 1483-1486
18 Detail from Ghirlandaio, *Adoration of the Shepherds* – the Triumphal arch and procession
19 Detail from Ghirlandaio, *Adoration of the Shepherds* – Joseph
20 Joseph Nechvatal, *Drifting telemachus* (2014) 44 × 66 inches. Computer-robotic-assisted acrylic on velour. Courtesy Galerie Richard, New York
21 Richard and Elise in simultaneous focus
22 Time-travelling patterns

1 The New Paradigm

Daniel Rubinstein

> *One way to begin to build the needed apparatus is to use the following approach: to rethink the nature of nature based on our best scientific theories, while rethinking the nature of scientific practices in terms of our best understanding of the nature of nature and our best social theories, while rethinking our best social theories in terms of our best understanding of the nature of nature and the nature of scientific theories.*[1]

This book is about the formation of a discourse on images that has been waiting in the wings for some time. A wider context for the emergence of this discourse is the crumbling of a system of thought that is called metaphysics. That this linear and historical model of comprehending the world is being replaced by a new paradigm ushered in by a constellation of accelerated developments that can be variously described as 'algorithmic', 'ecological', 'new-materialist', 'fragmented', and 'holistic' is generally recognized. What is less well understood is how this departure from the representational discourse affects the photographic image. A belief still lingers in the ability of the photograph to represent people, events, and situations, in its power to aid recognition, memory, description, and archiving, as if these powers can be retained independently from the new discursive practices that are driven by algorithmic, neurological, and quantum models.

Perhaps it is because we are so used to placing great trust in photography's ability to describe reality truthfully, to represent it faithfully, and to report it accurately that we grew accustomed to believing that these powers of representation and description are somehow outside the movement of history and time, giving us a universal power of comprehension that is immune to the failures of our own limited experience. In allowing ourselves to be persuaded that our cognitive skills place us above our own human, fallible, and mortal nature, we became a little like gods, and the ability to represent the world as a picture is for us more than a way of seeing – it became akin to theology, i.e. something larger than the finite trajectory of human life that bestows on it universal and eternal values of 'truth', 'understanding', and 'knowledge'.

And yet, this understanding of photography as a reliable representational mechanism cannot be reconciled with what we now know about the world and ourselves. Briefly stated, these new understandings are: first, the centrality to contemporary culture of generative algorithms introduces elements of undecidability, randomness, and unpredictability into all aspects of life.[2] Second, new insights into the structure of the brain suggest that the higher brain functions (i.e. rationality) cannot operate independently from instincts, desires, and gut responses, overturning the Cartesian intuition

that rationality and emotion can be split asunder.[3] And third, the new conception of matter that is derived from quantum physics indicates that matter is not solid, independent, and self-contained, but can be better described as an entanglement between bodies and techniques, organic and inorganic, artificial and natural, mind and body.[4]

At bottom, these new models reject the foundational premises of the Western tradition: subject-object, image-thing, form-content, identity-difference, substance-essence. What replaces these notions is not a single unified theory but a constellation of loosely connected developments that reject the belief in the existence of an 'objective reality' that exists independently of our attempts to grasp, picture, modify, and analyze it. These developments are incompatible with the representational model of knowledge, which grounds truth in the ability of the mind to produce legible images of fixed and knowable nature. In every case, hierarchical structures of control-and-command give way to disjointed and fragmented processes driven by artificial intelligence, random and contingent assemblages, and automated models of decision-making.

Genealogy of Representation

The representational model is based on a two-fold principle that underwrites most knowledge systems of Western civilization. The first part is drawing a limit, a dividing line between two kinds of entities: theoretical (spiritual) and material (corporeal). This is a fundamental (but ultimately false) distinction between what something is and how it is described. The word *apple* describes a fruit with crisp and sweet flesh (), but the word *apple* cannot be bitten into, even though both *apple* and mean the same thing. Images and objects are forever conceptually separated and belong to different categories: images are clones of objects, never the other way around. There is no gray area, no twilight zone that permits the existence of entities that are part matter and part spirit. Form and content are not only conceptually separated, they are also defined in opposition to each other, so an image is that which is not an object and an object is that which is not an image. In the same way that Newtonian (classical) physics considers mass and energy as separate and categorically different entities, representation understands the image as absolutely and ontologically distinct from an object. The second part of the representation principle establishes a fixed standard that is shared by all the disciplines and all the faculties of human perception. For while representation admits that change happens, the one thing that never changes is representation itself. For that reason, there is a hierarchy and stability in the representational model that is universal, ahistorical, and eternal.

Because representation is so deeply woven into the flesh of the Western *subject* it is more than a methodology, it is its methadone. Marx famously remarked that religion is the opium of the people, but he forgot to add that representation is their legal high. Indeed, the sociopolitical function of representation is not dissimilar to that of religion: both establish a hierarchy, a given-once-and-for-all order, an eternity of clones destined to repeat the same thing over and over again. It is not an accident that Immanuel Kant offers representation as the mechanism that will free men from the bondage of the Middle Ages, for representation holds the keys to a knowledge that does not require the authority of god, the priest, or the good book.[5] However, representation is capable of this accomplishment because – like religion – it situates an external authority that men must abide by. Because it is invisible, tasteless and odorless, limitless and universal, representation commands respect as the law of the

land, the totality that nothing is exempt from. As the basic premise of classical science, representation implies objectivity and disinterested observation guaranteed on the one hand by a clear-cut separation between the scientist and the object of study – so the scientist's own material conditions do not affect investigation – and on the other by an assumed neutrality that allows the scientist to assert the universality of 'his' findings.[6]

Upheld by the conviction that the images and things belong to two ontologically distinct categories, the belief in the objectivity of representation reigned supreme until the appearance of photography in the 19th century, which presented metaphysics with an impossible conundrum: an image that is both distinct from and continuous with an object. According to the Platonic, Aristotelian, and even Newtonian models of knowledge, a chimera like this cannot exist. To say otherwise is to declare that mass and energy are somehow one and the same thing (as Einstein did in joining them as $E = mc^2$ – energy equals mass multiplied by speed of light squared – in 1905). Suddenly, the Platonic theory of knowledge – the 2,500-year-old fable of the cave (the sensual world is an illusion, true knowledge is accessible only to reason) – caved in, and the shadows on the walls of the cave started to mingle with objects as they appear in broad daylight. Plato's cave gave way to the photographic exposure, which merges darkness with a flash of lightning in one techno-poetically enabled instant. Despite the superficial similarity between Plato's cave and the photographic darkroom, photography suggested a radically different model of knowledge, for here the materiality of the photographic process is written directly into the image in such a way that the sensual and the rational, the process and the image, are fully entangled and indivisible. The conceptual, the physical, the social and the sensual are all mixed together in the outlandish moment of photographic exposure, overturning the metaphysical principle of the separate disciplines in charge of ideas (philosophy), matter (physics), society (ethics), and sense (aesthetics). The binary split between the conceptual and the material, which guaranteed the objectivity of the representational method, is destroyed by the photograph, for here the material and the conceptual are one and the same. In other words, the  is not more real than the photograph of an *apple,* for, at the last count, both  and *apple* are symbolic avatars of mass/energy. The fruit does not pre-exist its image, rather it comes into existence by the act of naming it. The image is raised to the dignity of a 'thing', and representation is revealed as a particularly persuasive conspiracy theory aimed at maintaining the fiction that 'reality' has an existence independent from our image of it. Through photography we come to appreciate the words of the pre-Socratic philosopher Parmenides (b. around 515 BC), 'Thinking and Being are the same thing'.[7]

It is precisely because photography is both 'thinking and Being', i.e. an objectifying process and a material presence, that it is at one and the same time the fullest expression of the logic of representation and the very limit beyond which it cannot go. Photography does more than represent reality – it modifies our conception of the real as solid and intransient into a global network of self-replicating nodal points.

From Production to Information

It should hardly come as a surprise that photography can shed light on the deepest and most dramatic paradigm shift that befell Western society, because its invention coincides with the moment when said society moved from being invested in modifying the

world (the problem of labor and machines) to being invested in information (the problem of thought and artificial intelligence).

Since its invention in the 19th century, the photographic image gave visual expression to the idea of 'immaterial labor' that is oriented not toward the modification of spatial-temporal reality (the world of work), but toward the production of information (data processing).[8] It has done so by showing what happens to the real once it is placed inside a 'black box' – the photographic camera being its first instance and the prototype of all the black boxes that followed on from it.[9]

Whether a camera or a computer, a black box is a device with an input and an output. If you feed data into a black box, it will be output as information.[10] Significantly, the kind of information that the black box outputs depends, not on the kind of data that it is being fed, but on the kind of invisible processing that is taking place inside it. In the case of the digital camera, for instance, it is an entirely arbitrary decision that the data that is placed within the camera is being output as a picture that has a visual resemblance to the object in front of the lens. What the camera outputs is determined, not by the object that is being photographed, but by the authors of the code that instructs the algorithms how to process the input data. The same packet of data could be output not as an image file but as a sound file, a text file, as a string of numbers, or it could be left unprocessed.[11] It is therefore not essential for a photograph to exist as a visual image. In parenthesis, it is salutary to mention that black boxing is not unique to digital photography. Traditional analogue photographs are also the outcome of a process that computes the real and outputs it as information. The operations that take place inside the photographic darkroom are not in principle different from the operations of algorithms, and any deviation from the executable program (changes to the chemistry, temperature, or order of operations) results in an output with different material qualities – a point that is completely lost on the believers in the so-called indexicality of photography.

Appearing as innocuous pictures on our smartphones and tablets, these photographic skeuomorphs are harbingers of a revolution in information technology in which the homey familiarity of photographs is used to algorithmically manipulate our own identities by exploiting our weaknesses and weaponizing our selves against ourselves. Yet precisely because photography is a black box that produces an image, and therefore establishes connections between algorithms and human emotions, desires, thoughts, and feelings, it is capable of shedding light on the manipulative power of computation.[12]

The digital code that streams through the algorithmic structures and the computational assemblages that dominate contemporary life is for the most part invisible and inaccessible to our comprehension. Yet, in photography this entwined entity that effortlessly merges code and thought, feedback loops and emotions, data processing and action, is presented as an image, and therefore it makes graspable the internal logic of a new layer of consciousness that corresponds to the societal shift from production to information.

As developments in computational intelligence, neuroscience, and quantum physics begin to influence and communicate with each other, it becomes apparent that photography is a linchpin of many of these processes. It also emerges that a quest for a positive definition of photography that is cognizant with new perspectives on space and time as continuous, and with intelligence (artificial or otherwise) as fundamentally irrational, is urgently required to understand the cultural and political composition of contemporary life.

Fragmentation of Photography

In the broadest terms, this book explores the impact of the disintegration of the representational world view on photography. Succinctly put, it maps a transition from what can be called 'traditional theories of photography' to a new approach that diverts from the persistent focus on the rationality of the optical image and in so doing prepares a way of encountering photography not as a visual image but as a new way of inhabiting the immaterial materiality of the contemporary augmented reality.[13] The critique of the traditional view of photography can be summarized in three points. First, the traditional view is *narrow*, in the sense that it engages with only a small number of actual photographic practices, often ignoring the uses of photography that fall outside of its conception as an aesthetic practice. Second, it is *optical*, inasmuch as it understands photography as an act of light-writing, attributing to it signifying and aesthetic qualities, forgetting that many photographic operations, practices, and events are inaccessible to human vision and do not exist as an image. And third, it is *parochial* because, while photographs and photographic techniques are widely used in everything from law enforcement and medical research to the study of antimatter and cosmic radiation,[14] traditional photographic theory does not for the most part relate to other disciplines in the sense that it does not contribute to them and does not learn from them.

This book does not aspire to become the new definitive or normative code for the deciphering of images; its aim is not to replace the discourse of the index with something more up to date. Rather, this book encourages the reader to think through images in a way that changes both images and thoughts. To think about images in ways that are not indebted to representational thinking requires paying close attention not only to the concerns of thought, but also to the manner, style, and timbre of thought. At stake is the possibility of communication that does not rely on the normative values of correspondence and truth.

In the digital age, a photograph is no more a representation of the world than a url is a representation of online content. The url does not signify, nor can it be true or false; rather, what we need to know of a url is whether it is *working* or *broken*. To say the same thing slightly differently, the Internet did not abolish the notion of truth, nor did it substitute it with a post-truth; instead, it has shown that the meaning of truth is interlinked with the technological paradigm of the age. Contemporary culture, its disciplines, and discourses are replete with references to and uses of photography. Yet, despite the significance of photography for the construction of the fabric of social, political, and scientific reality, photography studies for the most part tend to focus on the aesthetics of the image without reference to the expanded visual field that is continually mined by a broad range of disciplines. One of the aims of this book is to address this critical deficit by providing a snapshot of photography's engagement with the contemporary environment. Instead of the traditional approach of assuming that photography is determined ultimately by representation (sometimes also referred to as index, document, punctum, or archive), this book suggests that photography is a rich interdisciplinary field that transcends the traditional boundaries of visual studies, aesthetics, and media.

This book is raising the question of what becomes of photography when its presumed visuality is augmented by cultural artifacts produced by computation, randomness, automated processing, and incompleteness. Because to see photography in terms of the traditions of visual culture, with all their ocular-centric, perspectival, and representational

baggage, is to ignore the fact that photography is not only an image, it is also a slice of the 'real' that the age of present-day life experience is made of. The photograph is at one and the same time material, technological and visceral. It is not only a visual medium but also the possibility of grasping the sensual 'now' of the information age.

Notes

1 Karen Barad, 2007, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, Durham, NC: Duke University Press, p. 30.
2 Luciana Parisi, 2014, *Contagious Architecture: Computation, Aesthetics, and Space*, Cambridge, MA: MIT Press.
3 Antonio R. Damasio, 2004, *Descartes' Error: Emotion, Reason, and the Human Brain*, New York: Avon Books.
4 Barad, *Meeting the Universe Halfway*, p. 362.
5 Immanuel Kant, 2009, *An Answer to the Question: 'What is Enlightenment?'*, London: Penguin.
6 Dorothea Olkowski, 1999, *Gilles Deleuze and the Ruin of Representation*, Berkeley, CA: University of California Press.
7 See the excellent analysis of this fragment of Parmenides in: David Gallop, ed., 1991, *Parmenides of Elea: Fragments: A Text and Translation*, rev. ed., Phoenix Presocratics 1, Toronto, ON: University of Toronto Press.
8 Vilém Flusser, 2015, *Into Immaterial Culture*, Metaflux Publishing.
9 On the possibility of another photography see Aim Luski, 2013. 'Cameras', *Philosophy of Photography* 4,1. pp. 3-12
10 On the difference between data and information see Alexander Galloway, 2011, 'Are Some Things Unrepresentable?', *Theory, Culture & Society* 28, 7–8, pp. 85–102.
11 Rubinstein, Daniel, and Katrina Sluis, 2013, 'The Digital Image in Photographic Culture: Algorithmic Photography and the Crisis of Representation', *The Photographic Image in Digital Culture*, 2nd ed., ed. Martin Lister, London: Routledge, pp. 22–40.
12 Golding, Johnny, 2012, 'Ana-materialism and the Pineal Eye: Becoming mouth-breast (or visual arts after Descartes, Bataille, Butler, Deleuze and Synthia with an s', *Philosophy of Photography* 3,1, pp. 99–121.
13 Johnny Golding, 2010, 'Fractal Philosophy, Trembling a Plane of Immanence and the Small Matter of Learning How to Listen: Attunement as the Task of Art', *Deleuze and Contemporary Art*, eds. Stephen Zepke and Simon O'Sullivan, Edinburgh: Edinburgh University Press.
14 Michael Doser, 2016, 'The World Unseen: Photography as a Probe of Particulate Materiality', *Philosophy of Photography* 7, 1–2, pp. 139–54.

References

Barad, Karen. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham, NC: Duke University Press, 2007.

Damasio, Antonio R. *Descartes' Error: Emotion, Reason and the Human Brain*. New York: Avon Books, 1994.

Doser, Michael. 'The World Unseen: Photography as a Probe of Particulate Materiality.' *Philosophy of Photography* 7, 1, 2 (2016): 139–54.

Flusser, Vilém. *Into Immaterial Culture*. Metaflux Publishing, 2015.

Gallop, David, ed. *Parmenides of Elea: Fragments: A Text and Translation*, rev. ed., Phoenix Presocratics 1. Toronto, ON: University of Toronto Press, 1991.

Galloway, Alexander. 'Are Some Things Unrepresentable?' *Theory, Culture & Society* 28, 7–8 (2011): 85–102.

Golding, Johnny. 'Fractal Philosophy, Trembling a Plane of Immanence and the Small Matter of Learning How to Listen: Attunement as the Task of Art.' In *Deleuze and Contemporary*

Art. Edited by Stephen Zepke and Simon O'Sullivan. Edinburgh: Edinburgh University Press, 2010.

Golding, Johnny. 'Ana-materialism and the Pineal Eye: Becoming mouth-breast (or visual arts after Descartes, Bataille, Butler, Deleuze and Synthia with an s.' *Philosophy of Photography* 3, 1 (2012): 99–121.

Kant, Immanuel. *An Answer to the Question: What Is Enlightenment*. London: Penguin, 2009.

Luski, Aim. 'Cameras.' *Philosophy of Photography* 4, 1 (2013): 3–12.

Olkowski, Dorothea. *Gilles Deleuze and the Ruin of Representation*. Berkeley, CA: University of California Press, 1999.

Parisi, Luciana. *Contagious Architecture. For an Aesthetic Computation of Space*. Cambridge, MA: MIT Press, 2014.

Rubinstein, Daniel, and Katrina Sluis. 'The Digital Image in Photographic Culture; Algorithmic Photography and the Crisis of Representation.' In *The Photographic Image in Digital Culture*, 2nd ed. Edited by Martin Lister, 22–40. London: Routledge, 2013.

Part I

From Pictorial Practices to Algorithmic Capitalism

2 Images Without Worlds

Claire Colebrook

What is the difference between the end of life and the end of the world, and how might we think about life without the world? The answers to these questions are internal to the institution and definition of art. If we think of art as a universal that includes forms of non-human life (such as birdsong, dances of display, elaborate webs and nests) it would follow that a certain imaging power is essential to life. This was how Henri Bergson at one and the same time included humans within all conscious life, while also setting humans apart. If a body responds immediately to the world it is caught up and determined by the mechanics of matter; if a body perceives the world through memory, with a halo of images of a past or other world, then there is a delay between perception and action. Mind is the temporality of imaging, perceiving the present in terms of a past that surrounds and dilates the image with a range of potentiality. It is this Bergsonian tradition that Gilles Deleuze will invoke in his two volumes on cinema; it is the capacity for images to be released from the immediacy of sensory-motor apparatuses (bodies as functional organisms) that generates an ever greater virtual world. For Bergson, this virtual realm took the form of spirit, and was best exemplified in the imagination of an action or life that would not be oriented toward the here and now, but would think of spirit in general (Bergson, 1935).

For Deleuze, the camera's capacity to combine images that synthesize potentials and events *not* of this world releases the mind from the body, allowing for the overcoming of the loss and disenchantment of the world:

> The sensory-motor break makes man a seer who finds himself struck by something intolerable in the world, and confronted by something unthinkable in thought. Between the two, thought undergoes a strange fossilization, which is as it were its powerlessness to function, to be, its dispossession of itself and the world. For it is not in the name of a better or truer world that thought captures the intolerable in this world, but, on the contrary, it is because this world is intolerable that it can no longer think a world or think itself. The intolerable is no longer a serious injustice, but the permanent state of a daily banality. Man *is not himself* a world other than the one in which he experiences the intolerable and feels himself trapped. The spiritual automaton is in the psychic situation of the seer, who sees better and further than he ran react, that is, think.
>
> (Deleuze, 1989: 169–170)

On the one hand Deleuze's intense conception of the image as the very making and unmaking of the world seems radically post-human and destructive of a Western

privileging of man as the subject and ground of world formation: humans are not image-makers (*homo faber*) but effects of a synthesis of images which, in modern cinema, goes beyond the lived body, and the embodied eye. On the other hand, the elevation of the image intensifies a certain aesthetic that privileges a conception of the art object, a distinct artifact that properly generates a world and that elevates humans from embodied to spiritual beings. When we talk about the end of the world we are inevitably talking about a relation to images, either because the true end of the world is something we can only imagine and never live through, or because – as I will argue here – what is usually thought of as the end of the world is really a destruction of a specific relation to the image. At its extreme this motif takes the form of zombies, who live, move, and see the world without seeing that it is a world. Less obviously, post-apocalyptic culture is haunted by the idea of a world that no longer knows it is a world, ranging from the destruction of the forms of global media that allow humans to have a sense of humanity as an interconnected and self-constituting whole (such that the post-apocalypse is a disconnected wasteland of wandering humans), to the elegiac images of once worldly objects that are abandoned, detached from the worlds that enabled them to have sense. One might think here of the last remaining bible in *The Book of Eli* (2010) that is in a braille that no one can read, or the burning canvas of Pieter Bruegel's *Hunters in the Snow*, in Lars Von Trier's *Melancholia* (2011): the post-apocalypse is littered with objects from a lost world, fragments of a time when the world had not yet fallen into disparate, fragile, unselfconscious elements. When art objects appear as lost, no longer recognized, or as mere junk, we are given *images without world*. What were once objects of what Bernard Stiegler refers to as 'mystagogy' – or seeing an image as the revelation of some immaterial sense that remains to be read – become nothing more than dead matter (Stiegler, 2017). What is crucial is that some remaining witness be there to remember this Earth *as the world*, not a planet that simply *is* but a world that appears to itself. In *Oblivion* (2013) Jack Harper (played by Tom Cruise) holds on to fragments of a lost America (books, LPs, a baseball cap), while in *Arrival* (2016) the future of civilization depends upon the capacity to translate an alien-delivered global language, which is only discoverable through a highly singular and fragile archive of individual human memory. As we head into the 21st century we become frantically Hegelian: we must not simply exist, nor exist with each other, but must arrive at existence that knows and recognizes itself through an incarnation and archive of living memory. In *Blade Runner 2049* (2017) the border between human and replicant is marked out by a horse-figurine; the object is at once remembered (as part of a manufactured memory), while also existing as a found material artifact that will supposedly verify the singular human memory that is constitutive of worthy life. In *Blade Runner 2049* it is the replicant's capacity to reproduce itself, to maintain itself through time, that is presented as the miracle of the new world. The planet is what it is, but the *world* is that which appears to and recalls itself. It is as though the world, images, and reading compose the very possibility of what defines itself as properly human: if one were simply to live, perceive, move, and act, one would not yet have a world. Viewing the world *as an image* requires reading what is perceived as if it were there for others, while viewing images as if they were of a world opens the image out to time and the real. I do not see the painting as canvas and paint, but as a signed object, gesturing to me from a past that was read by others, and will be read into the future. I do not perceive the material object in the present as isolated and present to itself, but as a fragment that can be imbued with sense because of the archive of images that *is* human memory.

This was how Bergson described the emergence of spirit: I perceive what is before me in terms of a richer past, and the more of the past that inflects the present, the more free and spiritual the present becomes (Bergson, 1913). In the 21st century, Bernard Stiegler also ties the emergence of spirit from matter to a temporal relation to the image: one views what is before one as though it were the sign of a past voice that one might be able to read. Without this belief that what is perceived is an object that discloses a sense one has lost the world (Stiegler, 2018).

Here, then, I want to explore three senses of world: the first is the world as we know it – our world (my particular horizon of sense); the second is the world in the broader sense of various lifeworlds (the world we have in common, and that we can compare with those who live, or have lived, different worlds); and the third is the sense of the world in its most minimal sense, a world that doesn't know it's a world, or a world without the world (this is the sense referred to by Martin Heidegger, who claims that animals are poor in world, while the stone has no world [Heidegger, 1995: 186]). The world is different from the Earth; one might speak of the Earth in material, physical, historical terms as that which exists before and beyond conscious life, but the world is always a world *for* some being. We could imagine the world of animals, the world of trees, the worlds of different types of humans. The notion of world seems, then, to be all-inclusive, but I want to suggest that this not the case, and that it is instead one of the ways in which a certain portion of humanity has managed to constitute itself as humanity in general. There is something peculiarly modern and Western about the concepts of lifeworld, end of the world, possible worlds, and the essential meaning and humanity of the world. To say that our experience is made possible by the sense of having a world is to presuppose a subjective condition as the horizon through which the world is given. It is to define the subject in terms of future-orientedness, horizons of sense, comprehension, and possibility. This hermeneutic commitment might seem to be a fairly innocuous and unavoidable notion of the subject, but I want to argue otherwise. The fetishization of the world precludes us from thinking beyond a highly normative conception of the human. This is especially so in seemingly post-human articulations of the world. Post-Heideggerian thinkers such as Humberto Maturana and Francisco Varela will argue that in the beginning is the world, an original connectedness, attunement, and potentiality, *from which* something like 'the subject' may emerge as a highly particular and sometimes misleading effect (Maturana and Varela, 1992). It would follow, then, that ethics would be grounded on the capacities for a body to be in tune with an original relatedness. One specific way this idea has been articulated has been in Francesco Varela's mobilization of cognitive science and Buddhism: we should see the self not as that which precedes the world, but as that which emerges from world-constituting processes such as language, habits, and other social systems. Once we reach this realization we notice that the self is *empty*, and we therefore become distanced from the notion of an 'I' as the ground for ethics; instead, what we are given are relations with ethics becoming a process of self-emptying. Further, ethics is not a matter of knowing or thinking, but of know-how, and unfolds from openness to the world:

> Modern Western Science teaches us that the self is virtual and empty, and that it arises continuously to cope with breakdowns in our microworlds. Taoism, Confucianism, and Buddhism teach us that ethical expertise is progressive in nature and grounded in the ongoing realization of this empty self in ordinary time and action. …

> *Ethical know-how is the progressive, firsthand acquaintance with the virtuality of self.*
>
> We normally avoid this aspect of our fragmented, virtual nature, and yet praxis is what ethical learning is all about
>
> (Varela, 1999: 63).

At its height the ethical subject would not simply live in the world but would become aware of worldliness as such, capable of viewing every other being according to the singularity of their world. It is *this* subject, I would argue, that is tied to a very specific conception of art: the proper comportment to the world is not one of seeing, but one of reading, and the proper relation of reading is one in which what is before me is the sign of a world.

The two philosophers central to this claim for the transcendental nature of 'world' are Heidegger and Kant. It is through his reading of Descartes and Kant that Heidgger will argue that 'the subject' is produced as an effect of knowledge practices. For Kant, Descartes' procedure of doubt – or asking how one knows the world with any certainty – makes no sense unless one already has a world. In order to be able to doubt there must already be a distinction between experience and what is experienced; this distinction occurs through time, with time itself being the experience of differences in spatial orientation (Heidegger, 1967). Self and world presuppose time and space, and time and space presuppose some event of connectedness; it is this horizon of synthesis that increasingly becomes determined as *world,* not so much a pure transcendental but a singular event. Heidegger will intensify this primacy of world; rather than think of a transcendental subject as the condition for experience, there are forms of being in the world, with the experience of 'the subject' emerging only at a particular moment in history, and through specific knowledge practices. By the time we get to the work of Jacques Derrida and Jean-Luc Nancy it is the end of the world that intensifies the transcendental conception of world: if a world unfolds from every singular subject, if there are no two horizons of sense that are the same, then there is no world in general (just as there is no subject in general) (Toadvine, 2018). The world in its strongest sense is bound up with the image: rather than beginning with a reality that is then captured more or less accurately by subjects, it is perhaps better to see the subject as nothing more than a synthesis of images. There is not a world that may or may not be experienced, nor experience that encounters a world: there is a general imaging, an appearing that generates the screen that is nothing more than synthesis.

When Foucault writes *The Order of Things* he is not writing a history of mindsets, worldviews or ideologies; he is, instead, thinking about history in terms of the different ways in which knowledge and what is known are distributed. Like Heidegger, who in 'The Age of the World Picture', argued that thinking about each subject as having their own way of viewing the world was a symptom of subjectivism (Heidegger 1977), Foucault also thought that the more important question was how we came to think of subjects as representational agents. Foucault saw his task as one of thinking less about subjects and objects, and more about the table, plane or canvas that allowed for the division between subject and object (Foucault, 1970). Whereas Heidegger focused on the appearing, presencing, or unfolding of being (with *Da-sein* as the site where such disclosure took place), Foucault was more concerned with the practices,

relations, bodies, and procedures from which the notion of knowledge as representation emerged, while also insisting that other relations were possible. One intriguing gesture toward another modality of life – beyond representation – was his conception of the 'shining' of language: rather than language being the sign of the world, it might bear its own force. Such a notion resonates with a whole series of gestures in late 20th-century and early 21st-century thought, where paint, film, and words appear as matters themselves. On the one hand one might see such manoeuvres in terms of a new materialism of vibrant matter, no longer requiring the subject as the condition for appearing. On the other hand, one might also think of the direction of new materialisms as a form of hyper-subjectivism, as though every aspect of the world unfolded its own world. Every image of the world would not be confined to itself, but would be expressive of a whole that was nothing more than all its varied imagings. The world would not be there to be imaged, but would be itself a composition of images. Each image unfolds a world.

Why does such a contrary tendency matter? In order to think about the valency of this question I will invoke two images. The first is the scene from *The Planet of the Apes* (1968) where the Statue of Liberty lays strewn on the coastline as so much abandoned wreckage. When it is viewed by George Taylor (played by Charlton Heston) it signifies both that the distant planet he thought he had landed upon is really his own Earth in the future, and that he lives in a world that has no comprehension of what this monument signifies. There is a sublime horror in seeing the Statue of Liberty from a point of view in which it is *not* at all significant, not a statue, but waste. The second image is *The River Nile, Van Diemen's Land, from Mr. Glover's Farm*, painted by John Glover in 1837.[1] When Australia was invaded by white settlers it was deemed to be *terra nullius*, despite the fact that indigenous people were present, visible, and were the subjects of early depictions of the Australian landscape. Those depictions nevertheless presented indigenous peoples as part of the world viewed and not as *having* a world. In Glover's painting two bodies are facing each other, while another is above in a tree. Other faceless, barely discernible bodies can be seen at the water's edge and on the horizon. While there is a long-standing European tradition of painting and writing about peasant life as part of nature, one might draw a distinction between Romanticism's conception of the peasant who is thoroughly attuned to their world, almost a world unto themselves, and the colonial gaze that saw indigenous bodies as parts of the world. Painted two decades earlier than Glover's picture of Van Diemen's land, John Constable's *Wivenhoe Park* (in the National Gallery of Art in Washington) shows roaming cattle in the foreground in a fenced-in paddock, with buildings on the horizon, two swans, and two fishermen on the water. The key difference is not simply that the human presence in the landscape is natural-cultural (with the fences, buildings, transformed fauna, and boat) but that the humans are clearly task-oriented; they have a world of labor that subtly transforms the Earth. The literary equivalent to this visualization of those who are attuned to the world, but in a manner of utter immediacy, is typified by Wordsworth's *Resolution and Independence*, where the lyric 'I' surveys the world, notes the rich variety of living beings, and is so bound up with the world that there is a joyful unselfconsciousness: 'I heard the woods and distant waters roar; / Or heard them not, as happy as a boy' (Wordsworth, 2010: 232). The encounter with the leech-gatherer articulates a profound sense of worldliness and its relation to reading and sense. The joyful being-in-the-world of nature is interrupted by a man

who appears, *as if he were a stone*, an object that demands some sort of reading at the same time as it refuses sense:

> I saw a Man before me unawares:
> The oldest man he seemed that ever wore grey hairs.
>
> As a huge stone is sometimes seen to lie
> Couched on the bald top of an eminence;
> Wonder to all who do the same espy,
> By what means it could thither come, and whence;
> So that it seems a thing endued with sense:
> Like a sea-beast crawled forth, that on a shelf
> Of rock or sand reposeth, there to sun itself;
>
> Such seemed this Man, not all alive nor dead

The leech-gatherer is an image of a body that is on the threshold of being-in-the-world, and yet (like the stone) close to being worldless; he looks at nature as though it were a book to be read ('and fixedly did look / Upon the muddy water, which he conned, / As if he had been reading in a book'), and yet speaks as though his words were sound rather than sense: 'The old Man still stood talking by my side; / But now his voice to me was like a stream / Scarce heard; nor word from word could I divide'. He is a part of nature (like the stone) and yet also suggests an utterly singular world that is *not* that of the lyric 'I'. By the time Heidegger will make a distinction between the stone that has no world, the animal that is poor in world, and *Da-sein* who is nothing more than the clearing of its utterly singular world, there will already have been a long tradition of hierarchizing bodies to the extent to which they are world disclosive. The crucial difference is not so much between animals, which are poor in world, and *Da-sein*, which is the site for the unfolding of the world, but between humans who are aware of themselves as world disclosive, and then those romanticized humans who are not fully aware of the singularity of their world. The poet and painter can gaze upon the peasant as poised between humanity and animality: the peasant has not yet suffered the loss of immediacy that plagues the modern, disenchanted and world-assessing gaze. The gaze of the painter or poet can capture the peasant's world, with the labor upon the Earth unfolding the sky, trees, grass, cattle, and water. Well before Heidegger's elevation of being-in-the-world above the detached 'world pictures' of modern subjectivity, philosophy, and aesthetics had already established that the human world is a world of sense and transformation; the Earth is there to be rendered into a world. And yet, for all this valorization of the unselfconscious world unto itself, the infant gaze for whom the world is all in all, the colonizing gaze of *terra nullius* does not elevate the bodies in its purview to those who unfold a world; they blend unto, rather than transform, the Earth.

One of the ways we might think about artworks or what it requires to view something *as art* is that it creates a form of life *without world*. Worldliness is, after all, a modality of reading, and a modality of humanizing. If I take a fragment from a world, place it in a gallery, and set it apart, it is now in a position, *either* to be read as a sign of a world that offers itself to be read, *or* in a far more sublime manner as an image as such, without world, without sense, and without humanity.

The Origin of the World

Today when we talk about the end of the world, we aren't talking about the end of the planet, and we aren't talking about the genocide of a people. The end of the world is somewhere between these two catastrophes, not the full destruction of the Earth but not 'only' the loss of a people and *their* world. In most cases the end of the world is quite parochial: it amounts to the end of Manhattan or Los Angeles (sometimes London) in many a Hollywood blockbuster. A related sense of 'world' is one that is tied far more explicitly to a very profound sense of 'humanity' or 'the human'. In a seemingly minor dispute between phenomenology and Kantian philosophy, Eugen Fink argued that Kantianism had failed to account for the origin of the world (Fink, 1970). This origin in question was not a cosmological question, but an ontological one. How can we say that anything at all *is*? Kant had already argued that to experience something as a being requires that one already have a horizon of time and space, and a sense of causal and lawful relations. If one's experience were not coherent and did not add up to objects that remained relatively stable, one would not have a world. This is where I would argue that a certain sense of the world originates: the world as the possibility of anything, the world as origin. When phenomenologists argue that they have accounted for the origin of the world they are at once undertaking a hypermodern move within the history of philosophy, but also disclosing something extra-philosophical about the ways in which the concept of the world comes to function. Philosophically, from Kant to Hegel and modern phenomenology, it is no longer sufficient to simply state – metaphysically – what happens to be the case. In addition to stating *that* there is this world that we know, we also need to account for *how* the experience of the world comes into being. This 'how' of the world is always a phenomenology – how does the world *appear* as a world? Kant will say that phenomena – as appearances *of* something – are necessarily relational; something appears *to* us, *as* the appearance of something that subtends that appearance. There is a world, or appearance, because there are synthesized relations. In order for there to be a world, there must be a subject to whom the world appears. And this subject is not a thing within the world, but the transcendental horizon that makes any world (and any self) possible. Enlightenment, maturity, responsibility, and cosmopolitanism: these are all, for Kant and beyond, implications of having a profound sense of world. Rather than simply experiencing the present, one becomes aware that the present emerges from an ongoing unfolding of synthesis, sense, retention of the past, and anticipation of the future. It is not that there is a world that we then must come to know, it is from a relation of unfolding that we come to understand ourselves as subjects that are the condition of the world.

Once we reach that stage of recognition, we can then reach enlightenment: rather than accepting any simply given truth we demand the justification and genesis of truth. We are no longer subjected to a transcendent and simply given order, but come to truth and understanding for ourselves, *and* assume that any other rational being would (and should) also have such a power and responsibility. The world, then, is not the Earth or planet but the horizon of sense that allows us to think of any possible cosmos. This philosophical necessity of world is intensified in the 20th century, where the subject becomes the horizon of *all* sense and appearing, and not just (as in Kant) the condition for the only world that we know. This is why Heidegger will say that the stone has no world, and that animals are poor in world. The animal

does still have a life and orientation that allows things and possibilities to appear, but unlike the Kantian cosmopolitan or Heidegger's *Da-sein* who is disrupted by angst or boredom, the animal can never become aware *that there is a world,* or that what appears does so within a horizon of unfolding sense. After Heidegger, Jurgen Habermas will claim that the task of an enlightened modernity is not to posit metaphysical truths about the world as such, but to engage in reflection on the lifeworld (*Lebenswelt*) (Habermas, 1992). Jacques Derrida – despite all the claims for deconstruction as a form of post-humanism – will insist that the death of any single other is the end of the world, and this because the horizon of sense through which anything is given cannot be distributed among humanity in general, precisely because 'humanity' is itself given through a specific mode of world. The world plays an even more profound role in the thought of Gilles Deleuze and his post-Leibnizian and Bergsonian account of world as image, and image as world. Like Kant, it makes no sense to think of a thing in itself, some simple non-relational presence that *then* enters into relations. Rather, everything might be thought of as an unfolding of world. There is the world of the stone, the leaf, the bat, the book, the molecule; what something is *is its perception of the infinite*:

> In all cases it is true that the world only exists folded in the monads that express it, and is only unfolded virtually as the common horizon of all monads, or as the outer law of the series they include. But in a more restricted sense, in an intrinsic way, it can be said that when a monad is summoned to 'live' – yet more when it is called to reason – it unfolds in itself this region of the world that corresponds to its enclosed enlightened zone: it is called upon to 'develop all its perceptions,' and therein its task resides.
>
> (Deleuze, 2006: 84)

A stone is its response to the warmth of sunlight, the slow erosion from the elements, its capacity to be cut, assembled, and sculpted. (A stone, in this Leibnizian sense, has its own stony world, although I would suggest that it is just this world that is perhaps better thought of us offering a truly apocalyptic end of the world, a freedom from the all-too-post-human penchant for regarding everything as opening out to a vibrant infinite.) Despite their commitment to inhuman matters that are the only way to leave the Earth and find the cosmos, Deleuze and Guattari celebrate the high modernist philosophical and literary capacity of sense. It will be matters themselves – the paints on canvas, or sounds of the quartet – that allow for a thought of the cosmos. Art is the perception of matters of expression; one sees something like color as such: not just the color of this leaf but that which appears *as if for all time*. Writing against Merleau-Ponty, Deleuze and Guattari insist that art is not the milieu of the flesh (not our horizon of potentiality), but a capacity to free matters from *our world*:

> the being of sensation is not the flesh but the compound of nonhuman forces of the cosmos, of man's nonhuman becomings, and of the ambiguous house that exchanges and adjusts them, makes them whirl around like winds. Flesh is only the developer which disappears in what it develops: the compound of sensation. Like all painting, abstract painting is sensation, nothing but sensation.
>
> (Deleuze and Guattari, 1994: 182)

The bird becomes the being it is by assembling a circle of colored leaves, relating to the leaf not as something functional, but as the bearer of a quality – a percept. In this sense, art is pre-human (and probably counter-human in its distinction from functional life). But it is with art, and modernist art most specifically, that the quality as such that is constituted in art achieves its highest potentiality. The color is no longer the color of a leaf, or even the expression of the Earth, but opens to the cosmos: what color would be in any world whatever.

It is at this point in the history of philosophy, and philosophy's reflection on its own history, that the intrinsic relation between world and image exposes an ongoing hyper-humanism intertwined with an equally insistent anti-humanism. If one thinks of the world simply as the sum of all things, with humans as thinking and viewing things alongside other thinking and viewing things, then 'world' is an unthought backdrop, and to think about the end of the world would be a material, physical, and not peculiarly human event. All the things that exist might not exist. When Deleuze and Guattari write about art and the cosmos they pose the hyper-philosophical question of what might be as such, regardless of any of the worlds in which is happens to have unfolded. There is a quite distinct claim in their work that the task of art and philosophy is to free oneself from the world – the meaningful horizon of sense and relations for us and our kind – and yet this is set alongside the ultimate aim of art, which is not the isolation of matter, but the capacity *in matter* to disclose an immaterial and cosmic/eternal force. One might say then, following Deleuze and Guattari, that there are not worlds – and certainly not *the world* – that are there to be perceived and rendered into images, but that it is from perception-images (forces becoming what they are by the encounter with other forces) that worlds emerge. If the concept of world in the strong sense begins with Kant – that the perception of any single thing presupposes a horizon of synthesis, achieved by the transcendental subject – then the apotheosis of world is achieved by Deleuze and Guattari: everything unfolds its own world, but it is the task of art (modernist art) to grasp the potentiality of any possible world by qualities that are given a cosmic concretion: 'the plane of composition involves sensation in a higher deterritorialization, making it pass through a sort of

deframing which opens it up and breaks it open onto an infinite cosmos' (Deleuze and Guattari, 1994: 196). Could the color, sound, light, texture, figure, or timbre in this artwork allow for a perception of the cosmos, or the potentialities from which worlds emerge? What this trajectory of world (as condition of any possible image) exposes – from Kant to Deleuze – is a normative aesthetic that haunts any thought of the image. What *cannot* be thought is an image devoid of worldhood. The stone must either be dismissed as having no world, or one attributes a vibrant relationality to every aspect of a whole. It is the lyric recognition of this whole – the eye that manages to free itself from the body – that makes modernism the aesthetic of *mankind*.

Without the World

If the strong sense of the world emerges with transcendental philosophy, modernity, and cosmopolitanism, then it should be possible to explore a non-worldly account of the image by looking at what the tradition of *Lebenswelt* philosophy rejected. What might it mean to live, look, or imagine without a world? What does the concept of the world give to those who are worldless or poor in world? Philosophically, Kant argued that there was a practical ethics bound up with the responsibility of becoming aware

of the transcendental condition of the world. If one simply posits that the world is the way it is, *and* one goes further and offers some metaphysical explanation for the world – talking about God, the beginning of the universe, some given moral law – then one is leaping outside the relations of all that is given, and experienced, and is claiming to speak from on high. If, however, one accepts that one only knows the world *as it appears* and that all we are given are appearances *of* what can never be experienced in itself, then one is forced to acknowledge that anything we know is given to us, relationally. If we think about the possibility of those relations, or the synthesis that composes experience, we are drawn to the transcendental condition of the world. I can experience this, here and now in its coherence, because I retain the past and anticipate the future; the causality and order of the world is not something I encounter, but a condition necessary for any encounter. Not only does the world appear to me as ordered, coherent, stable, and there for others, I am bound to assume that every other subject relates to the world in the same necessarily lawful manner. To experience anything is to experience it within a horizon of sense and coherence. Kant's work takes aim at a whole series of beings who are worldless, poor in world, or who speak as if being were something to be known or intuited without any locatedness. Perhaps the most irresponsible are the mystics, metaphysicians, and enthusiasts who elevate themselves above the world claiming to speak for what is, without any sense of the conditions through which beings are experienced. In addition to the metaphysicians who have kicked themselves loose from the world, are the animals, savages, mystics, and immature souls who simply accept what is, not grasping the sense or conditions of the given. Writing on Kant's 'materiality' Paul de Man noted that despite associating this worldless, senseless, or inhuman vision with the 'wild man', Kant nevertheless saw poetic or sublime vision as a capacity to see what appears *without* imbuing it with homeliness, sense, purposiveness or harmony:

> Kant speaks of 'a wild man who, from a distance, sees a house of which he does not know the use. He certainly observes the same object as does another, who knows it to be definitely built and arranged to serve as a dwelling for human beings. Yet in formal terms this knowledge of the selfsame object differs in both cases. For the first it is mere intuition [*blosse Anschauung*], for the other both intuition and concept.' The poet who sees the heavens as a vault is clearly like the savage, and unlike Wordsworth. He does not see prior to dwelling, but merely sees.
>
> (de Man, 1997: 81)

This material sublime of Kant's both anticipates what later writers like Jean-Francois Lyotard will refer to as sublime, a capacity to release the visual from the day-to-day, worldy, and humanizing sense of the world, while also indicating why becoming-animal or savage vision became so alluring for 20th-century thought and the avant-garde. It would seem to leave us with an exclusive disjunction regarding aesthetic normativity: either art should be world disclosive (allowing us to reflect upon the horizon of worldliness that precedes day-to-day givenness), or art should be a radical break with the order of the world, once again drawing us back to the matters from which the world is composed. This exclusive disjunction would be intertwined with another seemingly exclusive disjunction between normative conceptions of humanity: either being human is a form of being-in-the-world, not simply seeing what is, but seeing the given *as* part of a meaningful horizon of possibilities; or human existence, by way

of art and images, has the unique capacity to break with the flow and sense of life. We could see these two distinct demands articulated in the work of Jurgen Habermas and Gilles Deleuze and Felix Guattari, respectively. Both, like Kant, tie this realization of world to a trajectory of modernity. For Habermas, and for many forms of liberal political theory after Kant, it is metaphysical to simply insist on the truth of the world. Instead, it is the goal of enlightenment to provide conditions that allow us to reflect on the practical horizons of action and language that allow any world to be given. Art would be one way in which the world would not simply be given, but would appear as given *through* a presupposed horizon of meanings and expectations (the *Lebenswelt*). On this reading images would always be bound up with worlds, but art's images would be composed in such a way as to draw attention to their imbrication in a history of meanings and practices. By contrast, Deleuze and Guattari argue that art should break with the lived, destroying the horizons of sense, possibility, and practicality through which things are given. In *What Is Philosophy?* (1994) and *A Thousand Plateaus* (1987) they see the history of art as one in which what is perceived becomes less and less an expression of the world, and more and more an opening to the cosmos. Color or sound could be (and should be) seen or heard, not even as expressions of the audible or visible (what they are for we who perceive them) but as qualities that might be imagined beyond any world in which they are given. The image might then be thought of either as that which stands apart from the everyday sense of the world, such that we might be drawn back to the horizon of the world; or, the image would be a destruction of the world (of any world) allowing us to see as such the force of matters from which events such as seeing emerge.

Despite the disjunction between these two possibilities they both presuppose an ideal of modernity and (in slightly different ways) counter-humanity. For Habermas, the concept of the world – or, more specifically the *Lebenswelt* – arrives once we abandon metaphysical notions of how the world is, once we refuse simple subjection to transcendent and external authorities, and recognize that any world and law we have is one we come to give ourselves. Modernity is an ongoing project of enlightenment achieved by a reflective public sphere that is aware of itself as self-legitimating. There is something profoundly Hegelian in this historical claim: prior to the establishment of a reflective public sphere we experience the world as it simply is, but once practices of reflection have emerged we recognize the world as the lifeworld, as possible only because of the meaningful practices through which we, and others, are constituted. Unlike Hegel, Habermas will not see this journey as one of abstract reason, with the world as nothing more than the means by which reason discovers itself; instead, what ultimately recognizes itself as reason emerges from life and remains bound up with a life and materiality it knows only reflectively (Habermas, 1990). Deleuze and Guattari also locate the power of art and images to open out to the cosmos in a history of modernity, where modernism releases matters from the meanings and purposes of the organism and its world.

Despite these different trajectories, both have a structure of secular redemption or *felix culpa*.

The end point is a freedom from man as a simple animal within the world to whom life is simply given. This end point is not a return to some pre-metaphysical naivety, a simple beatitude never disturbed by the weight of consciousness. What is achieved is a casting off of the human, a genuine *post*-humanity, achieved by the power of the image *as image*. One must be neither an animal, nor a child, nor the imagined pre-modern

or non-Western human who simply lives the world, without a sense of the world *as world*. Rather, just as Heidegger's moment of authenticity is achieved by shifting from the fallenness of everyday life (simply comporting oneself to things as if one were a thing among things) to breaking with such everydayness by means of boredom or angst, so the contemporary ethics of the world and image demands that one must have lived through a history of believing in the truth behind images, *then* recognizing that there is no truth other than that of the image, finally arriving at the image itself. The art object, freed from life and standing alone to disclose appearing as such, has two dimensions. It *may* be regarded as a fragment that allows one – strolling through a gallery – to adopt the lyric 'I' that can view every perception as if it were the expression of a world. It may also be thrown out of the gallery, freed from the world-imbuing gaze. This is what the post-apocalyptic imaginary views with horror as the end of the world, that what is would simply *be* and not appear to be.

It is important to think, then, not so much about whether one demands that images open out to the world that gives them sense or whether one should arrive at the pure post-human immediacy of the image, but rather of the ruthless Hegelian logic that grips the ethics and normativity of the image. Think of existence: not the world, but just being without any sense of itself, a mindless, lifeless, non-conscious 'isness'. *Then* think of that being as taking up a relation to itself, knowing itself as being. This is at the heart of Christianity and Hegelianism: a relation of making manifest that requires distance and recuperation. A God who simply is would fall short of a God who could create forth from himself, allow a certain falling away or emanation, that then returns to express the joy of existence: 'The plant sings of the glory of God, and while being filled all the more with itself it contemplates and intensely contracts the elements whence it proceeds. It feels in this prehension the self-enjoyment of its own becoming' (Deleuze, 2006: 89). In short, it is better to have a *world* that takes up a relation to itself (even if that relation takes time and requires a non-knowledge overcoming itself to arrive at knowledge). When Deleuze and Guattari write about becoming-animal and becoming-imperceptible, or of modernism freeing itself from Romanticism's striving to express the Earth to arrive at the cosmos, or when Deleuze writes about overturning Hegel and finding immanence, finally, in the history of philosophy, there is a very clear sense that it is better (if not necessary) to go through a history of subjection to transcendence, of thinking of images as distanced from the truth, and then finding the image as such, than it is to be without world and image altogether. There can be no modernity of post-metaphysical immanence, of realizing that what we once thought of as a world of distanced and simply given things is really only possible through our horizon of sense, without the fall into transcendence and naivety that is finally overcome. The postcolonial, the postmodern, the post-human, the post-metaphysical, and all the 'turns' that take us back to affect, materiality, embodiment, and the real: all these have the narrative structure of the fall of the image and the redemption of the world. In order to arrive at a moment of immediacy and sublime materiality one must have fallen into the distance of seeing images as images *of* some world that is never fully ours. The distance is overcome when rather than images of the world, the world is image. We are not distanced subjects who must somehow find the truth through the mediation of images, but become nothing more than the milieu through which the world gives itself to itself.

Why is this temporality important? If we go back to the theorization of world and the modes of life it negates, we can then see why the status of animality, savagery,

infancy, and mysticism take up such crucial and ambivalent modes for post-human hyper-humanism. For Kant the wild man has the capacity to see *without* imposing sense and purposiveness upon the scene. For Heidegger the animal is poor in world, bearing a relation to life but not yet aware of the specificity of those relations. For Deleuze (and many others well before him), the vision of the child is open to the world, not yet burdened with the concepts, norms, and reified systems that will deaden life. Modernist primitivism also valorized the savage as open to a far more intense experience of the world. All these imagined modes might be thought of as prior to any sense of the image: what is experienced is lived *as such* without any sense of its being mere appearance. The Platonic turn away from appearances to the condition for the possibility of appearances, the turning of the soul away from the shadows toward the light of truth, is possible because one begins with the figure of those enchained in the cave for whom the image is nothing more than itself. Such enchained beings are not yet enlightened, not yet aware that what appears is only possible because of some prior transcendental condition. From Plato onward philosophy, literature, and visual culture will be populated by these originary beings who we may either lament for their poverty in world, or yearn for nostalgically for not yet having fallen into the mediated condition of having a world. It is always *becoming-animal* and not animality as such, a retrieval of childlike wonder and not infancy as such, an embrace of savage vision but not an erasure from civilization as such. It is better to have been expelled from paradise and regained its plenitude than to live in unmediated naivete.

I have already detailed the ways in which this overcoming of distance figures in philosophy, first by rejecting a pre-human immediacy, and then embracing a becoming-child, becoming-animal or post-humanity as a means of paradise regained. When Wordsworth laments that 'I cannot paint what then I was', he is at once registering a loss, but by saying this origin is unpaintable is another way of saying the world was 'all in all', with no distinct sense of self and other, no sense (that is) of the transcendental condition of being a subject *to whom* the world is given. Yet for all that sense of loss and the profound distance between a self who remembers and a moment so unselfconscious that it cannot be remembered, the present's registering of that loss and awareness is not to be sacrificed. The art that overcomes distance is worth distance; it provides abundant recompense.

One way of thinking about the future (and one that *Blade Runner 2049* steadfastly refuses) is that destruction of the planet will have precluded any possibility of life reproducing itself with all the richness of an origin expressing itself in future generations. The year 2049 sees the world living on because of various forms of manufactured life. Gone are the farms, orchards, teeming rivers, and vineyards that were symbols of life's grandeur and cyclic renewal in 19th-century art and literature. In this world of life as it is, surviving by way of simulation, the film valorizes the truly mimetic image. First, the central character's memory of playing with a toy horse is intimated to be real, to be grounded in a past that truly was, and that can be proven by a journey that will rediscover fragments of that past. When 'K' (Ryan Gosling) finds places and objects (including the toy horse) that answer to his memories, he is convinced that he is human, that he is the miraculous *natural* copy that emerged from two replicants. His fragmentary memory seems to be authenticated by the fragments he finds of his past. What this strand of the film achieves is nothing less than a hyper-human refusal of simulation: to be human is to be individuated by

images that emerge from a past that can (and should) always be refound. It is not just that we are individuated by memory (such that erasing memory as an erasure of self is a common motif in dystopian sci-fi), but – more importantly – that truly human memory is a witnessing of the world, a world that precedes us and that is archived by every other image and witness. The other, related, strand of the film presents the miracle of life emerging from two replicants: a world that lives on by replication must be surpassed by a retrieval of the world that managed to surge forth from itself, generating ever varying copies that were always increasingly rich expressions of their origin. There is always a good and bad image: the good image that expresses a self-aware and self-varying life, and a bad image that is mere copy/replication without ground.

Blade Runner 2049 depicts all too clearly the ways in which it is unthinkable to accept the possibility of images without thought, without ground, without self-generation. As with so many post-apocalyptic films, the desolate future is at once a consequence of human self-mastery and ever-expansive generation. The archive mania that produced an empire that would spread itself in as many generations as possible would wear out the planet, and yet rather than contemplate its own non-being post-apocalyptic culture turns to a new world enabled by others who do not have self-generative mania. In *Blade Runner 2049* the truly human future is given when replication becomes generation. In good theological fashion future generations will not be copies manufactured for an end, but self-emerging organisms who express (by way of variation) the richness of their origin. Be fruitful and multiply, but do so with a telos. From Victor in Mary Shelley's *Frankenstein* to *Blade Runner 2049* there has been an insistence on copying and imaging as (properly) expressive of its origin, rather than the proliferation of simulations with no reference back to their world. Victor is horrified when the human he creates is not quite the likeness and perfection of man, and is further horrified when that monstrous progeny is thought of as multiplying itself across the globe. When one is horrified – as Victor is, and as *Blade Runner 2049* continues to be – that copying and futurity are not grounded in generation, one repeats and intensifies a theology of the image. To say that man is made in God's image is to see this world, and all good images, as different from, while expressive of, the origin. Blind replication, whether it take the form of clones, zombies, or what Deleuze theorized as simulacra, is worldless and viral: rather than variation as a response to the world (as in Darwinian evolution or Christian humanism) images mutate without vision, without even the minimal purposiveness that one would attribute to 'selfish genes'. This is why, despite all his references to life and to philosophers of life, Deleuze valorizes the time-image in cinema. It is the capacity for images not to give multiple viewpoints on the world but to vary in themselves that Deleuze sees as the attainment of 'time in its pure state'. The image does not capture movement and life, but takes on a 'life' of its own: such a life is no life at all, precisely because it has no world, and no end toward which variation tends.

Once cinematic images are no longer viewed as trackings of movement, as copies of a lived present – once, that is, the image, stands apart from the life of time in this world – it cuts itself off from relationality. This is how we might understand 'time in its pure state': if time is measured by the mapping of something going through change, then change must be the change *of* some relatively constant being, but if time is released from any thing that goes through time, if time is without world, then any world would be the effect of time. There could only be worlds because of

the unfoldings of durations lived in some way. In *Cinema 2* 'time in its pure state' is defined by way of images without worlds: not the image *of* some thing, but imaging or variation *from which* the eye may or may not assemble a world. If the eye is the eye of the camera, and therefore not bound to a sensory-motor organism and its striving for life and world, time is liberated from reference and interest, but perhaps not desire (if we think of desire as an anarchic and lifeless drive of creation/destruction that is detached from fixed forms).

I would suggest that one can contrast the cinematic and machinic image without world, with the more nostalgic modes of pre-worldly vision that one finds in valorizations of the child, animal, or mystical other. There is an important distinction between being poor in world and worldless. As Heidegger argued, animals are poor in world; their life is oriented to a milieu and its possibilities, but they cannot see that world break down and become aware *that there is world*. They are open to their possibilities without the angst or boredom that follows from a sense of the singularity of one's *own* possibilities, the being-toward-death that would draw them to an awareness that they have decisively *this* world and no other. Animal spirits have no sense of the finitude of spirit, feeling the world and themselves as one. The child, the animal, and the mystic are alluringly poor in world – connected seamlessly to a milieu without the burdens of Cartesian subjectivity. (One might note, here, the ways in which the turn to affect and animality is often aligned: one can escape the representationalism and detachment of mind and become, once again, a feeling self.)

If we return to the post-apocalyptic genre and the end of the world we can start to come to a conclusion. When we imagine the end of the world this is mostly the end of the 'human' world, if humanity is defined in its modern Kantian sense of living one's life with a sense of one's singular and self-determined possibilities. Not only post-apocalyptic cinema, but the broad milieu of Anthropocene studies, has accepted that humanity in its modern, world-transforming, hyper-consuming, and expansive mode has been destructive of life; what has been posited as redemptive is a future given to us by way of a post-human humanity, closer to the poorness in world. One might think of James Cameron's *Avatar* (2009) and the pseudo-indigenous blue N'avi, who are attuned to the planet by way of touch and an interconnected network of responsiveness. They do not 'have' a world as a cognitive or transcendental horizon; they *are* their world. The world is not viewed in the manner of an image, but is immediately aware of itself, by way of touch rather than knowledge. It is the invading and plundering Americans who have mapped, pictured, diagrammed, and represented Pandora in advance. The indigenous N'avi feel rather than see their world. Their mode of existence is intuitive and affective rather than representational. The Anthropocene imaginary is therefore at once post-human – rejecting centered Cartesian representationalism – but not inhuman, still retaining a relation to the world bound up with life, connectivity, and an implicit rather than transcendental world. Further, the lyric 'I' of the post-apocalyptic aesthetic looks longingly at pseudo-indigenous (pre-modern) world attunement, and yet cannot – for all that – bear the loss of its own world-surveying longing.

Animals are not metaphysicians, nor are children; their blessed immediacy or freedom is not what is sought for by either Habermas or Deleuze, and yet history is nevertheless described as a falling into (and redemption from) metaphysical positing. Habermas makes this quite clear by describing modernity as post-metaphysical, achieved when the truth and sense of the world is recognized as emerging from communicative practices. For Deleuze and Guattari, there is also a distinct historical journey

from territorialization (the assemblage of relations to generate a milieu), toward deterritorialization (or the creation of a body or element that explains or grounds relations), to reterritorialization (where what emerged from relations among bodies is seen as their cause), to higher deterritorialization where the forces that composed any territory are released and given in themselves.

In order to conclude I would like to return to Glover's image of Van Diemen's land as *terra nullius,* where the bodies he views are so thoroughly within the world that they can be said (from afar) to be without world. Rather than taking the path of attributing worlds, life, humanity, and redemption to these bodies, I would suggest that the more fruitful path (or, more accurately, the more radically *fruitless* past) would be to abandon the post-apocalyptic terror of being without world, and instead to think the apocalypse as the end of the world. Only then, only with an acceptance that an Earth without worldiness is the end of humanity but not the end of life, might we once again be able to see and not feel the beauty of the Earth.

Note

1 http://www.ngv.vic.gov.au/explore/collection/work/5631/

Works Cited

Bergson, Henri. *Matter and Memory*. Translated by Nancy Margaret Paul and W. Scott Palmer. London: Macmillan, 1913.

Bergson, Henri. *Two Sources of Morality and Religion*. Translated by R. Ashley Audra and Cloudesley Brereton. London: Macmillan, 1935.

De Man, Paul. *Aesthetic Ideology*. Edited by Andrej Warminski. Minneapolis, MN: University of Minnesota Press, 1997.

Deleuze, Gilles. *Cinema 2: The Time-Image*. Translated by Hugh Tomlinson and Robert Galeta. Minneapolis, MN: University of Minnesota Press, 1989.

Deleuze, Gilles. *The Fold: Leibniz and the Baroque*. Translated by Tom Conley. London: Continuum, 2006.

Deleuze, Gilles, and Felix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*. Trans. Brian Massumi. Minneapolis: University of Minnesota Press, 1987.

Deleuze, Gilles, and Felix Guattari. *What Is Philosophy?* Translated by Graham Burchell and Hugh Tomlinson. New York: Columbia, 1994.

Fink, Eugen. 'The Phenomenological Philosophy of Edmund Husserl and Contemporary Criticism.' In *The Phenomenology of Husserl: Selected Critical Readings*. Edited and translated by R.O. Elveton, 73–147. Chicago, IL: Quadrangle Books, 1970.

Foucault, Michel. *The Order of Things*. New York: Pantheon, 1970.

Habermas, Jurgen. *The Philosophical Discourse of Modernity: Twelve Lectures*. Translated by Frederick G. Lawrence. Cambridge, MA: MIT Press, 1990.

Habermas, Jurgen. *Post-Metaphysical Thinking: Between Metaphysics and the Critique of Reason*. Translated by William Mark Hohengarten. Oxford: Blackwell, 1992.

Heidegger, Martin. *What Is a Thing?* Translated by W.B. Barton Jr. and Vera Deutsch. New York: Henry Regnery, 1967.

Heidegger, Martin. 'The Age of the World Picture,' *The Question Concerning Technology and Other Essays*. Translated by William Lovitt, 115–155. New York: Harper Collins, 1977.

Heidegger, Martin. *The Fundamental Concepts of Metaphysics: World, Finitude, Solitude*. Translated by William McNeill and Nicholas Walker. Bloomington, IN: Indiana University Press, 1995.

Maturana, Humberto, and Francisco Varela. *The Tree of Knowledge: The Biological Roots of Human Understanding*. Boston, MA: Shambhala, 1992.

Stiegler, Bernard. 'The Proletarianization of Sensibility.' *Boundary 2* 44, 1 (2017): 5–18.

Stiegler, Bernard. *Neganthropocene*. Translated by Daniel Ross. Ann Arbor, MI: Open Humanities Press, 2018.

Toadvine, Ted. 'Thinking After the World: Deconstruction and Last Things.' In *Eco-Deconstruction: Derrida and Environmental Philosophy*. Edited by Matthias Fritsch, Philippe Lynes, and David Wood, 50–80. New York: Fordham University Press, 2018.

Varela, Francisco J. *Ethical Know-How: Action, Wisdom, and Cognition*. Stanford, CA: Stanford University Press, 1999.

Wordsworth, William. *William Wordsworth*. Edited by Stephen Gill. Oxford: Oxford University Press, 2010.

3 Undoing Imperial Modernity

Ariella Azoulay

In this chapter I propose to step back from the drive to announce new beginnings or characterize the novelty of photographic tools or images. Such timelines of progress, nurtured by and reassessing the assumptions and premises of imperial modernity, compel us to acknowledge, every once in a while, that we are surrounded by 'the new' – new cameras, new photographic codes, new eras, or new visions – and to keep up with its pace.

Progress is the imperial mode of storming the world. The imperial movement of progress is pursued on the one hand as if along a single, straight line of advance, while, on the other, it operates in a suicidal cycle where the new can hardly survive the constant and renewable threat of being declared unfit by the newest. The new is an imperial incentive, a requirement, and a command, but it is framed as an inspiration and a promise in ways that separate it from the violence it involves. Pursued for the sake of itself, it is above all a movement, destructive and unstoppable. The new unfolds in a particular temporality – that of historical progress – without which nothing can be announced as new. The principle of the new has become the source of its own authority; the newness of the new has become its sole *raison d'être*, and – like colonial expansion and capitalist growth – it has become voracious and insatiable.

From the very beginning, i.e., from 1492, this principle of progress has been inseparable from the principle of destruction, a destruction that has taken many shapes and is often wrought by those who will be its direct targets and victims.[1] After all, destruction cannot be pursued without laborers, just as imposing new structures cannot be built without workers. Progress is both the reason and excuse for destruction and its remedy, the preferable way to deal with the wreckage left behind while producing ever-increasing ruination. Destruction is done in the name of progress, a concept that today still holds the status of a supreme authority, sparing people the responsibility for their destructive actions and making them believe that their actions were guided by an authority higher than human interests. Nothing is supposed to stand in the way of progress; nothing is permitted to stay as it used to be. Piles of debris everywhere may be the most visible marks of the triumph of progress, but the destruction of the common – what people can and should care for together – is its less visible but no less worrying manifestation. When anything new becomes a cherished token of progress, and possessing or having access to it becomes the modern mode of being *à la mode*, the movement of the new expands into ever more places, where things can be made unfit, old, obsolete, and given over to people's obsession for modernizing them. The condition of imperial modernity is to be always in motion, always in the process of expanding the

new into new territories, always against local people's laws, sometimes even against the laws of physics.

We are called upon to use our expertise and position as scholars and intellectuals to give new names to what, from a non-expert position, is experienced as reiterations of the same imperial violence. In other words, expert knowledge cannot be produced unless one inhabits what I propose to call positions of imperial shutters' operators. These are the shutters through which the shared world is dissected into differentiated fields of knowledge and spheres of action, so in the role of scholars of photography, for example, we are called to engage with photography as if it were a field apart, detached from the world of which it is part, immune from the catastrophic imperial order that facilitated its emergence.

Imagine that the origins of photography are not to be found somewhere around the beginning of the 19th century – when European white males enjoyed a certain cultural, political, and technological wealth, and could dream of potential recognition as glamorous inventors if and when they would succeed in developing further ways to fragment, dissect, and exploit others' worlds and enrich their own culture at the expense of others. Rather let us go back to 1492. What could this mean?

To answer this question we have to unlearn the expert knowledge that calls upon us to account for photography as having its own origins, histories, practices, or futures, and to explore it as part of the world in which it was made possible. We have to unlearn its seemingly obvious ties to previous modes of producing images, and problematize these ties that reduce photography to its products and its products to their visuality. For that, we should also unlearn the accepted genealogies of such fields of knowledge that invite us to affiliate ourselves with scholars of visual products, thus denying our necessary affiliation with other imperial agents who destroyed others' worlds in order to transform their ruins into the basis of our scholarship and the visual resource of the photographic wealth that we inherited as obviously ours as scholars. Unlearning photography as a field apart means, first and foremost, foregrounding the regime of rights whose imposition on the world from which photography emerged was already naturalized and legalized. Without questioning this regime of rights, we will continue to ignore the questions – how is it that photographic images could be produced regardless of the well-being, labor, exploitation, will, and beliefs of those from whom they were taken, and how is it that they could continue to exist detached from the circumstances in which they were taken, archived, researched, studied, traded, explored, displayed, and reproduced?

Let me present an excerpt from the well-known report by Dominique François Arago, which was delivered in 1839 before the French Chambre des Députés and is considered a foundational moment in the discourse of photography. The speech is often quoted as an early attempt to define and advocate the practice and technology of photography. I propose, rather, to read it as a performance of naturalization of the imperial premises, which had served as the ground from which the new practice had emerged. That Arago, a statesman and a child of his time, confirms the imperial premises of photography and praises its goals is of no surprise. What is striking is how the performance of naturalization is reiterated in non-statesmen's texts, including in texts that rejected the imperial order and goals, such as Walter Benjamin's *The Work of Art in the Age of Mechanical Reproduction* (1935). Such reiterations do not testify to the nature of the 'new' technology, but to the way photography, among other technologies, was rooted in imperial formations of power, first and foremost the use

of violence, the exercise of imperial rights, and the creation and destruction of shared worlds.

Dominique François Arago:

> While *these pictures* are *exhibited* to *you*, *everyone* will imagine the extraordinary advantages which could have been derived from so *exact and rapid means of reproduction* during the *expedition to Egypt*; everybody will realize that *had we had photography* in 1798 *we* would *possess* today faithful pictorial records of that which the *learned world* is forever deprived of by the greed of the Arabs and the vandalism of certain travelers. To *copy* the millions of hieroglyphics which cover even the exterior of the great monuments of Thebes, Memphis, Karnak, and others would require decades of time and legions of draughtsmen. By *daguerreotype one person would suffice to accomplish this immense work successfully*. [*italics* added]
>
> (Dominique François Arago, 1980, 'Report', *Classic Essays on Photography*, ed. Alan Trachtenberg, Leete's Island Books, New Haven, CT, p. 17)

Walter Benjamin:

> Around 1900, *technological reproduction* not only had reached a standard that permitted it to *reproduce* all known *works of art*, profoundly *modifying their effect*, but it also had captured *a place of its own* among the artistic processes. In gauging this standard, we would do well to study the impact which its two different manifestations – the reproduction of artworks and the art of film – are having on art in its traditional form. [*italics* added]
>
> (Walter Benjamin, 2002, *Selected Writings, Volume 3: 1935–1938*, The Belknap Press of Harvard University Press, Cambridge, MA, p. 21)

For both Arago and Benjamin, the existence of images and objects, as well as works of art waiting to be reproduced, is not a question or a problem, but a given assumption. Reproduction is understood in this context as a neutral procedure ready to be used by those who own the proper means for it, and regardless of the will of those from whom the objects have been expropriated. It is based on this assumption and this understanding of reproduction that photography could be perceived and discussed as a new technology of image production and reproduction. A lineage of previous practices that produce and reproduce images should have been constituted for photography to be conceived of as a novel addition, a technology that alters and improves – substantially and on different levels – the quality of the end product. In this means–end relationship, not only is photography construed as a means for the achievement of an end, but the end is also construed as a given, and the existence of the object as simply given to the gaze – of the camera, in this case – is thus assumed and confirmed.

The context of Arago's speech enables one to reconstruct the regime of rights and privileges that were involved in the advocacy of photography. That the world is made to be exhibited is not a question for Arago, nor is it a question that it is not for everybody but for a certain audience addressed in his speech by a familiarizing 'you', an audience made up of white men like him, French statesmen and scientists. The acquisition of

rights to dissect and study people's worlds – the Napoleonic expeditions are a paradigmatic example here – and render their fragments into pieces to be meticulously copied with sharpness and exactitude, is not posed as a problem but is taken for granted. For that to happen, those who are harmed by the use of the new means of reproduction, which had been imposed and used systematically by Napoleon's brigade of draftsmen during the expedition to Egypt, for example, should be bracketed and left out of these debates in which the fate of photography is discussed, and in which the right to operate it is directly and indirectly accorded to a certain class, at the expense of others.

In 1839, those who were directly invoked by Arago's 'you' had already been responsible for large-scale disasters that included genocides, sociocides, and culturcides in North and West Africa and the Caribbean islands, for naturalizing and legalizing these acts through international institutions and laws, and for instituting their rights to continue to dominate others' worlds. At that point, the universal addressee implied by Arago's 'everyone' is not fictitious only because so many were not included, but also since those who were addressed as universal addressees could not come into being without dissecting, bracketing, and sanctioning the experience of violence experienced as other than it was. The violence of forcing everything to be shown and exhibited to the gaze is erased and denied when the right in question is only the right to see. If the right *not* to exhibit everything is respected, a universal right to see that endows 'everyone' with unlimited access to what is in the world cannot be founded. Thus, extending the right to see so as to render 'everyone' as truly universal is not possible without perpetrating further violence. Acknowledging the violence invested in universalizing the objects to be seen, and its predication on the distancing of those who oppose that violence in an attempt to protect their world against the invasion of the new, does not mean restricting the right to see only to those few who acquire it to themselves. What it means, rather, is questioning the imperial right to impose a universal right on heterogeneous worlds whose members maintain a different relation with the material world in which objects are organized, not only for the gaze. It means that as long as the principle that not everything should be made available for the gaze and exist only for the gaze of 'everyone' to see is respected, the existence of a universal right to see is a fraud. When photography emerged, it didn't halt this process of plunder that made others and others' worlds available to some, but rather it accelerated the process and provided further opportunities and modalities to pursue it.

In this world, studying the products of photography (photographs) as detached images, similar and different from other types of images and defined by a distinct ontology, is necessarily approving the violence of their separation and recognizing the authority of experts – be they border patrol agents specializing in reading ID photographs, or scholars who study the bodies of others as if they could do so in the same way if they coincided with the photographed persons in the same unit of time and space, and would have to actively participate in forcing them to be taken thus in photographs. This was made possible only since the shutter that facilitates the production of images was neither limited to, nor started with, the shutter embedded in the camera.

While Arago discusses the reproductive qualities of photography in terms of speed, growth, and accumulation, Benjamin refers to a more substantial change that photography – conceived by him too as the latest phase in a linear development of means of reproduction – brought to 'its' objects, i.e., works of art. Responding to the task inscribed in the position of the expert – explaining the uniqueness and newness of photography – Benjamin has to embrace two assumptions: (i) the universality of the

category of a 'work of art, under which as many different types of object could be processed as if they were destined to be subsumed under it; (ii) that those tokens (of this universal category of work of art) have a coherent history in which photographs – the products of photography – find their place, 'a place of their own'.

Photography *did not* initiate a new world, nor should it be studied as having its own separate history. Photography was invented and instituted in a world that had been shaped through massive destruction and plunder of others. The particular form that such destruction and plunder took deserves our attention when studying the emergence of photography as a visual experience, social relation, and technology. This particular form of violence against others and the worlds in which they used to live can be described – and is in fact defined – by the operation of shutters that separate, dissect, and sanction the effects and outcome of this violence. The shutters provide official approval that there is no violence even though people suffer from it and experience it as violence. Shutters are an integral part of big cultural shrines, universal procedures, a multitude of technologies, legal corpuses written in universal language, and a culture of documents that attest and certify that they are free of violence. Thus with the operation of shutters, sacred graves are made into archeological sites, power masks are made into works of art, and facial traits are made into types. All of these can be opened to a democratic culture of deliberation, meaning, and interpretation, as long as objects are kept as dissected and well-delineated unities, sanctioned by shutters that block the interference and infiltration of undesired elements that threaten to interfere with the detached nature imposed on these objects. The massacre of thousands of Egyptians who fought against the Napoleonic expedition whose goal was to dissect their commons so that objects or representations could be extracted for European museums is such an example.

These new statuses, new names, and new worlds of things and people could not have come to exist without the imposition of imperial rights against others and others' worlds, so that their objection would be made even more difficult to pursue given that these imperial rights against others were legalized and documented. By 'new world' I understand mainly a configuration of violence that destroys *existing worlds* of signs, activities, hierarchies, and social fabrics, and replaces them with a 'new' universal type of objects, classification, laws, technologies, and meanings. In this so-called new world, local populations and resources are assigned specific roles, places, and functions. In images and image-making practices, it concretized and reified the right to destroy, to accumulate, to appropriate, to differentiate, to study, to rescue, to record, to document, to salvage, and to exhibit. Photography could not have been institutionalized as a practice of photographers without these rights that colonizers acquired for themselves, and it also contributes to naturalizing and constituting such rights over others as given. Let me illustrate this with a discussion of the shutter.

The camera shutter – operated and controlled by a few who were mandated to determine how the commons would be exploited, what could be extracted out of it and under which circumstances – was modeled on the operation of other imperial shutters. Photography participated in the reproduction of imperial divisions and imperial rights, and was used to provide lasting proofs that what was plundered, thanks to these rights, was a *fait accompli*, was indeed what other shutters designed it to be so that the photographic shutter could simply copy/reproduce/document 'it'. To illustrate this simply, let me reiterate an example I have presented at length several times elsewhere – the making of a 'stateless' or a 'refugee' or an 'undocumented' by imperial

shutters and its affirmation in endless *documentary* photographic projects as if being a true embodiment of these categories.

As long as the discourse on photography is contained in its 'own' history, it's the existence of photography as part of the enterprise of imperial shutters that is denied. Its shutter is rather described as necessary for obtaining a legible, sharp, and precise image out of the flow of light. Understood as a subservient element of the photographic apparatus, a means toward an end, the shutter is discussed mainly in technical terms related to the rapidity of its closure, the ability to control and change its velocity, and the swiftness of its performance. The picture to be obtained is presumed to exist, even if for a brief moment, as a petty sovereign. The petty sovereign is not what is recorded in the photograph – in terms of its final content or image – but, rather, is the standalone photograph-to-be, the image that prefigures and conditions the outcome of the closing and opening of a shutter. The petty sovereign asserts itself at that moment as *preceding and separate* from the contingency of the event of photography and from the situation out of which a photograph is about to be extracted. It commands what sort of things have to be distanced, bracketed, removed, forgotten, suppressed, ignored, overcome, and made irrelevant for the shutter of the camera to function, as well as for a photograph to be taken and assume its accepted meaning. What is suppressed and made irrelevant has not made it into the discussion of the shutter. The shutter has a history of its own that consists of moments in the improvement of its operation, testified to objectively by the quality of the images it yields. In the technological and historical discussion of the shutter, the only elements that matter are the quality – precision, clarity, recognizability – of the images, the end product, and the erasure of any trace of the shutter's operation. This is an effect of, on the one hand, the means–ends relationship between the camera and the images it produces, and, on the other hand, the dissociation of the camera's shutter from other imperial shutters. That the production of images is perceived as the sole outcome of the operation of the shutter is in itself the great achievement of this device, what renders it imperceptible not only in the photographs themselves but also in the operation of the imperial enterprise altogether, on which the invention of photography was modeled.

In a split second, the camera's shutter draws three dividing lines: in time (between a before and an after); in space (between what/who is in front of the camera and who/what is behind it); and in the body politic (between those who possess and operate such devices and those whose countenance, resources, or labor are extracted). The work of the shutter is not a single operation that occurs only for as long as it takes the shutter to open and close, nor is it restricted only to the practice of photography. If shutters in the service of petty sovereigns were limited only to cameras and were not operative in other domains – wherein the violence perpetrated by the sharp movement of their blades hits bodies at a greater proximity – the departure of the camera and the photographer from the scene would not necessarily be part of a devastating regime. 'Here we're going to take your photograph' – this is what women whose children were snatched from them have been told after being arrested at the US–Mexico border. When the automatic movement of the shutter completed its cycle, at one and the same time launching the event of photography and determining its completion, the women were taken to a different room from their children. Saying goodbye, hugging them, let alone acting as their protecting mothers were no longer allowed, a set of limitations imposed without any knowable or definite end.[2] The structural coordination of the multiple practices and institutions blurs the direct responsibility of each of them in the

further plight that awaits depleted worlds divided into pieces. In a split second these three boundary lines are drawn and redrawn in endless variations, and an image – or, when the shutter is not embedded in a camera, a status – is issued and a *new* state is sanctioned, encapsulated in a differentiated object.

We should reject the invitation to interpret such a *new* state as defined by its place in any historical timeline, certainly not as a novelty to be praised for breaking some grounds, and insist on recalling what the '*new*' destroys by forcing people and things to be made different from what they were, have been, or wanted to continue to be. Once separated from the world out of which it was generated and from which it was extracted, an image or a status is already compatible with and conforms to the technologies, institutions, and experts of a different world. In such a world, one can no longer hear the cries of those who were separated from others and claim not to be precisely what they are doomed to be by these shutters. For those doomed not to be heard, there is no way out of these coordinated technologies and institutions; their cries can be interpreted and treated only as coming after, from the outside, or from an unruly position to be tamed. Consequently, the operation of the shutter commands a degree zero of neutrality, since whatever comes out of its operation is already stripped bare of its singularity, its singular way of being part of the world.

Unlearning imperialism aims at unlearning its origins, found in the repetitive moments of the operation of imperial shutters. Unlearning photography aimed at the purely mechanical operation of the shutter can be pursued only if the shutter's neutrality is acknowledged as an exercise of violence; in this way, unlearning imperialism becomes a commitment to reversing the outcomes of the shutter theretofore assumed as uncontested facts. This reversal must overcome one of imperialism's major dissociations: that between acting people and extracted objects – such as 'documents', 'photographs', or 'works of art' – in which the experts specialize. In other words, it must overcome the practice of extracting aesthetic, scientific, and economic value from existence, life, and activities in a shared world – and of handing over to other imperial apparatuses images and documents to be used thereafter as disposable resources.

At this point, one may try to imagine that at the moment the shutter closes in order to reopen again in a fraction of a second – announcing ceremoniously a new state, a new border, or a new cable station –the people whose lives are forever going to be changed by the act, without even being consulted, are rebelling and do not allow these shutters to sanction such transformations and to make them exist as *faits accomplis*. One may also imagine that those who have been dispossessed manage to recover some of the objects robbed from them, and that others burn the papers that made similar objects the possessions of others.

We should insist on reminding ourselves, however, that this does not require hard, imaginative, or groundbreaking work. This happens anyway and doesn't need to be initiated as a *new* form of resistance – it already exists – and rather needs to be recognized and acknowledged as part of any account of the operation of a shutter (and not solely imagined). Such acts of quotidian rebellion may happen at any moment, in multiple places, and involve numerous different people and objects. Imagine now that you are able to consider all of these occurrences as constitutive of the operation of the shutter; imagine, then, that when you recognize the operation of the shutter independently of such occurrences, you risk effecting their disappearance. Imagine you can grasp and describe this shutter's operation, follow the events that it violently generates, and do so without using the shutter's dividing lines to describe them. Imagine that you refuse

to naturalize the dividing lines and do not accept them as having always been there. Imagine that when a Mexican migrant is killed while crossing the 'American border', you understood and articulated that the killing in fact already happened the moment that the border first came into being. This is what unlearning imperial shutters looks like. This is how the Mexican migrant or the Palestinian refugee insists on unlearning imperialism when they smuggle themselves across the border. They are unlearning the dissociation that unleashed an unstoppable movement of (often forced) migration of objects and people in different circuits, and the destruction of the worlds of which they were part, worlds that were transformed into construction sites where everything can be made into raw material.

Under the rule of imperial shutters, there is no longer a common world to care for but only scattered enclaves to protect. Unlearning imperialism involves an attempt to suspend the operation of the shutter and to not let its traces disappear, and thus the shutter to be exhumed from its outcome. Making the operation of the shutter visible is an effort to resist its operation in time, space, and body politic alongside all of those who did not allow it to be completed. It means to resist the impulse to craft *new* worlds and rather to care for existing worlds and to labor to rewind the operation of its shutters and repair their damage. It means this rather than stating with market and imperial forces that we have no choice but to engage with the total colonization of the world with new intelligent technologies that render existing worlds destructible, while skills of destruction, packaged as vision, discovery, and innovation, continue to be dominated by growing fields of expertise.

Imagine people going on strike in each and every domain of expertise, including experts and providers of free labor required for the operation of these shutters. The origins of imperial violence are not rooted in far bygone times. The origins of imperial violence root themselves constantly through us, as we operate shutters through which the world as raw material is generated as always ready to use, as imperial data and resources.

Thinking about imperial violence in terms of the operation of a camera shutter means grasping its particular brevity and the spectrum of its rapidity. It means understanding that this brief operation transforms an individual rooted in her lifeworld into a refugee, a looted object into a work of art, a whole shared world into a thing of the past, and the past itself into a separate time zone, a tense that lies apart from both present and future.

The camera's shutter is not used here as a metaphor for the operation of imperial power, but rather as a later materialization of an imperial form of power and governmental technology, as if modeled after it, programmed to reassess visually and institutionally imperial modes of world destruction and construction.

Potentializing the history of photography should involve an attempt to attend to the violence through which photographs could become its products, and be studied as such. Potentializing photography is an attempt to attend to curtailed meanings of events – meanings shredded thinly so as not to subsist, even though they were generated, written, and published more than once – and to engage with them, recognizing them as potential pieces of histories to be continued. Let me present this through an example, but at the same time claim that this is not an example but paradigmatic of the violence that photography is made to sanction. To begin with, it cannot be reduced to the fraction of a second of the operation of its shutter. For an event such as the mass withdrawal in the 1860s of hundreds of thousands of slaves from their positions of

servitude to prolong and shape what would follow, a rewind process of the operation of the multiple shutters that dissected it should be played so as to attend to it in its duration. On this strike, DuBois writes:

> this was not merely the desire to stop work. It was a strike on a wide basis against the conditions of work. It was a general strike that involved directly in the end perhaps a half million people. They wanted to stop the economy of the plantation system, and to do that they left the plantations.
>
> (W.E.B. DuBois, 1992 [1935], *Black Reconstruction in America – 1860–1880*, The Free Press, New York, p. 67)

This general strike does not wait to be revealed yet again in an episodic manner from the archive by a historian who relies on an accumulated and transmitted forgetfulness among his or her peers. It should rather be affirmed and confirmed in its existence and persistence as a general strike in a way that the operation of the shutters would not be embraced as imperceptible. The challenge is to situate oneself as an actor in the midst of the contest of meanings and to engage with curtailed meanings in a way that their reference is not reified and captured by a single event of bygone time. The challenge is also to let be the cumulative effects that could be set off by resisting the shutters that were programmed to shut off and curtail them, and disrupt the chain of effects they could have unleashed and then accumulate and augment in a kind of domino effect.

Below are some photographs taken by Timothy O'Sullivan in 1862.

In the first photo, eight African Americans are seen gathered in front of the camera for a group portrait, while two others are seen in the background (no records are available that suggest whose choice it was – theirs or the photographer's). This photograph is included in numerous publications on slavery, as if it were its ultimate image; it was taken in a plantation named after its owner, one J.J. Smith according to the caption, who had exercised much violence in order to become its owner. Whenever this caption is reiterated and asserted as factual, the effect is actually another imposition of the planter's ownership and position on a disputed property that determines its future status as a property, a piece of commodified land, and the rights and body politic that would be associated with it with the abolition of slavery.

The recurrence of the caption 'J.J. Smith plantation' is telling, for it shows the role of photography in asserting racialized property (a plantation in this case). Racialized property – a system of ownership whereby ownership is denied to the subjugated race and acquired by the master race through this very subjugation – is irreducible to slavery. It was kept as part and parcel of the political regime of which slavery was part, but was not abolished with its abolition. The political regime, which was based on slavery and made it possible, was not dismantled when slavery was abolished, because its components survived this abolition and were not redefined. The shutters through which it operated continued to affirm and reaffirm the statuses of racialized property.[3] In other words, the abolition of slavery didn't mean a full disaffiliation of African Americans from slavery and of whites from stolen wealth.

Looking again at the photograph from the 'J.J. Smith plantation', one might note that some of the eight photographed persons might not have been slaves even before the American Civil War, but certainly, and contrary to what is stated in the accompanying

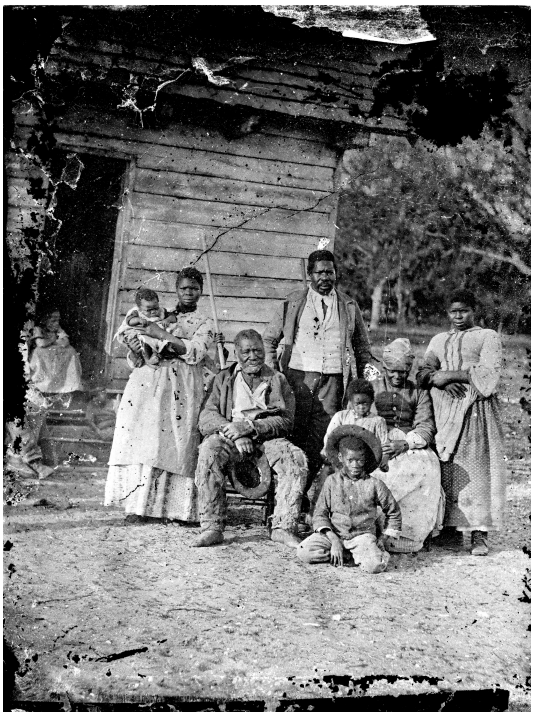


Figure 3.1 Land rights claimants. The common caption reads: 'Negro family representing several generations. All born on the plantation of J.J. Smith.' Beaufort, South Carolina, 1862. Photographer: Timothy O'Sullivan, Library of Congress.

caption, they were not slaves when the photo was taken. Neither slaves any longer, nor plantation workers – as the land is no longer a plantation, J.J. Smith's property. The caption doesn't reflect anything of their struggle to free themselves and negotiate their own and others' rights, a struggle that the caption loses but the photograph can still yield. Like hundreds of thousands of African Americans at the time, they contested the meaning of property attached to lands cultivated through their enslavement, and by claiming their share in these lands, they further distanced themselves from their positions as slaves and sought to realize the potentialities that this withdrawal entails. The meanings of worldliness, land, commons, rights, property, labor, and politics that emerged out of their engagement with the world were far from being exhausted. The violent disruption of these insurgent meanings came with the governmental shift from assisting former slaves to the restoration of the racialized economy of the South, but was confirmed with scholars who didn't cease reiterating racialized meanings as *faits accomplis*, such as those encapsulated in this caption. The photographed persons are in the midst of an attempt to claim what is due to them in exchange for their labor and as an advancement for their due reparations. Potential history, though, is not about writing an alternative history, but rather recognizing the potential politics in occurrences such as the general strike or the claiming of land rights, and that with one shutter after the other they are threatened to become anecdotes at best.

The series of seven photos taken by O'Sullivan can be interpreted as separate, unrelated anecdotes. But it would be more reasonable to approach them as the tip of the iceberg of plenty of images of former slaves posed in all kinds of situations, which could have been but were not taken. Were they taken they would have exploded the 'type' – 'slaves' or 'emancipated slaves' – that they were expected to perform, or in relation to which others engaged with their actions. These types are reflected in many of the captions of photographs that are part of the relatively slim and very limited corpus of photographs from this era. The fact that the corpus of photographs from this transitional moment is tiny is not an issue by itself, except for the fact that the forces against the recognition of African Americans as full political actors have triumphed; while they keep fabricating the phenomenological field out of which histories are being written and meanings are being shaped, this is done in part also by manipulating the relatively small photographic corpus.

Potential history is an attempt to prolong the impact and meanings that these actions had – or could have had – on others and on the political regime, before the next beat of a shutter would shred them and compel others to dismiss them. In his petition to the UN in 1947, DuBois discussed the origins of slavery in an attempt to disaffiliate slavery and blackness, claiming that not all blacks were slaves and not all slaves were blacks. What DuBois sought to achieve retroactively emerged as also difficult to achieve prospectively, in the post-slavery era. If their attempt to become full actors had not been violently opposed, their inspirational modes of proposing a way out of the abomination of slavery as a political system would have assigned African Americans a leading role in this transformation.

Here, briefly, are four major threads of this small corpus and its uses, which are rarely ever problematized when single images are being used, and could therefore become instrumental in preserving the racialized template of the body politic and its visual regime:

(a) Images of African Americans taken before and after the abolition of slavery are used alternately to depict both eras, regardless of the political status of the photographed persons.
(b) These images are used as illustrations, providing flimsy information about an image's background in a way that makes it easy to attribute the African Americans' deprivation, poverty, and subjugation to the faults of the photographed persons, and to dissociate them from the wealth produced with their labor, work, and action.
(c) Thus the images are complicit in perpetuating the possession of unjustly accumulated wealth in the hands of white Americans, which is then cherished and displayed as a great achievement, denying and disavowing its origin in African Americans' stolen lives.
(d) There are hardly any incriminating images of enslavers and planters who instantiate racialized ownership.

That a 'slave' could be recognized in an image of an African American who is not – or not anymore – a slave is a symptom of the absence of reparative modalities, including in image-making, putting an end to the regime of slavery. This is due not only to what is *in* this tiny corpus, but also to what did not occur and was not registered in it during the first decades after the invention of photography. Here are two examples.

In another of O'Sullivan's photographs taken on that August day in 1862, we see barely half a dozen 'Fugitive African Americans fording the Rappahannock River'. When the image is reduced to the number of escapees who forded the river on that same day, or to its corresponding record in the archival data, this single image falls short of invoking the image of a general strike and of the inspirational enactment of freedom that it performed. 'Listening to this image' (Tina Campt) with closed eyes, viewing beyond the details that made it to O'Sullivan's single frame, and concentrating on the world in and out of which it was taken, one should be able to attend to the departure not of a very few but of hundreds of thousands of people who opened the door to a world that they insisted was possible, a world in which slavery could not have its afterlives (see also Figure 3.3).[4]

In the same vein, one should problematize another absence, that of images of reunions – physical, symbolic, and emotional reunions – of African Americans with the stolen objects of their destroyed worlds, held in hundreds of local museums in the US and elsewhere. For the time being, until such untaken photographs show up, I propose to use these juxtapositions as placeholders in the photographic archive, upon which other, worldly, meanings can be built without being determined by the lasting presence of imperial agents and the regime of racialized property.

The meaning of emancipation as it was revealed with the disengagement of slaves from the plantations and their engagement in new colonies threatened not only the

Figure 3.2 'Fugitive Negroes, fording the Rappahannock River following the retreat of Pope's Army, August 1862.' Eastern Virginia, 1862. Photographer: Timothy O'Sullivan, Library of Congress.

Figure 3.3 Dismissed exposures: 'From the opposite end of the white world, a magical Black culture was hailing me. Black sculpture!' Franz Fanon.

system of power of whites over blacks, but also challenged the consolidated meaning of freedom as shared among slaveholders. This meaning goes back to the origins of the US and its foundations, and continues to be emblematized in Western museums that hold others' cultural wealth shared with imperial citizens as a modality to keep them complicit with the status of these objects as items in a fictional narrative of art history rather than as proof of the never-ending plunder of peoples in which their rights are inscribed. The imperial regime of rights, instantiated by different technologies of which photography is only one, grants to those from whom their material culture was expropriated – be they slaves or 'undocumented' – the minimum of rights while keeping them on the verge of being objectless, let alone objects inherited by and from others in their communities.

Let me illustrate this briefly with two photos from the second decade of the 21st century. Over the course of seven years, the Roma people in Paris settled in a few deserted zones in the 18th arrondissement, improvised their homes, and established a dense neighborhood with its own spatial syntax to respond to their needs and habits, including common and shared spaces. In the course of a single morning the police 'cleared' their neighborhood with promises to provide alternative accommodation. Without idealizing these makeshift quarters, what was established there in seven years cannot be replaced with provisions, not even when they are defined as a 'better shelter'. In the same year that this habitat was demolished, IKEA and the United Nations High Commissioner for Refugees (UNHCR) launched their 'Better Shelter' campaign,

the engineered materialization of the bare minimum of rights to be provided to the main grounding figure of human rights that, during centuries of imperial rule, has been reduced to an embarrassingly minimal existence – the human.[5] The 'human' is the universal effect of the long-lasting denial of the violence exerted against real people in order to make their state of dispossession a matter of fact and its origins obscure and obsolete, thereby justifying the betterment of their state. Hence, the 'better shelter' can be described by its authors, literates in the Universal Declaration of Human Rights, as:

> a social enterprise driven by a mission to improve the lives of persons displaced by armed conflicts and natural disasters. We aim to be the leader in emergency and temporary shelter innovation, and continuously develop our products together with our partners, customers and, most importantly, the people who live in our shelters. We strive to create a safer, more dignified home away from home for millions of displaced persons across the world through innovation.[6]

If there is a speculative aspect to my proposal to read in such a device the sum of rights the human is provided with, the collaboration between IKEA and one of the main UN organs – the UNHCR – in the invention of this device confirms its plausibility.

See Plate 1, Roma people / encampment / Paris.
See Plate 2, Ikea / refugee / shelter.

As long as imperial violence persists and is reproduced as part of the imperial condition, with no closure and no cure to the damage this violence has created, we should refrain from studying it episodically, accepting its framing as it is generated for our gaze by the imperial shutters. We should not let the 'novelty' of the image or the victim blind us from recognizing the imposition of the imperial principle of progress as inevitable. We should rather insist on our right to share the world with others in a different way. It may be of no surprise that today, as previously, when the engagement, complicity, and collaboration of 'everyone', including exploited subjects of imperial rule, are required every fraction of a second, people imagine the potential collapse of the technologies by which they are ruled, and are also made to believe that they must be ruled thus, in the form of a strike. And most likely such a strike has already started, in the same way that the general strike of slaves started a few decades before it could be accounted for as such.

Notes

1 On 1492 as a moment of origins see, for example, Sylvia Wynter, 1995, '1492: A New World View', *Race, Discourse and the Origin of the Americas – A New World View*, Washington, DC: Smithsonian Institution Press; or Houria Bouteldja, 2017, *Whites, Jews, and Us: Toward a Politics of Revolutionary Love*, Los Angeles, CA: Semiotext(e).
2 This is what US Representative Pramila Jayapal, who met with 174 women at SeaTac prison, heard from them. See https://www.seattletimes.com/seattle-news/politics/pramila-jayapal-168-women-seeking-asylum-held-at-seatac-prison-most-with-no-idea-where-their-children-are/
3 In his research-based novel published in 1911, *The Quest of the Silver Fleece*, DuBois showed that, though slavery had been abolished, the wealth of the South continued to be administered under the same racialized regime, but now on a national scale, with

Northerners as investors (W.E.B. DuBois, 2017 [1911], *The Quest of the Silver Fleece*, Scotts Valley, CA: CreateSpace).

4 Tina Campt, 2017. *Listening to Images*, Duke University Press.

5 In distinction from Lyotard and Rancière, I insist on the possibility to anchor historically and imagine theoretically a different discourse of human rights.

6 Quoted from the website: http://www.bettershelter.org/.

4 Between Topography and Topology

Susan Trangmar

> *Before, there were no eyes to see what was (taking place). No recognition or expectation. Nothing was missing.*
>
> *No matter how abstract it may become, topology remains fundamentally bodily … topology marks and maintains the meeting of abstract and concrete, the activities of analysis and the primary operations of touch and moulding.*
>
> Connor, 2002

There is nothing natural about the term 'landscape'. The history of the word itself shows us that the material substance of the Earth's surface has always been scaped, i.e. shaped and formed by agricultural, industrial, and aesthetic practices. Tim Ingold has pointed out that the influential genre of northern European painting that developed in the late 18th century gave rise to an emphasis upon approaching landscape as primarily an act of scenic observation rather than the lived practices of shaping the environment,[1] and the 19th century saw a further refinement in landscape representation with the introduction of photography, which from its beginning was closely tied to exploration, surveying, and mapping through practices of scoping and scaping. While photography was fundamental to the European colonial projects of mastering and controlling newly discovered lands, at the same time it was enthusiastically applied to more local, worked over, and familiar landscapes of England, and continues to be so.

In topographical terms, to 'scope out' is to survey a surface, in preparation to shaping it. The act of surveying has political, economic, and cultural consequences; it maps the territory and identifies frontiers and boundaries. To survey by representing in a map, a sketch, or a photograph is to make the land identifiable as a place, subjecting it to acquisition and management. The representational practices of much landscape photography today still utilize methods of surveying, combining the Albertian model of perspectival representation which is based upon the principle of the horizon line, establishing a 'level-headed', grounded basis for the picturing of place as a 'view'. This paradigm of rational representation places the observer/spectator in a position of mastery and the intention is to lay the world out as a surface available for inspection and appropriation.

This chapter examines the possibility of an alternative visual practice that draws from an understanding of landscape as an already entangled and diffracted entity, unstable and mobile, resistant, and responsive to human presence. Taking as a point of focus the specific coastal location of Dungeness in southern Britain,[2] the impact of environmental and industrial activity on this place and its increasing visibility as a

tourist site prompted me to consider the agency of the artist/photographer in relation to it. The images produced as part of this consideration could be seen as topographical in the sense that they address a place identified by geographical coordinates which is local to Britain and well known for its recent geological formation and continuous surface movement of deposition. Here, however, the production of images combining smartphone camera, human body, electronic printer, paper, and specific environmental characteristics opens up the representation of a site as a topography to a process of sensory, tactile, and cognitive engagement. Image emerges not as static topography (as a laying out of ground) but as dynamic topology (as transformation). Rather than image *of* place, the process produces image *as* place and place *as* image. Such a reworking of the concept of 'landscape' involves the human as one element the world passes through rather than as someone who passes through the world.

The place known as Dungeness is a cuspate foreland lying toward the eastern end of southern Britain not far from Dover. Protruding into the English Channel, the land mass forms a barrier against inundation of the marshland behind by the sea and is remarkable for being the largest body of coastal shingle in Northern Europe.[3] The combination of geology, coastal climate, human and animal inhabitation existing there has given rise to a unique topography and ecology. The 'ness' (meaning 'promontory') is of recent formation in geological terms; from 6000 BC the power of the prevailing ocean current precipitated the effect of longshore drift – sea waves pushing glacial material up the English Channel in a northeasterly direction. The flint pebbles ground down by the friction of waves began to accumulate as a barrier formed of successive ridges of shingle on the southern and eastern side of the promontory from around 1500 BC, a depositional process which continues today. The ridged landscape so formed is a record of seasonal weather patterns over the centuries, a kind of climatic and temporal fingerprint. Through a scarcely perceptible gliding and ebbing, the coastline continues to remake itself, shoring up, eroding, and edging along, heaving itself eastward. The foreshore is also subject to the erosive powers of the storm tides, themselves influenced by sunspot activity, seasonal gravitational fluctuations, and global weather pattern changes. Currently, the effect of the movement of longshore drift is temporarily undermined by seasonal commercial transport of shingle from the eastern edge of the promontory to the southwestern coast, a Sisyphean effort to shore up the coastal defenses and reinforce the shingle barrier protecting the nuclear power station situated on the tip of the unstable promontory. Concrete barriers reinforce adjacent stretches of the coastline and attempt to hold back the ocean, but the wave power generated at this point, combined with rising sea levels, makes this a landscape susceptible to radical change.

While the marshland to the north and west of the foreland has been painstakingly reclaimed from the sea by human labor over the centuries to become valuable pasture and arable land,[4] on the ness itself the living traditionally came from the sea. The chief human-made feature of the landscape from mediaeval times has been the presence of lighthouses successively powered by wood, coal, oil, electricity and now rendered almost superfluous through satellite navigational systems. In earlier times the lighthouse was not only an important navigational aid to shipping; to own the rights to shine a light upon both land and sea was a major development in political and economic technologies of surveillance and power and a lucrative source of revenue. The commercial and cultural connections between here and the northern coast of Europe were often greater than those with the rest of the island.

With the arrival of the railway and the invention of tourism the ground itself began to be industrially and commercially mapped and excavated. With roads and railways came the extraction industries, new forms of farming, increasing numbers of visitors, and army occupation in the Second World War, followed most recently by nuclear power plants. The nuclear power station and army ranges on the southern tip and to the west have harnessed the presence of natural energy sources and permanently impacted the geology and ecology. Much of the shingle ridge formation has therefore been disturbed by human activity; large amounts of shingle were removed by rail during the 19th and early 20th centuries for the aggregate industry (which still continues) and the rail trucks on their journey back from London transported the city's industrial and domestic rubbish back to the excavated site to be dumped there. Exhausted coal slag heaps litter the site with rusting parts and mineral deposits which stain the shingle shades of orange, blue, or metallic grey. Mounds of now grassed-over debris pepper the ground, and craters created by the offloading of surplus ammunition by German bomber planes flying sorties during the Blitz extend along the trajectory of the dismantled railway, periodically emerging as algae-laden freshwater ponds. Occupation by the military left behind a tangle of rusting wires, crumbling concrete buildings, and buried equipment which have added to the perception of the place as both picturesque and surreal. Geographically isolated from urban centers, and therefore marked by waves of exploitation of its natural resources, the material fabric of the site has developed as a shallow and absorbent meshwork vulnerable to competing natural and economic pressures.[5]

Cartographical technologies ground the human ontologically and epistemologically, dictating how a landscape is to be inhabited and understood. Forms of topographical mapping – the organization of point of view and production of spatial knowledge – can either connect us to the environment or organize it instrumentally as a flat surface to be controlled, what Doreen Massie has defined as 'the sphere of a completed horizontality'.[6] Successive paper maps of the area record contours, physical edges, and boundaries, showing how across several hundred years the geophysical balance between land and sea which forms this particular coastal promontory has violently shifted and land exchanged hands. While such maps of the coastline were produced by surveyors, for fishermen, and shipping the expanding and receding coastline with its changing inclines and angles in relation to directional current required practical experience to negotiate it. For hundreds of years the local population of fishing families on the peninsula had no need of paper maps; looking to the sea, their informal cartographies were complex, multidimensional and experientially based. Knowledge of the sea for fishing was acquired through observation and memory of migration patterns, cloud formations, the currents of the winds and ocean, and guided by the movement of the stars. In contrast, mathematically based geographical cartographies use projective techniques of spatial and temporal measurement, drawing out an abstracted topography as a series of informational coordinates and surfaces for surveillance, navigation, governance, ownership, and conservation. Such mapping techniques have developed in tandem with GPS and imaging techniques to regulate all aspects of economic and social life on the ground; all is laid out for inspection and subject to monitoring. Weather patterns, bird migrations, freight deliveries, tourist footfall, and cross-Channel licit and illicit traffic can be forecast and tracked.

The development of global cartographic and imaging technologies, the programmed transmission of data from satellites orbiting the Earth, tracking and recording data,

and projecting it back, increasingly shape complex temporal and spatial narratives which are nevertheless uneven in their application. Alongside GPS installed in most vehicles or smartphones, the local infrastructure of energy and communication lines to the peninsula is inconsistent and unstable. Lightning storms are frequent, often knocking out the local power supply, and Internet connections are unreliable. A cluttered tangle of overhead power cables vulnerable to wind and weather connect one building with another, the electricity supply often faltering, despite the proximity of the power station which towers over the local landscape.

Nevertheless, if there is a wireless signal in this location, as owner of the ubiquitous smartphone camera, I am able to establish geo-positioning, to organize and distribute information as visual, voice and text-based messages, statistical data, and digital graffiti. I am then connected into a seething network of commercial data transmissions and interactions between local and distanced interests which complicate multiple simultaneous experiences of locations and events. The applications available to me generate modes of orientation and perception and patterns of behavior which are fed back via feedback loops to inform a constantly mutating culture. Connectivity is both content and message. Not only does the material constitution of what I understand to be an image radically change with digitization but also the ontology of the image itself, from one of intrinsic guarantor of the real, to one in which the real is constituted by the exchange value of image as information.

The culture of computationally produced and circulating images is what Vilém Flusser has defined as the age of the technical image.[7] Flusser maintains a distinction between traditional images based on observation and mimesis and technical images based upon computation of concepts. Derived from observation and imagination, traditional images have symbolic content; they are codes of signification deciphered through traditions which aim to maintain stability. Technical images, however, are derived from calculating apparatuses which take bits or particles of information and recode them. These apparatuses are not observational, they do not 'see' with all the subjectivism this implies, they simply compute in order to fabricate. However, the abstract information produced by such apparatuses needs to be made concrete as an image; it takes form and presents itself as appearances and surfaces to be grasped and manipulated. Surfaces can then be grasped by fingers and fingers (digits) can count. To grasp with the hands is to calculate using finger-operated apparatuses – what Flusser calls to 'calculate and compute'. He suggests that while the photographer (for example) can only work within the parameters of such pre-programmed software, she can work against the autonomy of the apparatus from the inside, from the automatic function itself. The question then becomes one of the relation between the apparatus (in this case the smartphone camera) and the human and what this relation produces.

I *flip* open the smartphone, with index finger *swipe* the home touch screen, *trace* out the security identification pattern (one can use fingerprint recognition), and *switch* on/off the data connection. The microchip powering the smartphone is made up of silica (the same base chemical, silica dioxide, found in flint stone)[8] plus a conductive grid coating of silica transmitting an electric charge between screen and finger which allows the device controller to locate the position of the finger on the screen. I *tap* on the gallery icon. A gridded mosaic of thumbnail images pops up on the screen, to be *scrolled* through. With a *pincer* gesture of thumb and finger individual images can be expanded or reduced, recognizable shapes spreading out to become geometric patterns of color, patches of light and dark, lines, and ragged edges. The backlit screen imbues them with

a luminous glow and the differing formats of each miniature *thumbnail* image fit snugly against one another, giving the overall composition the appearance of a series of aerial landscapes divided into an urban grid of streets. No matter at what scale or resolution the images expand or collapse into, the kaleidoscopic optical pattern falls into a linear geometry, drawing the eye to *pick out* rhythms and repetitions. These images are the result of computations which enable a form of distributive cartography. Spatially discrete images can be organized chronologically or thematically. As long as computer power and signal network is available, the information contained by these digital artifacts can be reproduced anywhere, at any time. They can be shared, geo-tagged, referenced, replicated, compressed, gathered, or scattered. While it is ostensibly possible to delete a file at the *flick* of a finger and erase an image, the data itself remains written into the chip, persisting as data remanence which can be unlocked with specialist skills.[9]

See Plate 3.

Contemporary smartphone cameras provide a number of pre-programmed modes to construct scenes, one of which is the panoramic mode. The scenic format of the panorama as an architectural construct was a popular form of public entertainment in the 19th century, combining the familiar elements of landscape painting with the technological advances of optics and projection. The panorama was a highly influential medium of viewing and shaping the world politically; the European military and colonial projects of the era could be narrated and historicized in the composition of the painted landscape. Constructing a field of view greater than that of the (static) human eye, the panoramic view was immediately developed as a photographic technology which rationalized space as smoothly extending outward from a commanding point of view to a virtual horizon.

The panoramic function of the contemporary smartphone camera (like its photographic precursor) is designed to give an illusion of a continuously extended planar space assembled through sequences of still frames, emphasizing seamlessness and consistency of point of view. However, operating on a principle of sensor-scanning rather than light-based chemistry, the camera's optical sensor numerically calculates photons (Flusser reminds us that the word 'calculus' originates from pebbles used on an abacus)[10] and it is the algorithmic processing resulting from these calculations which produces image segments which can be recombined and reorganized in the production of an image. Specialized software applications take over the stitching of images, joining slightly overlapping fields of view; but if the camera is not rotated around the central vertical axis, the processor will overlap but not align artifacts and the principles of monocular vision will be disrupted. Coherence disrupted in this way breaks with the assumption of an inherent connection between the photographer's eye and the 'eye' of the camera as a grounding principle. If there is no attempt at a mimetic representation, purely geometrical opticality loses its pre-eminence in acts of scoping and scaping which can then be opened up to more complex sensory/cognitive engagements with the world.

Phone in hand, I check my battery charge, switch off data connection and walk out into the ness, following the sinuous tracks made by the habits of others. The combination of pervasive ambient sunlight and the looping of the coastline acts to disorient and confuse the eye. Distances between the landmarks of the power station and the lighthouses seem to fluctuate, and uneven surfaces require careful attention to the ground

beneath my feet. The rhythm of walking engendered by the coordination of sensory perception and physical movement in maintaining balance and equilibrium is amplified in the swinging movement of the smartphone within my hand. I slowly swing my arm in a lateral curve; right arm draws out, left arm balances. The body anticipates, guides, and then follows the line of the hand, and the camera is part of this gradual sweep in the air, the camera sensor tracking the physical movement through space and calculating variations of light as it goes, processing the information into a series of encoded frames. While the gesture is premeditated, the manoeuvre is limited by the extended articulation of muscles and joints. This is an action so much 'second nature' that it seems constitutive of what it might mean to be human (even when enacted by a robotic arm, for such mechanisms still exhibit a trace memory of human kinetic activity in their design). The trajectory taken is based upon experiential memory arising from the coordination of the bodily senses, a proprioception of stretching torso – swinging arm – rotating wrist – grasping hand in a coordinated, threaded-through dexterity. The neuromuscular motion is the conduit through which mind springs into action in partnership with the whole body, and the gestural trajectory incorporates both interior and exterior forces, enacting an incidental spatial dynamic dependent upon all the forces at play.

The smartphone is a clumsy object for drawing in space, designed for index finger and opposable thumb operation; it is not well suited to the twist and turn of the pivoting wrist joint and flexing of the hand.[11] There are resistances, limits to physical dexterity and reach. The speed at which the image processor can capture raw data cannot always match the speed of the act of 'drawing out' in space with the handheld camera. While the camera optics attempt to maintain a consistent focal point, the neuromuscular physiology of human optical perception is itself immersed in a more complex rotational gesture that incorporates senses responsive to spatial orientation and proximity. The eye is connected to the apparatus through the localized sensitivity of the fingertip on the button and the cradling of the handset in the palm of the hand. But more than this, within the orbit of the moving body in space the 'eye' of the hand is in touch with and is touched by the smartphone, uniting organic and non-organic electrical currents of energy. In being in touch with, and being touched by, there is a reciprocity of affect as body and device are each tied up in and guide one another and this affect is in turn caught up in the spatial extensions and contractions of the body in space. Prehension as intuitive grasp of action becomes apprehension, a conscious understanding that the world can shape and move us even as we attempt to shape it in moving through.

I pause, press the stop button, and review the 'captured' image. The data processed in such a way produces an image with characteristics which are an aberration from the program's predetermined intention, the processor registering information as a disturbed stuttering of visual coherence. Pixels are repeated or lost. Image stitching is broken or frayed. The resulting image is marked by jerks and hesitations, shot through with dropped or repeated pixels, glitches, and compressions. These characteristics can be said to be a consequence of the device taking on an 'un-readiness-to-hand', an operational disturbance to skilled use, in this case an intentional disturbance.[12]

Depending upon the duration and speed of exposure, the panoramic format is compacted or expanded, the image a two-dimensional visual patterning marked by scissions. The system of perspective which establishes a fixed viewpoint has been disrupted, flattening out perspective or tracing out fragmented curvatures of space;

the image becomes free-floating and multi-perspectival. I perform the exposure again. With each repeated gesture of exposure, the line and speed of movement and duration of exposure alter the format and dimensions of the image; there is no consistency. And with the redistribution of pixels, the matrix of the image is variable. The resulting image has contingency woven into its fabric, as the outcome of the flawed processing cannot be exactly predicted.

See Plate 4.

I tap shut the gallery window, considering whether to switch on data connection. Connectivity can only be delayed, but the interval of delay is significant. Without data connection these images as the after-effects of electronic processing exist as latent possibilities. Should the camera phone and its contents be lost without the data held by the system being redistributed then the loss can provoke anguish – as if not only the material object but the data itself is analogous with one's own subjective memory. Bernard Stiegler has argued following palaeontologist and archaeologist André Leroi-Gourhan that human – technology – environment have always evolved hand-in-hand and that the production of artifacts is key to the formation of human memory. The evolving exquisite synchronicity of hand-eye neural coordination in early humans facilitated a shared social dexterity in toolmaking, and the development of memory was embodied in the interlinking of neuromuscular hand, tool, and artifact. Together with genetic and individual memory formation this embodied-artifactual memory has been the mainspring of hominization. Stiegler argues that it was only with the development of artifacts as tools of measurement and management of events that they became mnemotechnologies, rather than mnemotechniques: 'It is no longer simply a method of memory storage, a mnemotechnique, but instead a fully fledged mnemotechnology, a technology that systematically orders memories.'[13] It is the systematic ordering of memory formation which conditions an experience of time and creates a mode of behavior which can be packaged and commodified.

As smartphone cameras produce images for continuous circulation and consumption, modification and exchange, the image gains significance by its sharing power and multiplication in wildly differing contexts. The flux and flow of images constituted in this way form cartographies of memory, collectively exchanged in the moment, open to reformulation and reinterpretation. Cartographies of memory are also the means of self-orientation, giving a coherent sense of self in relation to place as well as time. It would seem then that, for better or for worse, the *raison d'être* of these technical images is to be shared online, to give them life as part of the ever expanding universe of image-forming collective memories. Such images become part of a stream of connectivity and their potential significance is embodied within a currency of redistribution which must operate at ever faster speeds to retain commodified value. This is made possible by the speed of algorithmic calculation of data which has an inverse effect upon longevity – images become more easily expendable. They are taken up and absorbed into the matrix of online information networks which continually suck in more. Stiegler argues that the current epoch of media information technologies (or hyper-industrialization), powered by the capitalist demands for increasing consumption, speeds up transmission time to the extent that there is no delay between event and reception.[14] Compression of data for faster processing, compression of memory span. We experience a technologically mediated event as that

which has already been anticipated and historicized, i.e. fabricated and determined, even before the event takes place. The temporal compression caused by speeds of connectivity overtakes the necessary delay required by humanly powered mnemonic technologies or psychic individuation to reprocess information and share it in a process of collective individuation.[15] The experience of registering and attending to such images can become an exhaustive process with no rest, which can indeed exhaust time as the brain struggles to keep pace – not just to regulate inflow and assimilate but also to reflect and act upon. The increasingly fast operative speeds constitutive of hyper-industrialization have the power to atrophy the exercise of anamnesis (the embodied act of memory), that is, the possibility of psychic reinterpretation, deviation, and, therefore, self-determination. As the human becomes a functionary of the preprogrammed apparatus and its voracious requirements, the fear is that the capacity for psychic life will become more and more predetermined by an autonomously operating machine. However, while humans are easily captivated by speeds of automaticity, technical memory aids do not (as yet) replace the autopoietic power and fallibilities of human anamnesis; they are a form of information storage (hypomnesis) which, while conditioning and elaborating subjective memory formation, does not displace it. It is in the 'how' of the interaction between both, the kind of attention made possible, that the power of invention takes form.

So for now, I decide to interrupt the feed, sidestepping the circuits of networked distribution. Such a diversion would appear to reduce the undoubted creative interventions possible through online collective participation in construction and circulation of digital image networks. But we could also say that to interrupt this feed means that the focus of attention shifts, from the visible transfer, sharing and tracking by others (what might be considered the logic of the panopticon as a form of electronic surveillance) to an emphasis upon the involvement of printer, hand, paper, and print as one stage in an expanded process of making, of taking shape in which 'seeing' takes place through the hand. Far from disabling potential, in the temporary withdrawal from one regime of circulation, another mode of disclosure becomes possible.

In discussing the role of the hand in the course of human evolution and 'the intermeshing of tools and the motive gesture', Leroi-Gourhan states that 'the real significance of tools is in the gesture, which makes them technically effective'[16] and that in tracking the progressive de-skilling of manual dexterity in post-industrial times 'the hand is used to set off a programmed process in automatic machines that not only exteriorize tools, gestures and mobility but whose effect also spills over into memory and mechanical behavior'.[17] While the digit that pushes the button has no specialized dexterity in itself, seeming to act only as a pressure trigger, the hand still exerts agency in the context of the thought that inspires the gesture; it can either engage in mindless automatic repetition or it can consider its action as one which is informed by and open to circumspection.

Circumspection here is a mode of engagement, a concern for the way of handling or comprehending; the hand 'casts about', looks around for a way of how to go about doing something. While determined by the limited options of the printer's program, the reprocessing of numerical data into a printed image requires a decisive touch of the fingers, and a gesture of the hand which has its own motivations (both conscious and unconscious) in bringing forth. We can call this activity one of editing, from the Latin verb *edere*, meaning 'to bring forth, produce', and a process of preparation. Editing here is understood as a process which incorporates an intuition of the gestures

inherent to the material formation and works to reshape them from within; it is not an operation applied to inert matter. So to print an image is to be engaged in a form of editing which takes account of the relation of the hand to what comes within its milieu. As a specialized sequence of intermediations and extractions, authorizations and reinterpretations, editing creates differentiation and repetition, reproduction, and the publication of series. Processes of editing reframe, translate, and so introduce variation. These procedures create further processes of delay and return, re-cognition and reinvention, conjoining thinking and doing in elaborations of memory formation which are dilatory and open to affect.

How do the printer/operator cooperate? Electrical energy generates the power to move. Fingers press the buttons following a series of automatic instructions for data to be extracted from the camera's memory chip and re-encoded through another data encoder before being sent as a series of instructions through an inkjet printer. Hands place the paper in the printing tray, inserting the coated sheet of paper right-side down into the feed tray. A limited number of options are available to choose format, print quality, speed, etc. Press the button. Fingertip pressure initiates processing for output, the paper presses against the roller and unfurls as it moves through.

See Plate 5.

The decisions involved in the reprocessing of data to make a print on paper produce a sensuous object of particular tactility and volume. It gives a feeling in the hand through which we identify and remember. More objectively, the substance of the paper has a dual identity, being both surface and object simultaneously, and this dual identity hinges on an edge which is two-fold, that of both the physical sheet of paper and the framing edge of the surface image.[18] The condition of the paper is the image and the condition of the image is the paper: each stabilizes the other. A double framing. If the printed surface is taken as paramount, the other face becomes the underside, the one revealed as surface at the cost of the other. This is our usual experience. But once we approach the paper as an entity and not as simply a surface, then it is impossible to ignore the paper as double-sided. One cannot exist without the other; the underside is the upperside and the upperside the underside. Two edges and two surfaces with a palpable thickness between. The substance of the paper is understood as continuous surface and physical body at once. And all surfaces are themselves interfaces opening onto other surfaces and other bodies. Could we then think of the sheet of printing paper as itself both active and substantial, akin to a moving body of shingle – which is surface, form, and substance – moving against and with other surfaces, forms, and substances as continuous flow? As Deleuze and Guattari express it, 'every "object" presupposes the continuity of a flow; every flow, the fragmentation of the object'.[19]

What is happening during the interval of printing from the point of view of the (human) operator of the machine? Is the time between the insertion of the paper and the extrusion of the print simply waiting time, redundant time? The time is only null and void if the process is considered instrumental, in the service of producing a printed image as a static representation of the world in terms of visual resemblance, as confirmation of what already exists, and therefore a dead end. But the measured printing time is enmeshed with an open-ended subjective experience of thinking time; alongside the mechanical to-ing and fro-ing of the printing heads' punctuating flow, I am engaged in the go-between of forethought and afterthought in which my conscious thoughts

are sparked into being as the electrical current leaps across the synaptic gap. The differential rhythms of repetition and return constitute and give coherence and continuity to the mind's processes of cognition. This excitation is the motor that drives the present forward as consciously lived time. The mechanical imprinting, hand-in-hand with neural circuits of connectivity, together weave the fibrous matter of thought as a temporal and spatial dynamic, as a form of liveliness able to engage with other circuits of energy. With such a technological engagement, I take the time to think *in between* the given. This event of awareness is composed of a mingling of simultaneous processes – differential speeds come into cooperation as the circuits of electrically powered machinic memory combine with the electrical circuits of organic memory. Staying alert to the experiential event opens up the opportunity to consider how anamnesis is inextricably bound up with processes of technical mediation, to produce something new.

I am standing by the table listening to the stilted clunk and whirr of the printer. Light floods the room interior casting strong shadows of the window frame across the table and walls, cutting across surfaces and radiating palpable warmth from whatever it touches. A flapping at the corner of vision, a blur of feathers; a breeze comes through the open window. The background hum of the power station carried on the wind is drawn in, the muffled roar of the turbine mingling with the churring of the printer to and fro across the paper.

Turning from table to window, I notice that the format of some of the printed paper images are in the same 3:2 ratio as the window interfacing the room and the locale beyond. A series of frames are repeated as a form of differential spacing: image margins, paper edge, table edge, room walls, window frame. An interval for action is opened up by the intuition of a dynamic of spatial enclosures and disclosures opening out upon one another. The inside opens to the outside and the outside opens to the inside as the wind passes through, scattering papers.

The body remembers and returns to the movement of the hand; moving through space the hand wishes to be in touch with the paper. The paper swept up in the hand wishes to curl, to come alive in the hand. The sheet of paper is taken up and cupped between both palms; it has thickness, resistance. The paper is rolled up between the hands and wraps around itself to form an open cone, pulling the edges together, and holding the paper in tension. One of the most primitive of gestures perhaps, to wrap around and shape an enclosure, to capture space and light as volume. A gesture more an embrace than a grasp.

See Plate 6.

The turning of the paper is the embodied manifestation of the turning over of thinking, action guiding the not-yet-thought. The action pulls the framed edge in to wrap around itself forming an enclosure under tension. The contraction and enclosure form a temporary holding relation like a spring coil, which could easily unravel and then be gathered up into a new formation. The image is enfolded inside itself, like the petals of a flower bud. Curved and patterned surfaces flow into and over each other shaping a kind of vortex of light or entangled fibers as if the image was an extension of the fleshly interior of the eye itself. My gaze circulates around this curved interior core drawn into and out from the apex, which is itself both the source of light and its point of disappearance. What sort of viewpoint is this? Could this be the point of view from the interior of a rolling pebble, its softer parts hollowed out to create a passage from

its interior? Or an insect's burrow? A world turned inside out? An eye viewing its own interior, or an afterimage of the mind's eye, projecting itself back into the world? Or simply a projective cone harnessing the passage of light? It could be all or none of these things, for there is no latent, single hidden meaning to be penetrated and then exposed, but rather a turmoil of multiple overlaps, a spatio-visual dynamic. This haptic quality gives the printed image a Baroque turn. It is as if the interface between inside and outside has been dissolved and the space is one of liquid immersal continuously flowing through a middle (media: that which intervenes or middles). As if the image as informational medium is always giving birth to the world.

Turn again, the cone balanced in one hand, the camera in the other. The gesture engages body as pivot around which camera and cone turn – or rather, it is the camera and cone that are the pivots around which the body turns. The cone presents itself to the hand and the hand presents both inner and outer surface of cone toward the lens of the camera poised in the other hand. The camera traces the line of the paper as it catches the light, such that it is the turning of the cone which triggers the finger upon the button. A planar curve emerges, sculpted by the source of ambient sunlight and drawing the eye to follow the shape. Upperside becomes underside and underside upperside. The curved edge splitting the visual field of the image delineates the boundary between inner and outer and this boundary is one of exchange. Deleuze, in discussing the pictorial elements in Francis Bacon's painting, says:

> The contour as a 'place', is in fact the place of an exchange in two directions: between the material structure and the Figure, and between the Figure and the field. The contour is like a membrane through which this double exchange flows. Something happens in both directions.[20]

Above and below, figure and ground each spill out of the other. Topography convulses to become topology in the making. In discussing the work of Michel Serres, Stephen Connor writes:

> topology is concerned with what remains invariant as a result of transformation, it may be thought of as geometry plus time, geometry given body by motion … [But] no matter how abstract it may become, topology remains fundamentally bodily … topology marks and maintains the meeting of abstract and concrete, the activities of analysis and the primary operations of touch and moulding.[21]

Ground is no longer a flat and passive surface planar projection but a condition of emergence; horizon as a grounding principle is interfered with, shattered, and turned over so that what is above and what is below is overturned.

See Plate 7.

Like the roiling passage of advance and return which constitutes the evolving shape of the shingle coastline, the passage between topography and topology emerges through a continuous reproduction of difference, driven by forces of attraction, tension, and dispersal. The image of thought in the making here is that of the coastline as it extends the land, continually unfolding and shaking itself out in one place as it is simultaneously creasing up into ridges in another. This is a topology of overlapping spatialities

and temporalities, each constrained by the pressure of circumstances which make or break, disintegrate or multiply. The specificity of all the materials and techniques bound up in the event of becoming are intrinsic to each singular image, giving it its underlying force. The image retaining all the energies of its formation and awaiting a possible release is on the cusp of bursting its frame.

If this topology can be practiced as that which coils, uncoils, and recoils on the physical and virtual plane all at once, it opens up an understanding of our relation to place as led by the forces and technologies of that place, which condition what it might be to shape and scope. We understand it as a dynamic process of becoming, an operative field in which the observed affects the observer, the production the producer, and the production of an image itself, as life-forming and life-informing practice, a play of contingencies and responsive refabrications. In the embodied and processual act of technological reframing, new frames of reference emerge, enriching our capacity for mnemonic renewal rather than its withering away. And as this vital attempt to stretch our capacity will always be incomplete, so we understand that something will always escape us, undermining our all-too-human will to power.

With a springing open, the cone is caught and released by the breeze to become a slender blade of paper which both flaps across and slices through the visual field. Caught up in the tug of the wind, at any moment a sudden gust may tear the blade from forefinger and thumb, freeing it to drift, float, skim, and swoop on circulating currents of air before brushing against another surface. And the hand, too, is then freed, to turn aside.

See Plate 8.

It is possible for a leaf of paper to be matter which occupies and clutters up place and image to be matter which also clutters and contaminates space. It is also possible for image to come into being lightly, to take account of its footprint while taking flight, not in order to occupy space but to enter into new formations.

Human and non-human interventions. What is seen joins forces with what cannot be seen. Our understanding of what it is to landscape then requires a different concept of what to 'image' might be: image not as commensurable relation, but image as a continuous morphing process in which energy, sensation, and information combine. This is a process in which the human is engaged but which is not engaged wholly by the human and therefore the outcome cannot be predetermined. It is a process which is unpredictable, generative, passing through the human, and surpassing it. This would make more critical than ever the nature of our engagement in acts and events of landscaping of a world in which we cannot guarantee remaining present.

Notes

1 Tim Ingold, 2011, *Being Alive*. New York and London: Routledge, p. 145.
2 Dungeness, Romney Marsh, Kent, United Kingdom.
3 A.J. Long et al., 2004, *The Depositional and Landscape Histories of Dungeness Foreland and the Port of Rye*, Durham, UK: Environmental Research Centre, University of Durham, pp. 13–16.
4 Jill Eddison, 2002, *Romney Marsh*, Stroud, UK: The History Press.
5 For first-person accounts of the changing environment at Dungeness before 1960 see Dorothy Beck and Brian Ferry, 2004, 'Dungeness before 1960: The Landscape and the People', Natural England Publications, UK.

6 Doreen Massie, 2005, *For Space*, London: Sage, p. 107.
7 Vilém Flusser, 2011, *Into the Universe of Technical Images*. Minneapolis, MN: University of Minnesota Press, pp. 6, 20–1.
8 For the chemical elements of a smartphone see: https://www.compoundchem.com/2014/02/19/the-chemical-elements-of-a-smartphone.
9 Data remanance is residual digital information left behind even after data has been subjected to erasure.
10 Flusser, *Into the Universe of Technical Images*, p. 10.
11 For a full analysis of the capabilities, sensibilities and intelligences of the human hand see Raymond Tallis, 2003, *The Hand*, Edinburgh: Edinburgh University Press.
12 The concept of 'un-readiness-to-hand' is to be understood in the context of Heidegger's concept of 'ready to hand'. 'Ready to hand' is that aspect of *Dasein* (as a shared way of life) whereby a maker entirely absorbed in her skilled activity of making with tools does not experience the tools as independent objects; the maker is immersed in the tool and the tool into the maker. Heidegger says: 'The less we just stare at the hammer-thing, and the more we seize hold of it and use it, the more primordial does our relationship to it become, and the more unveiledly is it encountered. The hammering itself uncovers the specific "manipulability" of the hammer. The kind of Being which equipment possesses – in which it manifests itself in its own right – we call "readiness-to-hand" (Martin Heidegger, 1962, *Being and Time*, Oxford: Blackwell, p. 98). However, it is possible for 'un-readiness-to-hand' (or operational disturbance) to still perform as an involvement which activates the equipment *meaningfully* as well as exposing the wider context of involvements in which the activity takes place. Meaning then becomes a question of overall context and is relational. '(The) presence-at-hand of something that cannot be used is still not devoid of all readiness-to-hand whatsoever; equipment which is present-at-hand in this way is still not just a Thing which occurs somewhere. The damage to the equipment is still not a mere alteration of a Thing – not a change of properties which just occurs in something present-at-hand' (Heidegger, *Being and Time*, p. 103).
13 Bernard Stiegler, 2010, 'The Industrial Exteriorization of Memory' in *Critical Terms for Media Studies* (Chicago, IL, and London: University of Chicago Press), p. 67.
14 Ibid.
15 For a discussion of the effects of transindividuation on psychic and collective individuation see Stiegler, 'The Industrial Exteriorization of Memory', pp. 80–2.
16 André Leroi-Gourhan, 1993, *Gesture and Speech*, Cambridge, MA: MIT Press, p. 237.
17 Leroi-Gourhan, *Gesture and Speech*, p. 242.
18 Daniel Rubinstein, 2018, 'PostHuman Photography', *The Evolution of the Image, Political Action and the Digital Self*, New York and London: Routledge, pp. 100–12.
19 Gilles Deleuze and Felix Guattari, 1977, *Anti-Oedipus*, New York: Viking Press, p. 6.
20 Gilles Deleuze, 2003, *Francis Bacon*, London and New York: Continuum, p. 12.
21 Steven Connor, 2002, 'Topologies: Michel Serres and the Shapes of Thought', http://www.steven connor.com/topologies.

References

Beck, Dorothy, and Brian Ferry. 'Dungeness Before 1960: The Landscape and the People.' *English Nature Research Reports No 571*. Natural England Publications, 2004. https:publications.naturalengland.org.uk/file/76013.

Bogue, Ronald. *Deleuze on Music, Painting and the Arts*. New York and London: Routledge, 2003.

Connor, Steven. 'Topologies: Michel Serres and the Shapes of Thought.' Paper given to Literature and Science conference held in Ascoli Piceno, Italy, May 20–22, 2002. www.stevenconnor.com/topologies/2002.

Deleuze, Gilles. *Francis Bacon: The Logic of Sensation*. Translated by Daniel W. Smith. London and New York: Continuum, 2003.

Deleuze, Gilles, and Felix Guattari. *Anti-Oedipus*. Translated by Robert Hurley, Mark Seem, and Helen R. Lane. New York: Viking Press, 1977.

Eddison, Jill. *Romney Marsh: Survival on a Frontier*. Stroud: The History Press, 2002.
Firth, F.M. *The Natural History of Romney Marsh*. Kent: Meresborough Books, 1984.
Flusser, Vilém. *Into the Universe of Technical Images*. Minneapolis, MN: University of Minnesota Press, 2011.
Heidegger, Martin. *Being and Time*. Translated by John Macquarrrie and Edward Robinson. Oxford: Blackwell, 1962.
Ingold, Tim. *Being Alive: Essays on Movement, Knowledge and Description*. London and New York: Routledge, 2011.
Leroi-Gourhan, André. *Gesture and Speech*. Translated by Anna Bostock. Cambridge, MA: MIT Press, 1993.
Long, A.J., Waller, M.P., and Plater, A.J. *The Depositional and Landscape Histories of Dungeness Foreland and the Port of Rye: Understanding Past Environments and Coastal Change*. Research Publication No. 7, Environmental Research Centre University of Durham, 2007.
Massie, Doreen. *For Space*. London: Sage, 2005.
Rubinstein, Daniel. 'Post-Human Photography.' In *The Evolution of the Image, Political Action and the Digital Self*. Edited by Marco Bohr and Basia Sliwinska. New York and London: Routledge, 2018.
Stiegler, Bernard. 'Anamnesis and Hypomnesis 6.' *Memory and Information. Ars Industrialis*, 2006. http://arsindustrialis.org/anamnesis-and-hypomnesis.
Stiegler, Bernard. *Technics and Time, 3: Cinematic Time and the Question of Malaise*. Translated by Stephen Barker. Stanford, CA: Stanford University Press, 2011.
Stiegler, Bernard. 'The Industrial Exteriorization of Memory.' In *Critical Terms for Media Studies*. Chicago and London: University of Chicago Press, 2010.
Tallis, Raymond. *The Hand*. Edinburgh: Edinburgh University Press, 2003.

5 Creating London's Image

Pat Naldi

The painting *Greenwich Hospital from the north bank of the Thames* by the Italian painter Giovanni Antonia Canal (Canaletto) is one of the most iconic paintings depicting a view – that is, a particular image – of London. Dated circa 1750–52, it is believed that the painting was commissioned by the British Consul Joseph Smith to mark the completion of the Greenwich Hospital building. The painting was to hang in his consular residence located on the Grand Canal in Venice, where it would have been on view to the many English Grand Tourists he entertained there.

Whereas historically the image of the skyline made visible church and state power, authority, governance, and influence over its citizen population, contemporaneously and for the foreseeable future, it is the desire, demand, cause, and effect of a privatized, capitalist, speculative economy (and the elite who drive it and benefit from it) that actively shapes the image of the skyline. As David Harvey claims, 'capitalism and urbanization' are connected, with 'the logistical curves of growth of capitalist output over time […] broadly paralleled by the logistical curves of urbanization of the world's population' (Harvey, 2012: 4). The image of the skyline predicates how we citizens view, understand, negotiate, and relate to the city conceptually, spatially, and societally.

Fast forward 266 years to the present day, and the exact same view that Canaletto painted, barring a few minor historical details, can still be observed from the vantage point of Island Gardens situated on the north bank of the Thames on the Isle of Dogs, East London. This particular view forms part of the *London View Management Framework* (LVMF) which was originally published in 2007 as a component of the Mayor of London's *London Plan*, a spatial development strategy for Greater London that itself was initially published by the Greater London Authority (GLA) in 2004. The *London Plan* sets out an integrated economic, environmental, transport, and social framework for the development of the capital. First published under the leadership of the then-London mayor Ken Livingstone, the plan, set to be in effect until the year 2031, has subsequently been revised periodically, with the most recent version published by the then-mayor Boris Johnson in 2016.

The LVMF, which includes the view of the Greenwich Hospital under the rubric *24A.1: Island Gardens, Isle of Dogs to Royal Naval College*, forms a key part of the strategy to preserve London's character and built heritage. The document outlines the policy framework for managing the impact of proposed urban development within the scopal frame of fixed key views across London from the perspective of 'parks and other well-used public [and private for public use] spaces that take in important buildings or urban landscapes that help define London' (Johnson, 2012). It is, Boris Johnson asserts:

> important that we find a way of ensuring that new development fits with our built heritage so that London continues to be a desirable place to live, work and do business.
>
> (Johnson, 2012)

The policy has to be incorporated into development planning applications in London. In turn the plans have to be approved by the local borough council or City of London Corporation, and finally submitted to the GLA for final approval. How the policy is interpreted by the architects and planners, and how it is interpreted and applied by the GLA, are the crucial questions.

The LVMF delineates, in textual and photographic descriptive format, 27 designated and protected views of, and from, specific viewing locations in London. Some of the views encompass more than one viewing location, whilst others, for instance, have two or three shifting viewpoints along a bridge; these are called kinetic views. Hence, in actual fact, there are 61 separate, designated, and protected views within the framework of 27.

The views are categorized under the aegis of:

- *London Panoramas*: [Providing] views of central London and its suburbs from elevated public open spaces […] All London Panoramas include either the Palace of Westminster or St. Paul's Cathedral as their focus. These buildings are cultural landmarks that help promote London at a strategic level while also providing orientation and legibility within the panorama. Therefore, each panorama incorporates one or more Protected Vistas to ensure that the ability to recognise and appreciate the Strategically Important Landmark within the wider panorama is preserved or enhanced.
- *Linear Views*: Views of landmarks framed by objects in the landscape. They are defined by virtue of a gap between existing elements of the built or natural environment. They should be managed so that the ability to recognise and appreciate the landmark building in combination with the surrounding environment is preserved or enhanced.
- *River Prospects*: Broad prospects along the River Thames. Views of the River Thames and its associated landmarks often provide key images of London and reinforce the city's identity. The views of London and its skyline across riverscapes and from bridge to bridge are representative of the capital and include many iconic buildings. Several of these views are experienced as the viewer moves through the Viewing Place. The character and composition of built form above the river is often coherent and of very high quality. In many cases, it encompasses conservation areas, listed buildings and World Heritage Sites, enhanced by mature trees lining well-designed publicly accessible walkways
- *Townscape Views*: These are views of the urban townscape. They focus on architecturally and/or culturally significant set pieces. They are views of an architectural or landscape composition of historical significance. (Mayor of London, 2012: 30–3)

The overriding focal point of the LVMF is the protection of views of St. Paul's Cathedral. The 1938 St. Paul's Heights policy implemented a near- and medium-distance building height restriction affecting views of St. Paul's. The 1991 Regional Planning Guidance

for London (RPG3a) set up after the abolition of the Greater London Council (GLC), implemented a distant view[s] of St. Paul's alongside 34 strategic views of London through a visual system of 'views' and 'viewing corridors', 10 of which were to be protected. The LVMF of 2007 (under Ken Livingstone) replaced the previous RPG3a guidance (control was transferred from the government office to the GLA after the first mayoral election in the year 2000). As a supporter of tall buildings and their lucrative emblem, plus added pressure from the insurance company Legal and General, a major player of land ownership in the City, Livingstone's LVMF guidelines reduced the number of strategic views from 34 to 26 protected and designated views, and narrowed considerably the viewing corridors, thus enabling the release of sites for future development. The revised 2012 edition of the LVMF (under Johnson) increased the number of protected and designated views to 27.

In the foreword to the 2012 revised guidance of the LVMF, Johnson states:

> For centuries, London has been home to some of the world's greatest buildings and urban spaces. We are privileged to enjoy this architectural history as we go about our daily lives. When we across one of London's bridges, walk along the South Bank, or visit one of the viewpoints above the city, such as Parliament Hill, Primrose Hill or Greenwich, we are reminded of London's history and beauty, and why we love living here.
>
> (Johnson, 2012b: v)

By the same token the *London Plan* (2004) highlights the political and economic heritage of the city by valuing certain views above others; those that portray and uphold its heritage:

> Two thousand years of building have left layers of history, illuminating London's social, political and economic heritage. Today London has a great wealth of fine historic buildings, spaces and archaeology, including four World Heritage Sites and many buildings and sites of national importance that add to the capital's identity, attractiveness and cultural richness. The historic environment also helps to attract tourists, and provides valuable leisure opportunities and commercial and residential space, and is an important part of London's economy.
>
> (Mayor of London, 2004: 184)

Therefore, the particular views within the LVMF are chosen, according to the guidance:

> because they make a significant contribution to people's ability to understand and appreciate London as a whole [and] because they allow a viewer to see significant historic and cultural landmarks in their landscape or townscape setting and to understand the relationship between them.
>
> (Mayor of London, 2012: 29)

Many of the LVMF designated and protected views feature the identical or approximate view of pictorial imagery of London made familiar through historical paintings, prints, and drawings. However, it is Canaletto and his views *of*, where *from*, and *how* London is depicted, that, in particular, still endure today. For not only do other LVMF views correlate with his painting depictions of London, for instance *The Thames*

and the City of Westminster from Lambeth (1746–47) and the LVMF view *19A.2: Lambeth Bridge*, other overt exemplars of his pictorial influence in contemporary London include the Thames Diamond Jubilee Pageant held on June 3, 2012, whereby the spectacle performed on the Thames was reminiscent of his painting *The Thames on Lord Mayor's Day, looking towards the City and St. Paul's Cathedral* (1752). Canaletto was the most famous exponent of the pictorial *vedute* (Italian for view) that originated in Flanders as early as the 16th century. The *vedute* was a landscape genre of detailed painted cityscapes, a particular approach toward the traditional viewing of cities. It is also important to note that not only was Canaletto's father a theatrical scene painter, but Canaletto himself painted stage decorations, as did other painters of city views in his time. This influenced their attitude and approach toward their depictions of cities (Safarik, 1961).

Frédéric Pousin believes that the very 'idea of urban landscape', and here we can include the views of the LVMF, 'is based on an aesthetic attitude as well as on an aloofness toward the city', and it is one which is due to 'aesthetic models borrowed, in the past from painting, and, today, from other artistic media' (Pousin, 2003: 161). Landscape however, Rosalyn Deutsche argues, 'is an object framed for, and therefore inseparable from, a viewer' (Deutsche, 1996: 213). It is this interrelationship of the object (in this case the framed views of the city of the LVMF) and the viewer, in the city, that is the cause for tension within the very concept of the London designated and protected views; for visually, spatially, and conceptually the LVMF posits London as a series of framed views (images) to be 'experienced' from static 'view points'.

The historical depictions of London just outlined, and the governmental designated and protected views of the LVMF (one could also make a case for the designs by architects and planners) constitute what Christine Boyer describes as the pictorial image of the city as a work of art, a scenographic stage whereby:

> The function of the image, which we seek to historicize, is to record the material form and look of the city, and to present it to the beholder through staged or posed views.
>
> (Boyer, 1994: 69)

Renzo Dubbini argues that in the early 17th century new observation points also began to appear in depicted views of London. These views, he notes, were from the vantage points of sites of 'recent expansion looking toward the historical center' (Dubbini, 2002: 52), thus highlighting:

> the greater importance that specific sites had acquired in both the observation of the city and the construction of an urban image, an image that had been primarily mental, but that took on increased objectivity when it could be compared with the actual topography.
>
> (Dubbini, 2002: 52)

The transformation of the view of the city and the construction of its image from an imagined to an actual viewpoint at this time (Dubbini, 2002) was further enhanced by the patronage of artists. No longer did artists depict images of the monuments in London (in this instance) but also of and from private houses belonging to patrons wealthy enough to commission them. This enabled artists to produce, as Dubbini

notes, 'a general, public vision of the city, but also views from vantage points that in many cases coincided with famous aristocratic residences' (Dubbini, 2002: 53), thus 'furthering a multiplication of viewpoints that helped to construct a visual perception of the growing city' (Dubbini, 2002: 52).

Hereafter depicted views of London were patronized *of*, *from* (and enabled by) privileged, privatized spatial and visual perspectives. It is this that is followed through in the present-day designated and protected views of the LVMF, for not only are the 'views' designated by an elite few (and what is permitted to be built within their scopal frame), but the actual viewing locations – the vantage points you admire the views from – are on many occasions, mostly in fact, privately owned. That is, not owned by the state but by private moneyed elite landlords (royal, aristocratic, and private or corporate companies). The 'viewing location', the LVMF policy guideline sets out:

> [should be] open, publicly accessible and well used, a place in its own right allowing for pause and enjoyment of the view.
>
> (Mayor of London, 2010: 1)

In other words, privately owned spaces for public use. This not only highlights the privileging of views from land owned by the wealthy, and in most cases the corporate, but the attendant securitization and control (physical, visual, and psychological) of these spaces.

Whilst some of the ownership of the LVMF viewing location points are well known or rightly assumed to be Crown Estate property, for instance the Royal Parks incorporating the London Panoramas of *5A.1: Greenwich Park*, the Townscape View of *23A.1: Bridge over the Serpentine*, or local authority-owned such as the Townscape View of *24A.1: Island Gardens*. Others are surprising or harder to discern, such as: Hampstead Heath, incorporating the London Panoramas assessment points from *2A.1: Parliament Hill*, *2B.1*, and the assessment point *3A.1: Kenwood*. These latter viewing location points are under the control of the City of London Corporation. The Corporation became the custodians of Hampstead Heath in 1989 when the London Residuary Body, charged with disposing of the assets of the Greater London Council abolished in 1986, transferred its ownership, in the 'public's interest', from local authority-owned to the auspices of the private Corporation. Through the Bridge House Estates, as its sole trustee, the City of London Corporation also owns a number of the bridges spanning the Thames, such as Southwark Bridge, Tower Bridge, Millennium Bridge, London Bridge, and Blackfriars Bridge. LVMF viewing location assessment points on the bridges include the River Prospects from all of these bridges, such as *12A.1: Southwark Bridge*, *11A.1: London Bridge*, and *11B.2*. As a final example, the viewing location from the Townscape View assessment point *25A.1: The Queen's Walk at City Hall*, of which there are three kinetic views, is located (as well as City Hall, headquarters of the Greater London Authority) on the privately owned 13.5 acre More London Estate which was bought at the end of 2013 by the Kuwait state-owned St. Martins Property Corporation from Bahamas-based company London Bridge Holdings.

The consequences and effects on citizens of private spaces for public use are multifaceted. However, in relation to 'public' access, not only to private estates, but also to local authority-controlled and hence 'public' spaces alike, it is prescient to consider what transpired during the Thames Diamond Jubilee Pageant held on June 3,

2012. The flotilla of boats, which included the Queen and senior members of the Royal Family aboard the *Spirit of Chartwell*, travelled from Battersea Bridge to Tower Bridge (St. Katherine's Dock), passing under 14 bridges. The bridges provided the prime vantage points from which to view the spectacle of the passing flotilla. Other than Southwark Bridge, the bridges were closed to traffic, five were open for passing pedestrians only, and the rest were reserved for invited spectators, and in some cases also selected guests from charities, riparian boroughs, and members of the media. Public access to these 'public' or 'private for public use' spaces was denied to ordinary citizens.

The LVMF images purport a controlled view of London, one that is ideologically constructed to perpetuate and engender imaginative past state and current and future neoliberal desires. The political establishment's choice of, and value set upon, these sanctioned views above and instead of other ways of encountering and viewing the city, posits the function of these scenic representations (of value), as encapsulating, upholding, and defining, a strategic political and capitalist 'image' that gives credence to, and postulates London as, a 21st-century world city. This is an ideological 'construction' of London that, Malcolm Warner argues, is refashioned by each age in 'its *own* image' (Warner, 1987: 25).

Historically London has not been envisioned or recognized as a city of tall buildings. Yet at the time of writing, the latest findings of the New London Architecture (NLA) Tall Buildings Survey 2018, on the planned growth of tall buildings in London over the next decade, cites 510 tall buildings of over 20 storeys high have been submitted to planning or application, have planning permission, or are under construction.

The tallest building or structure within central London since 1310, until it was surpassed by the Post Office Tower (BT Tower) in 1962, was the pre- and post-Great Fire of 1666 St. Paul's Cathedral located in the city, the historic and financial center of London. A cathedral has stood on this site for over 14 hundred years, dominating the London skyline and overseeing its urbanscape; it has been the site and sight of authoritative church and state power since the Middle Ages. The current incarnation of St. Paul's Cathedral, designed by Sir Christopher Wren and built between 1675 and 1710, stands at a height of 111.6 meters. Whilst no longer the tallest building in London, the cathedral's overarching symbolic status, and architectural and visual presence, dictate the location, height, and design of other buildings within its line of sight throughout the City, Central and Greater London. Through the preservation of the *view of*, the image of St. Paul's Cathedral shapes the London skyline. This is achieved through the St. Paul's Heights policy and the Greater London Authority's LVMF policy guide. In 1930 the London Building Act, in existence for centuries (from 1667, a year after the Great Fire of London, buildings, aside from St. Paul's, were restricted to being four storeys high), raised the maximum height of building construction in London to 30.48 meters. This was the maximum length of the London Fire Brigade's ladders; fires were to be tackled from the outside of buildings. Fearing that views of St. Paul's would be obstructed, in 1938 the Dean and Chapter of St. Paul's Cathedral, together with the Corporation of London,[1] struck a gentleman's agreement with City developers that building height limitations would be applied to sightlines of the structure of St. Paul's from certain viewing locations across the capital. Added to the height limitation, were façade restrictions to buildings immediately facing, and setback restrictions on the frontages of buildings in the streets leading up to St. Paul's.[2] These restrictions only became legal statute in building guidance plans from the 1980s onward; up to that time some building infringements did occur.

The *London View Management Framework* policy guide, which in 2007 replaced the previous Regional Planning Guidance for London (RPG3a) introduced in 1991, sets out 27 protected and designated views and viewing corridors throughout London, most of which have St. Paul's Cathedral as its focal point. Both the LVMF and the St. Paul's Heights policy have not only enabled the image of St. Pauls' Cathedral and its attendant visual symbolism to be preserved, they have conversely impacted on the London skyline, shaping the urban layout, and thus how citizens view, negotiate, and relate to the city and the capital at large (Harris and Ruggles, 2007: 18).

Nevertheless the 1956 repeal of the London Building Act lifted the constraints on the height of buildings (though not the St. Paul's Heights) allowing for the surge in the construction of tall buildings in post-Second World War Britain. Tower blocks as high-rise housing in particular, were seen as quick and economic solutions for housing provision to achieve a high population density in what is claimed by the Royal Town Planning Institute was a 'perceived shortage of land' (House of Commons, 2002: 9), as replacement for homes destroyed by aerial bombardment and aged dilapidated dwellings. High-rise housing was, as Jacobs, Cairns, and Strebel (2012: 133) note:

> a materialisation of a specific modernising vision for cities and city life, one that joined the progressive ethos of state-led welfarism with modernist architectural aesthetic.
>
> (Jacobs, Cairns, and Strebel, 2012: 133)

This modernist vision was part of an 'architectural imagination', they continue:

> motivated by the potentials – economic, formal, social, spatial – of new materials such as steel, innovative construction technologies such as rapid system-building, new sciences about health and environment, and innovative mechanisms such as passenger lifts and integrated garbage handling systems.
>
> (Jacobs, Cairns, and Strebel, 2012: 135)

With London having the highest concentration of residential tower blocks, in addition to their economic viability (in 1956 the Conservative government also initiated public subsidies related to building height, that is, the higher the building the greater the subsidy), local authorities were eager to impress local residents with developers' futuristic Modern Movement and Brutalist architectural designs, and hence their own progressive outlooks; this included the 'desirable' views afforded from great heights and predicted greater resident sociality. However, by the 1970s, beset by (in many cases) poor design, material, upkeep, and location, residential tower blocks became unpopular, socially problematic, and stigmatized as undesirable social housing. The Housing Act 1980, under Margaret Thatcher's Conservative government, which gave council tenants the Right to Buy their council properties from local authorities, completely altered and striated the socioeconomic dynamics of entire communities, social housing residential tower blocks being amongst them. Whilst some of these residential tower blocks have been demolished, others have subsequently been transformed physically and in terms of desirability, commanding high purchase prices in the open housing market.

As a consequence of the 1956 repeal of the London Building Act alongside the post-Second World War surge in the construction of tower blocks as high-rise housing,

commercial tall buildings also began to be constructed throughout the 1960s and 1970s. Centre Point was one such building. Designed by Richard Seifert and completed in 1966, the building still stands at 101 New Oxford Street in central London. At 34 storeys high (117 meters) Centre Point was, at the time that it was built, the tallest building in London. Built by the property speculator Harry Hyams, on completion he refused to rent spaces on a floor-by-floor basis, instead insisting that a single tenant should take over the entire building. Centre Point famously lay unoccupied for many years. It was no coincidence that it was financially propitious to remain empty. The property economy was such at the time, that the loss of any rental income was offset by an escalating profitable increase in the value of the building. Subsequently Centre Point became not only an architectural landmark, but also came to be seen as a white elephant emblematic of the corporate greed of property development. So much so that on various occasions in the mid-1970s squatters and campaigners managed to occupy the building to protest against London's housing crisis and highlight that the empty building should be used to house the homeless. One of those protesters was Ken Livingstone who, 30 years later as the first mayor of London was not only a great advocate for the construction of tall buildings, but a major player in the shaping of the contemporary London skyline. In July 2013 planning was approved for the current owners of Centre Point, Almacantar,[3] a London property investment and development company, to redevelop the Grade II listed building from office space, restaurant, and bar, into high-end residential apartments, retail space, and public realm at the base of the building. In October 2018, half of the 82 luxury flats have been taken off the market as they remain unsold.

Richard Seifert also designed what was known at the time as the National Westminster Tower (NatWest, and since renamed Tower 42) at 25 Old Broad Street in Bishopsgate.

The NatWest Tower's very visible and imposing presence on the city skyline was meant to manifest the bank's stature. The construction of the 183 meters high, 47-storey building, built to house National Westminster Bank's international offices, began in 1971 and was completed in 1980. It was the first tall building (otherwise known as a skyscraper) in the City of London, and the tallest in London until the completion of One Canada Square in Canary Wharf in the London Docklands, Tower Hamlets, in 1990. The development of the London Docklands into London's second financial center (with its attendant tall buildings) came as a direct result of the deregulation of the financial markets in 1986 by Margaret Thatcher, the British Conservative prime minister at the time. Known as the Big Bang, the outcome was an influx of foreign banks to the City of London. A New London Architecture study notes that this:

> revolutionised office building [as these banks required] vast dealing floors which necessitated wide open offices and large glass windows to give natural light. Steel-frame buildings with raised floors, suspended ceilings and sophisticated building controls were the architectural order of the day.
>
> (London's Centre for Built Environment, 2014: 45)

As a result, 'The City of London Corporation', the NLA report continues, 'relaxed development controls, which led to a six-fold increase in planning permissions' (London's Centre for Built Environment, 2014: 45). Limited ground space and the

financial and planning incentives offered by the London Docklands Development Corporation (set up by the Conservative government in 1981), attracted foreign financial corporations to the Enterprise Zone of the London Docklands. This resulted in the tall buildings cluster in existence now in the privately owned but for public use Canary Wharf.[4] Thatcher's neoliberal policies directly enabled the construction of the first conglomeration of skyscrapers in London. Notwithstanding the economic downturn of the property market in London in the 1990s, which blighted the early years of the Docklands development, it was at this point that the London skyline had its greatest visual shift from St. Paul's Cathedral to the neoliberal capitalist economy.

As a consequence of this shift, in actual competitive terms (the relocation of major players in the financial market), with the added governmental pressure to compete, in symbolic terms (the message it sent out to the world of finance), and its inability to secure the European Monetary Institute (subsequently the European Central Bank) that chose to locate its headquarters in Frankfurt in 1998, the City of London Corporation had to reinvent its image and identity by opening up to its surrounding boroughs and reaching out to the world (Kaika, 2010).

Reaching out entailed implementing charitable organizations (which still continue) within the city and surroundings boroughs (whether this benefits the boroughs or is a strategy to extend its influence is questioned by Maria Kaika) and an electoral reform that gave more power to the corporate businesses located in the city based on employee head count, hence proving more attractive to corporate bodies. Its spatial restrictions safeguarding the view of St. Paul's had, to this point, been used to its advantage to firstly perpetuate its symbolic historical and imperial importance of its locality through its centrality as 'host' of the cathedral, and secondly to better control the location and design of new developments. This however drew accusations both from the business sector and from the government, of purporting a staid 'English' identity that contributed to its image of isolationism. Subsequently its spatial strategy and the city skyline became central features of a re-branding of the Corporation's image and identity, highlighting the Corporation, Kaika notes, 'as an institution most conscious of the importance of the imaginary for the proper functioning of the economy' (Kaika, 2010: 459).

The election in the year 2000 of Ken Livingstone as Mayor of London also proved opportune for the Corporation. His election came at a time, with the abolition of the Greater London Council (GLC), when London, and the notion of Londoner, had lost their political and civic status, and they needed to be reconstructed (McNeill, 2002). With the prospect of London and the City's economic powerhouse status waning in the face of international competition and faced with the dual challenge of attracting international business, consolidating London's status as a competitive node (a 'world city') in a global economy, and securing the development of affordable housing, Livingstone saw the future construction of tall buildings in London as the solution. With his rhetoric of 'London must continue to reach for the skies' (Livingstone, 2001: 4), he stated:

> I support high buildings, both as clusters (such as in the City, Canary Wharf and Croydon), and as stand-alone buildings (such as the Post Office Tower and Millbank Tower), where they are in close proximity to major public transport interchanges and contribute to the quality of London's environment. I have no objection in principle to London having the tallest of buildings.
>
> (Livingstone, 2001: 3)

In a further statement, Livingstone continues:

> High buildings can have a significant impact both on their immediate surroundings and on skylines and views across London. High buildings are often flagship developments that play an important part in regeneration.
>
> (Livingstone, 2001: 3)

For Livingstone tall buildings had a dual role to play. On the one hand they were pragmatic, enabling more office space (thus lowering the rental premium) and affordable housing through the conditional support of planning approvals with the private sector (as mentioned earlier he had been active in the Centre Point protests to provide housing for the homeless), and, on the other, they were symbolic, casting an image of London as a 'world city' within global capitalism, and as an inclusive multiracial society.[5]

In 2001 the Mayor's Office, through the GLA, published the *Interim Strategic Planning Guidance on Tall Buildings, Strategic Views, and the Skyline in London*. The guidance establishes a direct analogy between the symbolic visual impact of St. Paul's Cathedral and of tall buildings on the skyline, and the psyche of the local population and visitors alike. It states:

> London would be unthinkable without it [St. Paul's]. Yet in the purely functional sense there is no actual *need* for it. The activities for which it was built could be carried out just as efficiently in a far more modest building. The point is that there is a demand for it as spiritual inspiration, an architectural icon and a tourist destination. It is felt that the activities for which it was built are enhanced spiritually by an outstanding architectural expression that considerations of mere efficiency and cost could never deliver. For various reasons, some of those whose business it is to provide office floorspace find it advantageous to attract tenants by providing that floorspace in tall buildings of outstanding quality in certain locations.
>
> (Greater London Authority, 2001a: 9)

Consequently, some of the mayor's criteria for approval of planning applications for tall buildings were based on whether the developments were deemed to be: 'Creating new architectural icons for the new century', and 'Generating confidence in London's future, both economically and aesthetically' (Greater London Authority, 2001a: 14).

The *Interim Strategic Planning Guidance on Tall Buildings, Strategic Views, and the Skyline in London* was a precursor to *The London Plan: Spatial Development Strategy for Greater London* published by the Mayor of London under the auspices of the Greater London Authority in 2004. The plan set out an 'integrated social, economic and environmental framework for the future development of London, looking forward 15–20 years' (Mayor of London, 2004: vii), that was (and still is) at the forefront of the GLA's spatial urban regeneration strategy. In the plan, Livingstone notes the local and global socioeconomic changes over the previous 20 years, acknowledging the 'dominance of the finance and business sectors' (Mayor of London, 2004: 1), and an:

> increased inter-relationship between major economies, where internationalisation of investment and trade accompanies developments in telecommunications and

> rapid transport effectively shrinks distances between people, markets, and business decision takers.
>
> (Mayor of London, 2004: 1)

Thereby the 'vision' of Livingstone's *London Plan* is to develop London as a 'capital city' in which:

> The future of London has enormous importance for the UK as a whole. This partly reflects its capacity to attract economic activities, including the higher levels of global business, which it is simply not possible to attract elsewhere in the UK.
>
> (Mayor of London, 2004: 17)

As a 'world city', in which:

> London is a world city and acts as one of a very small number of command and control centres in the increasingly interactive network of transactions across the world economy. World cities have very distinctive strategic needs. Although separated by thousands of miles, they are intimately linked as a virtual global entity by the transactions of markets and communications systems.
>
> (Mayor of London, 2004: 15)

Whereby the strategy, the plan continues, is to:

> facilitate the continuing attractiveness of London to world business with a phased supply of appropriate floor space for international business activities, and the specialist services that supply them, especially in the Central Activity Zone where many will need and wish to locate. Areas that would benefit from new international scale activities and which have the potential to be attractive to them include the rest of central London, parts of the City fringe and the Thames Gateway.
>
> (Mayor of London, 2004: 15)

Prior to the publication of both *The London Plan* and the *Interim Strategic Planning Guidance on Tall Buildings, Strategic Views, and the Skyline in London*, the Minutes of the Meeting of the Greater London Authority Spatial Development Strategy Investigative Committee for May 16, 2001, shed light on the strategizing behind the development of tall buildings. Summary Action List 5.10 states:

> The RIBA [Royal Institute of British Architects] advised that the argument for tall buildings did not necessarily relate to the need to accommodate more people but, rather to attract business and regeneration and improve the face of London to the world. The main issues surrounded how the City was perceived rather than a functional requirement of how more people could be accommodated. Members asked if tall building were perceived as virility symbol of the City. The RIBA advised that they formed part of the identity of the City. The way people viewed the contribution of tall buildings to areas, could also have a beneficial effect with people appreciating why more businesses were being attracted to London.
>
> (Greater London Authority, 2001b: 3)

Consequently, following Livingstone's direct spatial planning policies, which included narrowing the viewing corridors of the St. Paul's Heights policy of 1938, reducing the number of protected and designated views across London from 34 to 26, and with the continued relaxation of spatial policies by the Corporation of London within the city, the floodgates were opened for the future proliferation of the construction of tall buildings.

To this day (2018) the majority of the tall (iconic) buildings prominent in this skyline, that is, in the City and central London, are the legacy of Livingstone's spatial policies predicated by his desire to consolidate London's world city status. Though of course this has to be understood in the context of a globally competitive neoliberal economy; one that has instigated and overseen a global building boom of highly visible iconic signature buildings by 'starchitects'[6] in the aftermath of and in search of the 'Bilbao Effect'[7] by the commissioning state and corporate sector who 'want' to be 'seen' inhabiting these iconic buildings as a reflection (exuding a successful and progressive image) of the said company's transnational financial and competitive status and aspirations; this is fictitious value creation based on the adage of 'speculate to accumulate'.

In order for these new architectural buildings to be considered iconic, and thus situate their host cities (and clients) on the global map, they must have, what Leslie Sklair terms institutionally sanctioned symbolic/aesthetic significance. Whether state-funded or private, this is driven by the corporate sector (Leslie Sklair, 2006).[8] Thus 'starchitects' are commissioned to design 'public–private buildings that can act as logos for [the] city' acting as 'symbols of prosperity' (Kaika and Thielen, 2006: 66).

The first of the current iconic building trend in London (in this particular instance the City) was 30 St. Mary Axe completed in 2004. Designed by Norman Foster, the 40-floor building was approved by John Prescott, the deputy prime minister of the Labour government at the time. The planning approval (before Ken Livingstone became the first London mayor) was entirely predicated on the premise of the 'Bilbao Effect'. Other buildings that have since followed include the Willis Building, designed again by Norman Foster, completed in 2008, 26 floors; Heron Tower, designed by Kohn Pedersen Fox, completed in 2011, 46 floors; the Shard, designed by Renzo Piano, completed in 2013, 72 floors; Leadenhall Building, designed by Rogers Stirk Harbour + Partners, completed 2014, 48 floors; 20 Fenchurch Street, designed by Rafael Viñoly, 37 floors, completed in 2014. These buildings, all for commercial or mixed use, provide the visual beacons of neoliberal capital power, overlooking the city spread out below and dominating the urban skyline in the manner of religious and state architecture centuries ago. Whilst some of Livingstone's spatial policies were tightened by his mayoral successor Boris Johnson, the proliferation of tall buildings has not only continued, it has become stratospheric.

These developments are targeted toward the accommodation of global capital corporations and luxurious residential use for international sale and/or buy to let. A manifestation of the neoliberal desire of exclusivity and aspiration is materialized not merely in visual form but is imbricated into the very fabric of the buildings and the streets we physically and psychically negotiate. As Harvey writes:

> The results of this increasing polarization in the distribution of wealth and power are indelibly etched into the spatial forms of our cities, which increasingly become cities of fortified fragments, of gated communities and privatized public spaces kept under constant surveillance. The neoliberal protection of private property

> rights and their values become a hegemonic form of politics, even for the lower middle class.
>
> (Harvey, 2012: 15)

It is through this, Harvey continues, that:

> ideals of urban identity, citizenship, and belonging, of a coherent urban politics, already threatened by the spreading malaise of the individualistic neoliberal ethic, become much harder to sustain.
>
> (Harvey, 2012: 15)

Urbanism itself, as process and product, is the source and profit of capital production.

Hence the city, its urban fabric, and socio-spatial structure manifest and correlate with its economy. Historically the skyline of church and civic towers in all their architectural forms was the visual manifestation of this economy and subsequent power, whilst in contemporary times they have been replaced by the corporate skyscraper (tall building). The construction and central location of church and civic towers and their visuality in the skyline, were a means of materializing this power and authority over its citizens, symbolically and in practice. That is, the symbolic 'showing' of power and authority itself 'instigated' power and authority.

Yet In the present day for all the success, prosperity, and power symbolically manifested through the materialization of tall (iconic) buildings, that is, corporate and luxurious buildings as opposed to post-war social housing tower blocks that have not undergone regeneration, paradoxically, they are also the instigators, aesthetic display, and symptom of the neoliberal economic crisis. For instance, consider the well-established idea of a 'crane index', whereby the number of cranes visible in the skyline is directly linked to, and is an indicator of, economic activity. A higher number of cranes signifies more construction work and a healthier economy, thus instilling confidence in the speculative property and financial markets. The London Office Crane Survey published by Deloitte Real Estate provides information and forecasts future commercial construction. Alternatively, the concept of the skyscraper index, initiated in 1999 by the property analyst Andrew Lawrence, charts a correlation between the construction of the world's tallest buildings and economic cycles in local and global financial markets. They are seen as predictors of economic collapse as they 'cap off what is a large building boom' (Lawrence, 2012: 44). The index cites examples such as the World Trade Center (1973, US and worldwide economic crisis), and more recently Petronas Towers in Kuala Lumpur (1998, Asian economic crisis), and the Burj Kalifa in Dubai (2010, global financial crisis).

As a result of these moments of economic crises and subsequent change, Kaika claims that architectures' need of creating significant and symbolic imaginary is essential in order to configure new significations (Kaika, 2010). Thus architecture produced during these moments, acts and performs, 'as a means of teaching society *what* to desire and *how* to desire it' (Kaika, 2010: 458); it is, in this respect, an attempt to 'salvage' and propagate itself. The current and future rafts of tall building developments in London are testament to this desire.

In London's recent history of tall buildings for instance, socioeconomic-based crises permeate: the post-war high rises (as utopian models) in response to, and as a means of, solving housing crises combined with the shortage of land; or the Canary Wharf cluster

of tall buildings as a result of the 'Big Bang', the deregulation of financial markets by Thatcher's government in response to the City's lack of competitiveness in global banking. The subsequent effect of the Canary Wharf cluster in turn caused the City of London Corporation to change its spatial planning policy in order to allow for more tall buildings to be constructed and enable it to compete in attracting international corporations and capital back into the city. Ken Livingstone's support for tall buildings was a means through which to strengthen and secure London's image as a world city in a global economy in the face of competition. In addition, London borough councils, faced with continued funding cuts from central government, have and continue to be more favorable toward building planning applications that fund local resources. Subsequently this has resulted in state and private sector real estate partnerships, the narrowing of St. Paul's Cathedral protected viewing corridors, and the reduction of designated views, in order to allow for more planning applications to be approved.

In turn, current and recent constructions in London were directly affected by the 2007/8 global financial crisis. The start dates of developments were delayed, whilst others were halted midway through construction, for example 20 Fenchurch Street, Leadenhall Building, One Commercial Street, the Pinnacle, Heron Tower, and 240 Blackfriars. 30 St. Mary Axe, one of the key landmark buildings in the City of London and of the capital's skyline, and the forerunner of the trend in the construction of tall iconic privatized corporate buildings within the City and the capital at large, was itself put up for sale on the open market in 2014, ten years after its completion. It was put into receivership by its co-owners, the privately held UK investment banking and private equity group Evans Randall, and the German real estate company IVG Immobilien, as they were unable to continue the repayments on the £500 million 15-year loan they took on when they bought the building from its original owner the insurer Swiss Re in 2007 for £630 million (the highest purchase price for an office building in the UK). The financial woes of the co-owners, players in the global financial crisis that began in 2007/8, and who first defaulted on the loan repayment as far back as 2009, was said to be caused by the international currency exchange rate in which a strengthened Swiss franc against British pound sterling inflated the original size of their multi-currency loan.

The building stands at the heart of London's financial center, on the former site of the Baltic Exchange building damaged by an IRA bomb on April 10, 1992. A year later on April 24, 1993, the IRA detonated another bomb close by in Bishopsgate. Tower 42, known at the time as the NatWest Tower, and discussed earlier in this chapter, was also extensively damaged during this attack. At the time, the IRA were targeting London's financial center; like the New York Twin Towers years later (known as 9/11), these were specifically chosen sites and sights for symbolic and physical attacks.

The skyline is intrinsic to London's 'image' as a city and, more specifically, its status as a 'world city': how it is viewed, and what it represents on a local and global scale. This 'image' and its referent are crucial in attracting and securing current and future investment of global capital, especially in the light of and as a consequence of, the global financial crisis of 2007/8. As Harvey states:

> what kind of city we want cannot be divorced from the question of what kind of people we want to be, what kinds of social relations we seek, what relations to nature we cherish, what style of life we desire, what aesthetic values we hold.
>
> (Harvey, 2012: 4)

Though 'we', in the current state of affairs, is the 'we' of private corporate capital that has replaced the 'we' of church and state governance (though aided and abetted by the state). Thus, the building of 30 St. Mary Axe itself manifests and imbricates its inception, location, construction, ownership, purpose, function, and 'downfall'; it symbolizes its economic status as a victim of its own making.

Whilst London is not unique in having designated and protected views, what is particular about London's 'views' is that they are premised on the purposeful creation and cultivation of an 'image' of the city the GLA wants to project for the here and now, and for the future. The desired image of London expressed through the *London Plan*, and the LVMF views, is, on the one hand, the aesthetics of a past heritage of Empire and power as the heart of the British Empire (with attendant religious, military, and state power) inscribed into the very fabric of its buildings, for example Greenwich Hospital, Palace of Westminster, St. Paul's Cathedral, and the Mall and Buckingham Palace, and, on the other hand, the aesthetics of a current and future neoliberal world city as expressed through its iconic tall corporate buildings, in order to attract and consolidate further capital. Both 'images' are the sites and sights of the London skyline that the GLA is attempting to coalesce into one within the LVMF policy guide.

As it currently stands, there exists a tension within the LVMF policy guide. It is the paradox between the desire to designate and protect views of St. Paul's Cathedral and other historical buildings – the heritage image of London of state power and empire – and the neoliberal, capitalist, economic, and political *need* to create and purport an urban skyline image of financial affluence and economic power – *a world city* – espoused through the construction of tall buildings throughout the capital and the City. How might this reconciliation be achieved, and how might the continued state and private sector privatization strategies affect the future, only time will tell.

Notes

1 The Corporation of London changed its name to City of London Corporation in 2006.
2 Façade and setback restrictions are concerned with limiting visual obstructions toward the cathedral. There are also depth restrictions in the immediate vicinity of St Paul's, thereby safeguarding underground structural damage.
3 Almacantar bought Centre Point from administration for £120 million in 2011.
4 The Canary Wharf area is currently owned by the private Canary Wharf Group plc.
5 World cities are termed such to denote global financial centers. For Livingstone however a 'world city' was not only limited to its economy it also meant an inclusive multiracial society, a city that welcomes the world. For further reading on world cities, in particular London, see: D. Massey 2007, 2014, *World City*, reprint, Cambridge, UK, Malden, MA: Polity Press.
6 Starchitects is the name given to describe star (i.e. celebrity) architects who design signature 'iconic' buildings in cities across the world.
7 This is attributed to the inauguration of Guggenheim Museum Bilbao in 1997.
8 Another aspect of recent iconic buildings is the nicknames attributed to them as a means of familiarizing and marketing their 'image' in what Charles Jencks (2005: 13) calls a 'one-liner'. C. Jencks 2005, *The Iconic Building: The Power of Enigma*, London: Frances Lincoln, p. 13. For musings on inventing names for London buildings see H. Newman, 2013, *Common*, Isle of Wight: The Copy Press, pp. 47–8.

References

Boyer, M. C. *The City of Collective Memory: Its Historical Imagery and Architectural Entertainments*. Cambridge, Mass: MIT Press, 1994 (Reprint, 1996).

Deloitte Real Estate. The London Office Crane Survey <http://www.deloitte.com/view/en_GB/uk/industries/real-estate/crane-survey/index.htm>. (Accessed 11 September 2014).

Deutsche, R. *Evictions: art and spatial politics*. Cambridge Mass, and London: MIT Press, 1996 (Reprint, 2002).

Dubbini, R. *Geography of the Gaze: Urban and Rural Vision in Early Modern Europe*. (Translated from Italian by Lydia G. Cochrane). Chicago: University of Chicago Press, 2002.

Greater London Authority. *Interim Strategic Planning Guidance on Tall Buildings, Strategic Views, and the Skyline in London*. London: Greater London Authority, 2001a.

Greater London Authority. Minutes: Spatial Development Strategy Investigative Committee 27 June 2001, 2001b. Available from: <http://legacy.london.gov.uk/assembly/past_ctees/sdsmtgs/2001/sdsjun27/mi nutes/sdsjun27mins.pdf> (Accessed 15 September 2014).

Harris, D., and Ruggles, D. F. *Sites Unseen: Landscape and Vision*. Pittsburgh: University of Pittsburgh Press, 2007.

Harvey, D. *Rebel Cities: From the Right to the City to the Urban Revolution*. London, New York: Verso, 2012 (Reprint, 2013).

Jacobs, M. J., Cairns, S., and Strebel, I. Materialising Vision: Performing a High-Rise View. In: R. Gillian, and P. D. Tolia-Kelly, (eds.) *Visuality/Materiality: Images, Objects and Practices*. London, Burlington, US: Ashgate Publishing, 2012.

Johnson, B. (2012) [Internet]. <http://www.london.gov.uk/priorities/planning/supplementary-planning-guidance/view-management>. (Accessed 20 April 2012).

Kaika, M., and Thielen, K. 'Form follows power.' *City: Analysis of Urban Trends, Culture, Theory, Policy, Action* 10, 01 (2006): 59–69.

Kaika, M. 'Architecture and crisis: re-inventing the icon, re-imag(in)ing London and re-branding the City.' *Transactions of the Institute of British Geographers* 35, 4, (2010): 453–474.

Lawrence, A. 'Talking tall: the skyscraper index.' *CTBUH Journal*, II (2012): 42–44. <http://www.ctbuh.org/LinkClick.aspx?fileticket=uXxzolM8loU%3D&tabid=1541 &language=en-GB> (Accessed 11 September 2014).

Livingstone, K. In: Greater London Authority *Interim Strategic Planning Guidance on Tall Buildings, Strategic Views, and the Skyline in London*. London: Greater London Authority, 2001.

London's Centre for Built Environment. *London's Growing Up!* London: NLA, 2014.

Mayor of London. *The London Plan: Spatial Development Strategy for Greater London*. London: Greater London Authority, 2004.

Mayor of London. *Revised Supplementary Planning Guidance: London View Management Framework*. London: Greater London Authority, 2010.

Mayor of London. *London View Management Framework: Supplementary Planning Guidance*. London: Greater London Authority, 2012.

McNeill, D. 'Livingstone's London: left politics and the world city.' *Regional Studies*, 36, 1 (2002): 75–80.

Pousin, F. 'Visuality as politics: the example of urban landscape.' In: M. Dorrian and G. Rose (eds.) *Deterritorialisations…Revisioning Landscapes and Politics*. London and New York: Black Dog Publishing Ltd, 2003.

Safarik, E. *Canaletto's View of London*. London: Spring Books, 1961.

Sklair, L. Iconic Architecture and Capitalist Globalization. *City: Analysis of Urban Trends, Culture, Theory, Policy, Action* 10, 01 (2006) 21–47.

Warner, M. *The Image of London: Views by Travellers and Émigrés 1550–1920*. London: Trefoil Publications in Association with Barbican Art Gallery, 1987.

6 Drone Alliances

Sarah Tuck

Can an aerial perspective operate as a sightline, both temporal and spatial, that links precarity and vulnerability as a shared lived reality, and bring together people in alliance?

This chapter addresses this question through an exploration of two sites of struggle against land dispossession and resource extraction, the Sami in Northern Sweden and the Sioux tribe of North Dakota, USA. It is an effort to understand if the view from above, put to use to record, reveal, and critique the scale and scope of contemporary settler colonialism, is an effective strategy of intervention in the cultural politics of representation and minority indigenous cultural criticism.

The two projects, artistic and activist, overlap in the meanings and intentions of these descriptions, where both may be said to be in part artistic and activist. Nevertheless, it is important to register the institutional and community processes, frameworks, and research imperatives which inform each example of a use of the view from above by and/or with minority indigenous communities. The first project, 'Drones and Drums', led by artist Ignacio Acosta, was commissioned by Valand Academy, Gothenburg University, and the Hasselblad Foundation as part of a triptych of exhibitions between Gothenburg in Sweden, Nicosia in Cyprus, and Lahore in Pakistan in 2018. For the purposes of transparency, it should be noted that the project and the triptych of exhibitions staged in the three cities emerged from a research enquiry into the geopolitics of drone technologies, 'Drone Vision: Warfare, Surveillance, Protest', which I led as a researcher. The second example is the use of drones by the Sioux tribe as part of the protest against the Access Pipeline at Standing Rock in North Dakota in 2016. The two examples crosscut a range of institutional and community networks but core to both is a use of a view from above as a part of the contestation over land and visibility of minority indigenous communities.

While it would be an overstatement to suggest that the use of drone technologies as a networked view from above in both examples are iterations of an already existing alliance between minority indigenous communities, they are not so disconnected that we can draw no ties between them. This is not to neglect the historical and experiential differences within and between minority indigenous communities, in this instance between the Swedish Sami and the Sioux tribe, but instead is to explore how the histories of settler colonialism and resource extraction marks a point of connection in the uses of the view from above by minority indigenous communities in North America and Northern Europe. While there are differences between the proposed resource extraction of Northern Sweden and the construction of the Access Pipeline in North Dakota these differences nevertheless cohere in the prevailing attitude toward

minority indigenous communities and are connected by an occupation of land, rationalized and made functional in the language of global capital. As such it reveals the mechanics of settler colonialism whereby land appropriation is intimately linked to the expendability of minority indigenous economic and cultural rights.

This chapter in proposing a similitude in the uses of the drone view by the Sami and the Sioux tribe is, in itself, part of an endeavor to consider how the use of an aerial perspective might be made into an alliance of a radical politics that is neither obdurately local in terms of identity nor neglects the local trajectories and histories of minority indigenous communities. Informed by Laclau and Mouffe's insight that equivalence 'does not just establish "an alliance" between different interests, but modifies the very forces acting in that alliance' (2001: 84), this paper attempts to consider how drone technologies have influenced the dynamics of protest on the ground and networked alliances. It therefore follows that the two examples of the use of a view from above not only enact a geographical imagination that is both locally situated and transversal, but in doing so modify the political and visual conceptualization and praxis of minority indigenous social, economic, and cultural rights.

Litte ja Goabddá [Drones and Drums] 2018

Litte ja Goabddá [Drones and Drums] is an investigation in the use of drone technologies as an infrastructure of protest against the Gállak mining project in Norrbotten County in Northern Sweden.

The artist Ignacio Acosta worked collaboratively with the Sami communities in Norrbotten, who had been using drones to film the protests against the proposed opening of a mine in Gállak by Beowulf Mining.[1]

The film, a two-screen installation, documents the labor of reindeer herding, the everyday of a housing estate, a recently built and abandoned mine, and the intensification of logging in the county. In the contrast between the obsolescence of a mine and the active physical labor of reindeer herding the artist puts into question the economic arguments made by Beowulf Mining to receive a 25-year exploitation license to commence drilling in Norrbotten for magnetite iron ore deposit and draws attention to the ruins of speculative capitalism in contrast to the economic sustainability of reindeer herding.

In the film's edits between a disused mine and the collective labor of reindeer herding normative assumptions of progress and tradition are upended; here the tradition of reindeer herding is rendered foundational to Sami cultural life and economic independence whereas the closed mine stands in place of and stands for the ruins of modernity. In the film's emphasis on reindeer herding as a social, environmental, and economic practice, *Litte ja Goabddá* asserts the resistance to Beowulf Mining as an opposition to multinational capital characterized as cultural and environmental devastation.

The use of the view from above captures the scale of the land under dispute and in so doing critically situates the Sami protest against the proposed mining operations within a broader spatial politics of land rights and dispossession, environmentalism, and resource extraction which extends the potential of alliances in an extraterritorial direction. As a perspective which enacts an injunction to see the land it marks an insistence on understanding the dispute between the Sami and Beowulf Mining as a continuation of the histories of settler colonialism and opposition, a point explicitly made in the film's title *Litte ja Goabddá* [Drones and Drums]. This proposal of a

Figure 6.1 Winter reindeer separation. Still from *Litte ja Goabddá* [Drones and Drums], Jåhkågåsska Tjiellde, Norrbotten County, Swedish Sápmi. Ignacio Acosta, 2018.

linkage between the uses of the Sami drum by the noaidi (shaman) and the use of the drone, suggests a conjunction across time that threads the present protest to the histories of Sami resistance. Moreover, it implies a use of the drone as a communication tool of a Sami cosmology, wherein the differentiation of land and sky is refuted. In this way the film presents Sami opposition to the mine as neither resistance to change nor a romanticized localism, but instead as a critical and situated opposition to global capital.

The titled chapters of the film *Litte ja Goabddá* captioned in Lulea Sami and English include panoramas as well as the detail of everyday life. In the shifts between vertical and horizontal perspectives and in the flow of images of an abandoned mine, a housing estate, and vast hydroelectric power stations, with associated electric power lines, the connections and disconnections between the local and global effects of capital and between the abstract and the real, the visible and the not visible are made apparent. The sequence of the film's four chapters, Forest, Water, Iron, and Resistance, presents a cartography of social and power relations, in which the local and the global, proximity and distance, nature and machine are thought relationally. Similarly, the movement between horizontal and vertical images, between fragment and totality interweaves the institutional fields of documentary photography and contemporary art, where the boundaries between the two are made porous and unstable. In this coupling of documentary form and contemporary art the film responds to the both the representational and activist needs of the Sami. Likewise, the intercuts between machine and nature is echoed in the sonic composition of the film, with the sound of drums and Sami yoiks giving way to the noise of the electric power plant and the sound of logging. As a reflexive form of narration this mix of the sonic and visual eludes any crude opposition between local and global and nature and machine, while implicating the aerial view as both a corollary and corrective to a geographical imagination and cartography of colonial expansion and control.

Figure 6.2 Pajala abandoned iron mine. Still from *Litte ja Goabddá* [Drones and Drums]. Bajil, Norrbotten County, Swedish Sápmi. Ignacio Acosta, 2018.

For the final chapter, Resistance, the film presents drone footage of a protest against logging and mining from 2016. An overtly partisan inclusion, the footage reminds the viewer of the political potentiality of drone technology as an infrastructure of protest, that connects the time and space of protest to the spatial politics of the network. It does so by insisting on the view from above as a recognition of land rights which stand in stark contrast to Beowulf Mining's efforts to rezone the land as a hard commodity trade.

Standing Rock, North Dakota, 2016

In 2016 the Sioux tribe led an encampment at Standing Rock in protest against the planned construction of an 1,172-mile access pipeline which would place water and land under threat of contamination. The pipeline, initially planned to cross north of Bismarck where the residents are majority white American was re-routed to the northern perimeter of the Standing Rock Sioux nation's land contravening the 1851 Treaty of Fort Laramie.

The remapping of the pipeline route expressed a form of virulent racism, insofar as native American land and cultural life would be put at risk.

In communicating the scale of the devastation planned, Sioux tribe drone pilots commenced filming the protesters, who were named 'water protectors' and the actions of the North Dakota State Police Department and private security firm, Tiger Swan, hired by Energy Transfer Partners who applied for state permits to construct the pipeline.

In 2016 the Federal Aviation Authority issued a No Fly Zone, criminalizing the use of drones over 154 square miles of airspace above the pipeline resistance.

This restriction on flying drones sought to constrain a networked awareness of the struggle of the Sioux tribe and the militarized policing at Standing Rock. As the civilian use of drones was denied the private security firm, Tiger Swan used a helicopter

live video feed to map the protests and assist coordination of the North Dakota police response on the ground. The events at Standing Rock throughout 2016 demonstrate how the view from above formed a part of the contest on the ground, whereby control over the skies was an essential component of control on the ground. For the Sioux tribe the drone view was a critical tool in the documentation and dissemination of the police and private security firm's use of attack dogs, tear gas, rubber bullets, and water cannons against the protestors exposing the scale of the police operations and pipeline construction. The criminalization of drone flights by a temporary No Fly Zone measure, whilst simultaneously permitting the private security firm Tiger Swan to use helicopters above Standing Rock, indicates not only how the view from above was an instructive perspective on the events below but also how a networked drone view from above was identified as a substantive political threat and practice.

At the time of writing this chapter the North Dakota Access Pipeline cuts through native American land, and has already resulted in oil spills polluting land and water and the Sami are awaiting the Swedish government announcement on a 25-year exploitation concession application submitted by Beowulf Mining Plc. Given this, it follows that the uses of drone technology as a critical apparatus in indigenizing a view of the land is not a guarantor of minority indigenous rights. Nevertheless, the drone view repurposed as part of minority indigenous resistance to land dispossession can be understood as a critical visual method of thinking and seeing in alliance, one that challenges the assumption of the aerial view as a colonial perspective by activating a 'politics of place beyond place' (Massey et al., 2009) as a fundamentally political process that connects the Sami to the Native American. Moreover in putting indigenous epistemological and ontological accounts of land at the center the aerial view makes legible land as the primary pursuit of settler colonialism.

In *Litte ja Goabddá* the artist Ignacio Acosta worked collaboratively with the Sami communities in Norrbotten, building on a use of drones by the Sami to attend to the storying of land in response to the threat of Beowulf Mining; and in North Dakota, the drone pilots of Digital Smoke Signals documented and advanced indigenous agency and land rights in opposition to the construction of the Access Pipeline and the accompanying militarized policing of Native American protest. In using the technological processes of the drone the Sami and the Sioux tribe dismantle the temporal and political 'othering' of allochronism[2] and ethnographic representationalism by a demand to an attention that the observer and the observed are of the same time. This aspect of simultaneity is supported by the various exhibition, research, and activist networks in which the work has been shared. The radial system of search engines, websites, and physical exhibitions re-encode and recontextualize the images from above as both of and about indigene, in which the aerial view is both a demand to be recognized and the articulation of land rights and resistance to ecological and economic devastation. While at first reading this emphasis on simultaneity may appear a commonplace assertion of the 'networked image' it is in its effect politically significant, since it puts into question colonial and market logics which suppose a disconnection of time and space, announced in the temporal sequence of places as underdeveloped, developed, and modernized. In refusing this 'geography of modernity' in which contemporaneous differences are reordered according to a temporal sequence of a colonizing narrative, the networked aerial view of minority indigenous land and cultural life not only disputes and disrupts the temporal and power geometries that underpin settler colonialism but does so by linking the view from above to an indigenous cosmology.

As such these uses of the view from above by the Sami and the Sioux tribe points to a critical alliance between minority indigenous communities which enacts local resistance as a spatial politic of visibility wherein the networked image effects a geographical 'stretching out of social relations' (Massey, 1994: 22). In aligning the question of visibility to a geographical imagination the view from above, despite the minimization of human detail, takes up Judith Butler's provocation: 'Which humans count as humans? Which humans are eligible for recognition within the sphere of appearance, and which are not?'[3] It delivers an answer to this by making land central to minority indigenous cultural and economic rights and in so doing making apparent how land is the primary pursuit of settler colonialism. In this way the use of drones by minority indigenous communities cannot be thought of as independent from opposition to settler colonialism. By presenting the land and lives of those excluded from 'recognition within the sphere of appearance' and by using the technological processes that present the possibility to 'see and not be seen' (Khbeiz, 2003: 6) the Sami and the Sioux activate antinomic geographical imaginations, of land and network. The assumed meanings of these two spatial imaginaries, of the local and the global, of the horizontal and the vertical, of sedentariness and flow, are not simply held in tension but are made conflictual strategies of appearance and spatial-temporalities, wherein the ruins of previous mines in Norrbotten and the violent policing of mass assembly and protest in North Dakota speak of the present resonant with a history of non-recognition.

When understood as transgressive acts within the fields of cultural and visual politics, the Sami and Sioux tribe uses of the view from above challenge normative accounts of the aerial view as a colonial perspective and mechanism of surveillance, and does so as a practice of critical signification, of signifying land and cultural rights in opposition to settler colonialism and the practices and rhetoric of a neoliberal globalization. It is therefore not simply an articulation of the view from above as an aesthetic, although it is of course also partially this, it is an act of refusal and denial of the essentializing of difference, of high/low, nature/culture, global/local, tradition/progress. A refusal of binary logics, where either/or is replaced by 'and' reconnecting nature and culture, the local and the global, tradition and progress. Moreover, this conjoining of categories is not simply a by-product of minority indigenous use of the view from above but is itself the site of strategic cultural and political contestation and subversion. In this, the networked view from above suggests a new possibility and positionality of indigene protest, one that expands geographies of social relations and in so doing alters conceptions of proximity by producing alliances at a distance. Repurposed as a critical visual method to document and disseminate indigenous resistance to land dispossession and resource extraction the networked view from above expands geographies of social relations and therefore alters conceptions of proximity by producing alliances at a distance.

As political demand and political expression the view from above puts into circulation an indigenous conceptualization of 'land' and cosmological thought. It does so on the basis that the aerial view is both site and sight of resistance against settler colonialism, while simultaneously proposing the network as a space of alliance between the proximate and the distant, and the seen and the not seen. In this, Sami and Native American uses of an aerial perspective destabilizes the geographies of distant and near and subverts the normative assumptions of surveillance, power, and control associated with the view from above. A subversion which points to a radical potentiality of drone technologies as a motile photographic tool, one which offers indigenous communities

the opportunity to document the scale of environmental devastation of their lands and provide critical evidence of the continuing assault on their cultural rights.

In this reworking of the aerial perspective as a space of visuality and sociality through which the indigenous communities of the Sami and the Native American produce and enact new forms of critical alliance, it is of interest to note that the motile drone view is made both an apparatus of and infrastructure for protest.

There is, therefore, a 'protest' dimension in the use of drones, one which runs counter to the logics of settler colonialism and aerial surveillance conducted by the state. In this respect the Sami and the Sioux tribe uses of drone technology open up a way of reconfiguring the aerial view by indicating the radical potentiality of seeing from above at a distance, one which offers indigenous communities the critical tools to document the scale of environmental devastation of their land and provide evidence of the continuing assault on their cultural rights, and one which insists on the eligibility for recognition across time and place.

Notes

1 See: https://beowulfmining.com.
2 To deny the simultaneous existence of the ethnographic object and subject, coined by Johannes Fabian, 2002, *Time and the Other: How Anthropology makes its Object*, New York: Columbia University Press.
3 Judith Butler, 2015, *Notes Towards a Performative Theory of Assembly*, Cambridge, MA: Harvard University Press, 2015 p. 36.

References

Butler, Judith. *Notes Towards a Performative Theory of Assembly*. Cambridge, MA: Harvard University Press, 2015.

Fabian, Johannes. *Time and the Other: How Anthropology Makes Its Object*. New York: Columbia University Press, 2002.

Khbeiz, Bilal. *Globalisation and the Manufacture of Transient Events*. Beirut: Lebanese Association for Plastic Arts, 2003.

Laclau, Ernesto, and Chantal Mouffe, *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics*. London and New York: Verso. 2nd ed. 2001.

Massey, Doreen, Human Geography Research Group, Sophie Bond, and David Featherstone. 'The Possibilities of a Politics of Place Beyond Place: A Conversation with Doreen Massey.' *Scottish Geographical Journal* 125, 3–4 (2009): 401–20.

Massey, Doreen. *Space, Place and Gender*. Cambridge: Polity Press, 1994.

Part II

The Image Between Representation and Automation

7 From Photographic Representation to the 'Photographic Genotype'

Yael Eylat Van Essen

We are currently in the midst of a cultural transition from a human to a post-human condition in which the wo/man no longer stands as an external observer facing the world, looking at and analyzing it, but rather acting from within it. In this world, human and non-human entities are operating simultaneously, connecting the natural and the artificial, objects and information, the real and the virtual. In recent years, photography has been taking part in this process: not only is the act of photography no longer external to the world, but most of it is not even carried out by humans.[1] The new photographic practices reorganize space in its broad contexts and create a new kind of affinity between the photographic act and the world's material and informative components. They deconstruct the space, sever its connection with the visual, and strip it of any attachment to the real in its traditional manifestations.

Current photographic technologies extend the boundaries of photography far beyond the limits imposed by biology on human vision, allowing for photography to see beyond the material surface at scales and resolutions that the human eye cannot absorb, while simultaneously affording the possibility to capture wavelengths that the human physiological system is unable to perceive. These new imaging technologies not only expand the visual range of the biological eye by replacing it with a vision of the machine, but they also take part in 'the intertwining and co-constitution of the organic and the machinic, the technical and the discursive, in the production of vision, and hence the perception of the world'.[2] Furthermore, while replacing the traces of the sun as a natural phenomenon, they offer a new kind of scientific objectivism as the basis for action in the real world.

This new objectivistic approach to photography is tightly linked to biometric applications and bears an additional affinity to biological mechanisms by connecting photography directly to biological phenomena. Furthermore, it is possible to identify common patterns and principles of action between current photographic and biological systems. The similarity between these two disciplines stems not only from the significant technological changes photography has undergone with its digitalization, but also from the major developments and transitions in biological research in recent decades. These are based, to a large extent, on the ability to use computational methods to analyze large quantities of data, and to merge biological and artificial processes.[3] In her book *Programmed Visions*,[4] Wendy Hui Kyong Chun highlights the intrinsic relationship between computing and biology around the concept of programming. She claims that, in the 20th century, it was almost impossible to discuss biology without reference to computer technologies as expressed in terms such as circuits, information exchange, and software. At the same time, the field of computerization also relies on

metaphors and procedures derived from biology, such as the reference to data storage as memory, to regulatory genes as switches, and to the engagement in genetic and evolutionary programs. The linkage between the two disciplines has become inseparable. [5]

In this chapter, I have chosen to refer to concepts from the fields of biology such as life, phenotype and genotype, memory, neural networks, emergence, and camouflage in order to discuss the role of contemporary photography in the potential deconstruction and reconstruction of images in general, and of the human image, and therefore of human identity, in particular. In dealing with these concepts, I will consider the ways in which new photographic practices fragmentize space, disconnect photography from the specificity of the moment, and present optional concepts for past, present, and future. I will show how photography relates to 'the real' through what I call the subject's 'photographic genome', but at the same time deals with the fictitious, relative, and fleeting reality of the post-truth era.

In the context of programmability, I would like to note the work of Vilém Flusser, who refers to the inherent inability of optical, mechanical, or biological paradigms to represent the world and their dependence on symbolic arrays, as manifested in the way it is being coded. In his book *Towards a Philosophy of Photography*,[6] he points out the fracture between the photographic act and the act of visual representation. He sees photography as one of many phases in the history of relations between humanity and the world where, despite photography's objective appearance, it amplifies the masking of the world instead of exposing it. Photography, he claims, conceals its true significance, whose essence is embedded in the photographic apparatus. Following Flusser, I will analyze what lies beyond the new automated photographic mechanisms, which, even more than before, maintains its opacity by its metaphorical, performative, and ontological reference to biological processes.

A New 'In-Depth Image' – A Process of Emergence

The frame obtained from an analogue photographic image is the result of the way the light falls on the object at a given moment. As a result, it is always related to a specific point in time in which a mechanical device unites with a natural phenomenon, captured at the click of a power button. Henri Cartier-Bresson referred to this moment in photography as the 'decisive moment'. It is a unique moment: 'a split second that reveals the larger truth of a situation'.[7] This is a moment equivalent to the decisive moment in hunting, in which the animal can escape just one moment before the trigger is pressed. This can be done by assimilating into space without being identifiable, by concealing the three-dimensionality of space at a specific moment in time. In both instances, the moment of 'shooting' is a moment of capturing a visual frame in which reality is translated into a two-dimensional surface,[8] or, in terms of digital photography, to a map of bits.

The analogue photographic process produced a two-dimensional and flat photographic surface. The computational photographic image has evolved to become an 'in-depth image' that consists of a two-dimensional bitmapped surface and additional metadata, referring to different aspects of the image. The linear phases of production / (manipulation) / distribution / consumption / action of the image that previously characterized analogue photography no longer preserve this order. These phases are interwoven, generating feedback processes, allowing for new practices of creating images, essentially different from those based on the projection of external reality on

the photographic surface. In this framework, I will refer to three different typologies of 'in-depth images' that are made possible through digital photography.

The first typology is realized in the way images are captured in digital cameras, such as those installed on our smartphones. Artist and theoretician Hito Steyerl, in her article 'Proxy Politics: Signal and Noise',[9] discusses the way in which the computerized photographic image is distinct from the indexicality of images created in analogue cameras. About 50 percent of images obtained from digital cameras installed in smartphones today are considered as 'noise' due to their tiny size and impoverished optical qualities. Therefore, the data that these cameras produce has limited value in the process of the deciphering of its images' content and their subsequent identification. In order for images to be free from visual noise, deep-learning algorithms[10] are applied to them. These algorithms scan images that are stored on the camera or retrieved from the camera's social networks. On the basis of the images' analysis, they create maximum compatibility between what has already undergone a process of 'noise cleaning' with the new frames taken by the camera. In removing noise, the algorithms base the photographed image on the memory of the camera while 'predicting' what the photographer might have wanted to photograph. From a programming point of view, 'noise cleaning' is based on a process of feedback loop that is difficult to anticipate. As Steyerl describes it, it looks 'more like the weather than a Xerox machine'.[11]

In this framework, the production process of the images encapsulates within itself an interpretive process of the machine. It captures spatial and temporal layers disconnected from the specific time-space of the photographed image in its traditional sense. Therefore, the various possibilities for the production of photographic images do not derive from an external reality photographed in the world but are 'programmed' by the machine itself. It allows the creation of images that relate to reality, but only within the parameters, predetermined norms, and permutations that they can tolerate. However, the learning processes which are embedded in the algorithm create a dynamic space whose parameters and norms are also changeable. Following Jacques Rancière, Steyerl claims that clearing noise from information, as a preliminary act of the creation of the image, is political: 'this division corresponds to a much older social formula: to distinguish between noise and speech to divide a crowd between citizens and rabble.' [12] The algorithms now being fed into smartphone camera technology to define the image prior to its emergence are similar to this.[13] This typology demonstrates how taking a photo can no longer be considered the expression of a single moment in space and time, but rather an act of constant contextualization and reframing.

The second typology of 'in-depth images' is related to the interface between the image and the cybernetic network, in which images often gain 'new life'. In the framework of big databases, the image as a visual surface becomes part of a broader ecology of information, based on the accumulation of data coming from various sources that are occasionally spatially and temporally disconnected. It is the outcome of the coding and textualization processes, in real and virtual space. It changes in relation to the flow of information, the modes of organization and formulation of metadata structures, and the modes of operation within them. As such, it is an essentially relative, unstable, fluid, unfocused, unraveled, centerless networked image, subject to change and endless manipulation.[14] The networked image,[15] which is charged with varying dimensions and contexts, is directly affected by the infrastructures and the information architecture of the platforms to which it is related. In this context, an image is

detached from aesthetic and representational dimensions. Its visual values are converted into lines of text that allow it to interface with information originating from various ontological and epistemological fields. The control over image databases representing global and personal spaces, and their extensive ability to interface with each other, is what makes it possible to produce the 'big picture', which can be seen in Paul Virilio's terms as the 'Grand Scale Optics'[16] that charge the image with new dimensions. These infrastructures and information architecture are largely influenced by a major shift in the organization of knowledge undergone in recent years, as the outcome of the transition from state institutional control to control by the large, privately owned information companies that represent different economic and political interests.

In contrast to the first two typologies, the third typology is based on the principles of optical photography as formulated in analogue cameras. Furthermore, although it is not based on networked models, it allows for interfacing with them. This typology is expressed in multidimensional image technologies based on the total light field, at a given time and space, such as those embedded in plenoptic cameras, for example the Lytro camera, which was promoted as 'the only camera that captures life in living pictures'.[17] These cameras are no longer based on the spatial logic of a bitmap characteristic of standard cameras, but on the perception of a systemic image that enables a parametric change in relation to focus, perspective, and depth of field, even after the picture has been shot. In this way, a new type of in-depth structure that theoretically encapsulates an infinite number of possible images within itself is obtained.

See Plates 9 and 10.

This type of image can be seen in reference to Deleuze's concept of the virtual, which he perceived to be as 'real as the actual'.[18] This results from the fact that it contains within itself the sum of possibilities, or the full potentiality, in which the actual could be realized in practice.

> The virtual is not opposed to the real but to the actual. The virtual is fully real insofar as it is virtual … Indeed, the virtual must be defined as strictly a part of the real object – as though the object had one part of itself in the virtual into which it is plunged as though into an objective dimension … The reality of the virtual is structure. We must avoid giving the elements and relations that form a structure an actuality which they do not have, and withdrawing from them a reality which they have.[19]

The virtual, following this view, contains its own reality, but one that has not yet been actualized. The existence of a structured space of possibilities is what makes the virtual 'beyond the actual'. This kind of apparatus, such as plenoptic cameras offer, exempts the photographer from the previously required task of successfully capturing the unique, one-time, irrecoverable moment. It detaches photography from a given time and space, in order to create an image that exists beyond the actual boundaries of what is real and concrete.

At the metaphorical level, the generative potential of 'in-depth' computerized images, in their different forms, could be thought of as a mechanism of emergence.

Emergence as a biological term is defined as the rise of a system that cannot be predicted or explained from antecedent conditions. It is also the result of a dynamic process in which a large entity is formed by the interaction of its parts, maintaining coherence without external control. Emergence requires novelty at the macro level, with regard to the micro level.[20] In the context of the concept of 'in-depth photography', emergence can be seen as an ongoing process with unpredictable consequences. The images created in this process can change their performances at the visual level (macro) and their level of performance within the information space in which they operate (micro).

The three models presented above demonstrate the act of photography within fluid and variable systems, or alternatively within the sphere of the virtual. They break down the perception of space and time on which photography was based in the past, and enable the dynamics of photography beyond the moment at which the photograph was taken. They offer a new type of gaze through the expanded photographic apparatuses, in what can be considered as a 'living system' that changes in relation to its environment.[21] It is important to note that this kind of 'living system' is potentially subject to endless changes based on interests and power structures of various kinds to which these mechanisms are related.

Towards an 'Image Genotype' – Beyond the Surface

The virtualization of the photographic 'in-depth image' through new apparatuses, such as the ones mentioned above, resembles in many ways the abstraction of space as a result of the introduction of digital technologies. In the context of the built environment, this abstraction is manifested in the concept of typology, which relates to situations of feasibility for the realization of a form as a real occurrence. Referring to the virtual in morphological and spatial contexts, Brian Massumi argues that 'The abstractness of the virtual has been a challenge to certain discourses, particularly in the interdisciplinary realm of cultural theory, which make a moral or political value of the concrete'.[22]

Analogue photography has a clear affiliation to reality and thus can directly touch its concrete and local contexts. Today, in light of the ability to manipulate frames using image-processing software, the validity of photography as a document of reality is undermined. The connection between the photographed image and reality becomes so fragile that it is difficult to distinguish between images created by other means and photographs that originate from the camera.

This kind of fragility is illustrated in French artist Raphaël Fabre's work, CNI (Carte Nationale d'Identité). Using 3D software, Fabre created an image of his face that was approved as valid for the issuing of an official identity card as a French citizen. In his work, Fabre referred to the new reality in which it is impossible to distinguish between photography and simulacra. He deliberately chose to avoid the use of computer tools such as 3D laser scanners that could have helped in the precise reconstruction of the model of his face. Instead, he chose generative tools to create the portrait that would emphasize the artificiality of the imaging process he had used. For example, in order to get an image of his hair, he used particle effects to generate fake hair, and eventually relied on multiple renderers to make the headshot look as if it had been snapped by a camera.[23]

See Plate 11.

However, even when images are created through the photographic apparatuses, the question arises as to their ability to create a representation of some kind of a stable identity. Japanese artist Tomoko Sawada created a series of self-portraits, where she represented herself with different facial expressions and outfits, as a 'distributed self'.[24] She shot a series of photographs using different photographic practices, such as passport photos, wedding photos, or photos for a model portfolio. In these works, she created 'an archive of the self' in which the various simulations and images that she had accumulated became a deconstruction mechanism of continuous identity. In the deconstruction of a unified perception of the self, her different simulations made her image into an elusive and incoherent identity.[25]

See Plates 12 and 13.

The attempt to capture what is beyond the surface can be seen as an aspiration to reach what can be called a 'genotype' of the photographed image. The genotype, a term originating in biology, refers to *the* relevant part of the DNA passed to the organism by its parents. It is contrary to the '*phenotype*', *which refers to* the physical and behavioral traits of the organism, such as size and shape, metabolic activities, and patterns of movement.[26] The genotype remains constant despite environmental effects and transformations. In the photographic context, the relationship between the genotype and the phenotype reflects the relationship between the visible – what is on the surface, the phenotype – and what cannot be seen – the genotype, which can facilitate the identification of the phenotype.[27]

In view of the non-historical nature of the genotype[28] as an expression of potentiality, the goal of defining the 'visual genotype' is to formulate the tools that will enable the identification of those elements that exist beyond the one-time appearance of the objects/subjects photographed. The challenge is to overcome the changing modes of appearance of things in the world which are undergoing transformations over time (like ageing or changing emotional states in humans), or by shooting angles, and the changing fall of light.[29] The potential for photographic systems to acquire such a competency, at a time when photography is becoming unstable and relative, is facilitated by developments in artificial intelligence and computer vision technologies that have the ability to identify objects and human beings to an extent that exceeds human capabilities.[30] Through these technologies, which are embedded in photographic apparatuses, it has become possible to locate the archetypal component of the photographed object/subject – its 'visual genotype' – and through that, to restructure the affinity between photography and actual reality.[31]

Restructuring the affinity to reality is enabled by the fragmentation of the photographic space into its basic components, and the identification of objects and subjects photographed in real space. The identification process is based on locating basic visual features grounded in mathematical relations that can be largely seen in analogy to the logic of the scopic regime of linear perspective, which was also based on mathematical relations that enabled the space's deconstruction and reconstruction. Designed around the concept of a vanishing point, it provides three-dimensional spatial information that transcends its two-dimensional representation. It is based, as curator and researcher William Ivins indicated, on recognition of internal invariances that produce

a 'two-way' relationship between object and figure.[32] The great importance of perspective, in light of this, as he claimed, was not its ability to provide realistic images, but rather its ability to produce absolute hybrids that combine fiction and nature, based on its optical consistency. In a way which resembles the logic of Renaissance perspective, new photographic apparatuses are able to generate new images based on mathematical relations associated with reality. However, they go beyond the mathematics of optics and the logic of representation which are central to the linear perspective paradigm and transform it to the logic embedded in biological phenomena such as feedback loops, autopoietic emergence, phenotypes, and genotypes.

With the use of the new photographic apparatuses it is possible to animate photographed characters, based on mathematical reduction of their biological traits. Neural networks algorithms enable the generation of images that simulate reality that has never actually occurred. In fact, this process reflects one of the central features of the genotype comprised within: the potential of possible occurrences that can emerge from it. Programmability, which is one of its central competences, is characterized by a built-in connection between an optional past, present, and future. This allows the creation of photographic images that have never been materialized.

As an example of the kind of possibility embedded in new photographic systems, we can see the way that scientists synthesized a high quality video of former US President Barack Obama, speaking with accurate lip sync into a target video clip, out of an audio composite. Trained on many hours of his weekly address footage, a recurrent neural network learns the mapping from raw audio features to mouth shapes. Given the mouth shape at each instance of time, a high quality mouth texture was synthesized and composited with proper 3D pose, matching what Obama appears to be saying in a target video to the input audio track. This process produced photo-realistic results for what seemed to be a real video recording of Obama.[33] Another example is the work of computer scientists who managed to generate animations of the emotional states of a photographed character, based on a single still photograph. This is achieved by the use of a video of another person and the development of tools to transfer the expressiveness of the subject in the driving video to the target portrait based on the analysis of its facial features. In contrast to previous works that require an input video of the target face to re-enact a facial performance, this technique uses only a single target image. These examples are just two from a broad range of research activity that creates the infrastructure of the use of algorithms for generating what is meant to be perceived as real photographed authentic scenes of realities, although they have never actually taken place.

The ability of a system to identify objects and to produce a reliable appearance, based on their inherent characteristics, is conditioned by their authenticity. The concept of authenticity is fundamentally related to the concept of truth. Relating authenticity to an object links it to its core characteristics, while enabling deviation from its specific manifestations and disengaging from them. Detachment from the specific dimension of an object is the basis of Heidegger's approach to the concept of authenticity, which he regarded as opposed to representation. He considered authenticity as embedded in situations in which the individual is open to the discovery of the infinite possibilities of use embodied in everything that exists in his world and the possibility of giving it different uses.[34] In the context of generative photographic systems, authenticity is based on the system's ability to create scenarios that appear to be real. However, unlike the Heideggerian concept of authenticity that relies on a state of

consciousness experienced by the subject, photographic authenticity is based on algorithms that rely on the logic of the machine. The photographic expanded apparatus in this context becomes a kind of diagrammatic infrastructure enfolding its potential conditions. Furthermore, the relationships between what is probable, what is possible, and what is real (related to the concept of potentiality) are inextricably linked with the cultural politics and ideologies behind them. It is, as Tiziana Terranova claims in her book *Network Culture*,[35] important to take into account that the relationship between these elements 'involves the opening up of the virtuality of the world by positing not simply different, but radically other codes and channels for expressing and giving expression to an undetermined potential for change'.[36]

Your Pictures Are Looking at Us – The Invisible Way of Looking

In his article 'Technology's In-Betweenness',[37] philosopher Luciano Floridi proposes classifying technologies according to three categories of order that designate the relationships between users and objects. First-order technologies are the most basic ones: those that stand between the user and the world of natural phenomena. They can be complex in nature, and sometimes even rely on other technologies, and can also be applied by non-human beings.[38] Second-order technologies are the most common, and include technologies that people use but are always involved in other technologies.[39] Third-order technologies, on the other hand, are technologies that refer to other technologies as users: they exclude the human subject from the chain of interactions and hence become autonomous. Although there are increasing numbers of people engaged in taking photographs in volumes unprecedented in history, contemporary photography can be perceived as mainly acting within the territory of third-order technologies, as it is gradually becoming a process dominated by machines.

Automated cameras are embedded in various types of systems, often functioning as actuators for different kinds of interactions. Smart cities, smart homes and smart objects are integrating cameras into their infrastructures in order to enhance and optimize their performance. In the sculptural series 'Nests', Czech artist Jakub Geltner demonstrates a critical approach relating to the new types of bond between the cameras and the environment in which they are located. He presents a series of sites where security cameras, which are a central factor in contemporary automated photography, are located in the public sphere. The way the cameras in his photos are arranged in space gives them the appearance of flocks of birds or biological colonies that have invaded the space and spread in it, creating what he describes as an infection. The cameras he photographs are seen as alien to the space, but at the same time they look like a natural phenomenon, a kind of organism integrated into it. In this way he refers to a new ecology, in which cameras are becoming components in an environment where the traditional distinction between the natural and the artificial loses its validity.

See Plates 14 and 15.

The most significant change in the sophistication of the photographic apparatus has to do with its ability to interpret what it photographs. This ability, based on the identification of repeating patterns, results from the great progress made in recent years in the field of artificial intelligence and machine vision, and particularly in the field

of face recognition.[40] These technologies draw on statistical data that validate them, thus creating a novel type of apparently 'scientific' objectivism that presents a new epistemological approach to the definition of objects in the world and to the manner in which we acquire knowledge about them. This falls in line with the current approach to the human image which is based on values of quantification.[41] By this approach, it has become irrelevant to refer to the human being as a metaphysical entity, but instead, the human is perceived as a source of information and quantified data that can be calculated, analyzed and manipulated with computational systems. The new photographic practices replace representations of the human as a 'spiritual entity' with the mathematics of physical bodies, substituting their complexity and multilayered properties with criteria which are measurable and predictable.[42]

Artist Trevor Paglen refers in his paper 'Invisible Images'[43] to the new status of photography. He claims that, today, it is not we who are looking at images, but rather, it is the images that are looking at us. We are being monitored by automated systems that we no longer control. Algorithms that decode the photographed images can identify objects and people, give them names, and analyze their behavior and even their emotional states. In his artistic work he gives visibility to the invisible encoding mechanisms that operate on a photographic reality by transforming the surface of the image into information on the people being photographed; information that can be analyzed and serve as a tool for control and a source of profit.

While photography is becoming more widespread and is a common medium of expression and communication for individuals worldwide, it has also expanded its appearance in institutional contexts, strengthening institutions' powers of control.[44] In recent decades, considerable resources have been invested in the development of computer vision algorithms for institutional surveillance applications. For example, biometric systems, which have gained the status of a 'technology of truth',[45] are used to automatically identify people by their physiological or behavioral characteristics, either as individuals or by assigning them to a reference group, and therefore connecting and distinguishing between them and other human beings.

The use of face recognition and categorization practices, based on biological characteristics and physical appearance, is not a new phenomenon. It was recognized as early as the late 19th century when Francis Galton developed his eugenics theory. This theory was regarded as a scientific investigation based on analysis of the appearance of photographed subjects as an indication of potential behavior. Although eugenics was conceived by its founders as an empowering theory, a manifestation of a liberal approach in which the use of biopolitical power was considered as an instrument for social welfare,[46] it was adopted in the 20th century as legitimation for racial ideologies. The use of algorithms for identifying people with respect to gender, ethnicity, biological age, and sexual orientation eventually applies the same principles. Needless to say, in their practical implementations these biometric practices can exacerbate social inequalities and undermine weaker elements of the population in order to serve the interests of those with power and the ideologies that shape their formulation.

In her article 'Face Recognition and the Emergence of Smart Photography',[47] Sarah Kember offers a view of the practices of 'cutting and sorting' which are embedded within applications of face recognition as inevitable. She suggests examining how this can be applied in a better and smarter way: 'not an indicator of technological (or human) autonomy and progress but rather of a human–machine photographic system able to see faces as objects "both-and" as ambiguous becomings-at-the-boundary.'[48]

The fact that this process is being generated by machines and becomes completely automated has the potential of avoiding known conventions and restructuring existing social and political perspectives. The potential implications are far more profound since the entanglement of photography within large-scale databases and automated network infrastructures transforms it from a representational platform, focused on the relation between the photographed images and the world, to 'a platform of action' within this world. Based on the practices of categorizations its performative aspects touch upon acts of inclusion and exclusion, accessibility and restriction, control, supervision, and manipulation.[49] In such a system the camera's performance moves far beyond 'looking at us'. Therefore it requires us to re-examine whether we do still have the responsibility, not only regarding the ways in which we are taking pictures, but also in the way in which we are being photographed.

Rethinking Identity

Through the use of new technological tools, photography maintains a new kind of affinity to reality. Indeed, in a way that can be perceived as paradoxical, in recognition of the detachment of the indexical connection to photography in its analogue contexts, and hence in its inability to mediate external 'truth', documentation and surveillance functions of photography become more valid. Moreover, the use of this medium is increasing in legal and forensic contexts and serves as a central means in civil and military control and regulation systems. Despite its evident contribution to functionality in surveillance, control, civil care, and security terrains, the use of these technologies constitutes a significant threat to many aspects of civilian life.

This threat is not only due to the increasing exposure of human beings to cameras documenting their activities, but also to the mechanisms through which the photographs are being interpreted, which deprive the subject of their capability for self-determination. The use of these technologies has exceeded the institutional framework of two of the main economic forces of the 21st century – the security and commodity industries[50] – owing to their potential as mechanisms for control and as a source for profit.[51] These technologies are designed according to the surveillance and marketing imperatives of targeting, tracking, and location.[52] Their interpretive processes are being driven by the possible and probable implications for potential actions that can be predicted, which are relevant for the targeting factors.

In the case of computer vision, algorithms replace metaphysical entities with vectors or with standardized templates as the source for identification and interpretation.[53] The automation of photography maintains a type of feedback loop in which entities sustain their unique characteristics, while being affiliated to different groups, on the basis of similarity. The degree of similarity serves as an index in a chain of association, which leads, as an apparently unavoidable result, to standardization and, in relevant cases, to institutionalization. In these circumstances, the individual is gradually fixed (trapped) in the patterns of action determined for them by the system. By being fully controlled and assimilated within the system, the individual theoretically loses their unique identity.[54] The categories that such systems employ 'are designed to reify the forms of power that they are set up to serve'.[55]

These automatic interpretation systems are performance-driven and therefore bypass human consciousness. As such, they resemble modern conceptions rooted in Freud's psychoanalytic theory based on the assumption that in order to get a deeper

understanding of the self, we ought to get to understand ourselves not through our cognitive processes, but through actions: dreams, emissions, behaviors. Since these automated systems are grounded on statistical tools, as part of the current perception of the 'quantified self', they do not enable any self-reflexive processes beyond the numerical prism, and therefore no real process of self-determination and critical approach can take place. Feedback-loop mechanisms between humans and algorithms as a means of approaching true knowledge of the self form an aesthetics of objectivity based on real data. As a result, when the standardization processes are taking place, an illusionary conceptualization of the self is granted on the assumption that the performative data of each individual are unique and not identical to the data pattern of any other person. This way of conceptualizing the self has far-reaching political significance since it dismantles the infrastructures of modern political identity, based on the way individuals belong to their common categories and how they relate to other people.[56]

The deconstruction of the concept of identity in its familiar form by means of interpretive applications is expressed in the concept 'becoming imperceptible' expounded by Deleuze and Guattari. In their book *A Thousand Plateaus*[57] they propose to treat 'imperceptibility' not from the viewpoint of not being seen, but rather through the inability to be interpreted. They claim that becoming imperceptible, which can be perceived as ways of being camouflaged,[58] can be achieved by a constant alternation of positioning, in which the subject adapts to the constantly changing background. This is a situation that renounces the concept of identity as a knowable object of stability and existence, for the sake of becoming or being in a state of constant change. Becoming imperceptible is an extension of 'becoming everyone and everything', and therefore it enables assimilation through the reduction of difference. It is a condition of blending into the background, by dissolution and disappearance into everything else, losing uniqueness, separateness, individuality, originality, and subjectivity.[59] Following Deleuze and Guattari, architect and theorist Neil Leach refers to the concept of camouflage in similar terms. He proposes to regard camouflage not as a condition in which the individual loses his identity against the background of the other, but rather as a mechanism for 'inscribing an individual within a given cultural setting', and, as such, as 'a medium to relate to the other through connectivity'.[60]

It can be claimed that the condition of 'becoming everyone and everything' is actually embedded in the interpretive mechanisms of the photographic systems. These, after all, are only possible on the basis of similarity:[61] the ability to characterize an entity in the world inherently relies on its connectivity with 'the other'. The ways in which deep neural networks and computer vison tools shape individual profiles and identities eliminate familiar ontological definitions and binary divisions. They do so by creating new hybrids that open the door to rethinking existing social settings.[62] In this context, new photographic identification mechanisms can apparently enable the unraveling and the reconstruction of familiar models of identity. In this respect, the new image-making devices function as sociopolitical objects, whose boundaries transcend their physical apparatus, into distributed systems of material and coded modules. They are integrated within a new complex of relationships between human and non-human actors: people, objects and things, concrete infrastructures, and abstract systems.

Consideration of photography in systemic contexts can be analyzed in relation to the changes that have been taking place in recent years in both biological research and

computer science. These changes are characterized by the shift from thinking in terms of strict models of programmability to thinking in more organic terms.[63] Research developments in the field of system biology, as demonstrated by Chun, emphasize the limitations that the reductionist perception[64] and the traditional programming have created, and the importance of the study of the interactions and connections between the different components of a system. These relationships are centered on data-driven programming based on algorithms of machine learning. This highlights the fact that mathematical models have allowed us to understand biological systems by identifying the connections among local interactions between the components of the system and their wider biological effects. This approach shifts the emphasis from the functioning of the unique gene to the functioning of the cell as an ecosystem composed of different networks and signals. The study of epigenetics[65] can also be seen as part of the tendency to examine the influence of environmental processes in place of discrete phenomena, as manifested in photography by the contextuality of the 'networked image'. It points to the development of programming that is also less strict and adopts biological models in the framework of becoming and processes, replacing previous models of being and identity.[66]

Indeed, the current preoccupation with the meanings of identity receives new forms of reference. Yet, it is important to remember that the relevance of photography, as opposed to other media, is in its affinity to reality. This affinity is becoming more prominent in light of the ways in which human activities are being regulated and monitored in space through mechanisms of identification based on biological properties. Through the process of identification by what I have called the 'photographic genotype', it can be perceived as a new type of truth being formed in relation to the physical reality: as a 'second-order truth', which links to reality by comparing one image to another. However, it is centered on a performative approach that replaces the world of representation. As a result, as I have mentioned above, it enables the creation of images of future time, hypothetical past, and potential present in various mechanisms of generativity. In this way, it establishes a new hold on reality by simultaneously generating the fictitious, while connecting closely to the real-time data space and to physical phenomena.

In order to better understand the complexity that exists in the framework of current forms of photography, between the real and the virtual, the potential or the fictitious, I again refer to the idea of 'in-depth image' and examine it through the concept of the fold. In biological terms the fold is a dynamic mechanism that enables geometric transformation of flat material into a three-dimensional shape, depending on environmental effects. Nature uses folding algorithms at a variety of scales, from protein folding and the creation of DNA coils to mountain ranges, in order to enable different behaviors. Referring to this concept, Gilles Deleuze relates to the convergence from two- to three-dimensionality, not as a morphological phenomenon, but rather as an ontology of becoming, of diversity, and of differentiation, which preserves movement and continuity. His concept of the fold is based on the perception of a continuing generative process that enables the existence of parallel routes, an expression of potential that has not yet been actualized.[67] He sees the fold as 'the matrix of passage from matter to spirituality, from being to abstractness, from visibility to imperceptibility'.[68] This type of matrix echoes the tension existing between the physical reality and the potential performances of the image, applied in the new typologies of the photographic 'in-depth image' that connects reality in its diverse manifestations with abstract systems within which it acts. As it performs in a multifaceted ecology in which automated

agent-based systems are acting in parallel with human factors, it encapsulates a complexity of realities which are folded and unfolded to produce a potentiality of infinite folds and surfaces. They 'twist and weave' through the multiplicities of time and space of a networked image performing simultaneously in compressed space-time platforms and in real-time. By this process the internal and the external are interwoven in a way that not only limits the ability to define the borders of the image but has the potential for its emergence processes.

> Folding-unfolding no longer simply means tension-release, contraction-dilation, but enveloping-developing, involution-evolution … The simplest way of stating the point is by saying that to unfold is to increase, to grow; whereas to fold is to diminish, to reduce, to withdraw into the recesses of a world. Yet a simple metric change would not account for the difference between the organic and the inorganic, the machine, and its motive force. It would fail to show that movement does not simply go from one greater or smaller part to another, but from fold to fold. When a part of a machine is still a machine, the smaller unit is not the same as the whole.[69]

The affinity to the actual reality takes on a heightened significance in the distinct performative aspects of photography, as they organize the conduct of people in space and time and influence the content to which they will be exposed and the things and people with which they will interact. Although the digital photographic image is defined by code (text), its ontology, due to its performative facets, is parallel in many aspects to that of new materialism, which 'abandons the terminology of matter as inert substance in favor of predictable causal forces'.[70] As new materialism relies on the post-human conception of matter as lively or exhibiting agency, engaging with both the material realities of everyday life and wide-ranging socioeconomic and geopolitical structures,[71] it offers new accounts for the perception of the photographic image in relation to nature, agency, and social and political relationships. By adopting these tools it gives new perspectives on the ways in which our material environment is being produced, reproduced, and consumed.

In her article 'Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter', Karen Barad suggests referring to the concept of performativity through the connection between language and materiality, while denying the conventional perception of the priority of text in determining what is real.

> A performative understanding of discursive practices challenges the representationalist belief in the power of words to represent pre-existing things. Performativity, properly construed, is not an invitation to turn everything (including material bodies) into words; on the contrary, performativity is precisely a contestation of the excessive power granted to language to determine what is real.[72]

In the context of current photographic practices, the ability to determine what is 'real' in relation to an image relies on computational algorithms. The new way digital photography is connected to reality is made possible by the fragmentation that an image undergoes by its convergence to text. This is true both in its visual as well as in its denotative and connotative aspects. Thus, in paradoxical fashion, since the new photographic apparatuses define objects in artificial and abstract ways, their capacity to

approach reality more closely, through accessibility to large networked databases, is growing. Therefore, by performing within what Bruno Latour defines as 'centers of calculation',[73] integrating biological and artificial living systems, photography touches directly on issues related to biopolitics, society, and ethics in a manner that affects profound aspects of social, economic, and political structures.

Current photography is characterized by the polarities between, on the one hand, the total fragmentation and abstraction of reality and, on the other hand, its new affinity with the material substance to which the biological concepts of genotype and phenotype can be applied. This polarization makes photography a unique and fundamental technology through which the relation between human beings and the world is being redefined and re-examined. Consequently, in a situation in which the old order is being replaced, identities are being distributed and crumbled, manipulated, or denied, photography becomes a key factor in inscribing the sense of the 'real' that can be actualized.

Nevertheless, photography relates to the living and the dead, to material substance and natural forces, to memories and to people in their daily lives, their happiness, and their grief. If we return to Henri Cartier-Bresson, we should remember that photography still retains its special magic that can be acquired by an intimate gaze, even in the state in which the 'camera is looking at us'.

Notes

1 Joanna Zylinska, 2015, 'The Creative Power of Nonhuman Photography', *Photographic Powers*, eds. Mika Elo and Marko Karo with Marc Goodwin, Helsinki: Aalto University, p. 140.
2 Ibid., pp. 148–9.
3 A broad overview of this issue appears in Saket Navlakha and Ziv Bar-Joseph, 2011, 'Algorithms in Nature: The Convergence of Systems Biology and Computational Systems', *Molecular Systems Biology* 7, p. 546.
4 Wendy Hui Kyong Chun, 2011, *Programmed Visions*, Cambridge, MA: MIT Press.
5 Ibid., p. 101.
6 Vilém Flusser, 1984, *Towards a Philosophy of Photography*, ed. Derek Bennett, Göttingen: European Photography.
7 Henri Cartier-Bresson, 1952, *The Decisive Moment*, New York: Simon & Schuster.
8 See reference to this issue in Ayelet Zohar's article, in her discussion of the concept of the camouflage. Ayelet Zohar, 2018, 'Camouflage', *Mafteákh, Lexical review for Political Thought* (in Hebrew), Tel Aviv: Minerva Humanities Center, Tel Aviv University, p. 9.
9 Hito Steyerl, December 2014, 'Proxy Politics: Signal and Noise', *e-flux Journal*, #60, available at: http://www.e-flux.com/journal/60/61045/proxy-politics-signal-and-noise (accessed March 1, 2018).
10 Deep learning algorithms are computational mathematical models that simulate the way neurons are connected in the brain. They attempt to mimic the activity in layers of neurons in the neocortex, where most of the thinking activity occurs. The software learns, in a very real sense, to recognize patterns in digital representations of sounds, images and other data.
11 Steyerl, ibid.
12 Jacques Rancière, 2001, 'Ten Theses on Politics', *Theory & Event* 5, 3, available at: http:// www.egs.edu/faculty/jacques-ranciere/articles/ten-thesis-on-politics (accessed March 1, 2018).
13 Steyerl, ibid.
14 In this respect it connects to the concept of 'The Undecidable Image' coined by Daniel Rubinstein and Katrina Sluis.
15 See my text referring to the photographed image through the concept of the network: Yael Eylat Van-Essen, 2013, 'The Image as a Networked Interface: The Textualization of

the Photographic Image', eds. D. Rubinstein, J. Golding, and A. Fisher, *On the Verge of Photography*, Birmingham, UK: Birmingham University Press, pp. 251–75.

16 Paul Virilio, 1992, 'Big optics', ed. Peter Weibel, *On Justifying the Hypothetical Nature of Art and the Non-Identicality within the Object World*, Cologne: Galerie Tanja Grunert, p. 90.

17 Lytro cameras feature a light field sensor that collects the color, intensity, and direction of every light ray flowing into the camera, capturing a scene in four dimensions. Its innovative light field sensor captures 11 million light rays of data (or 11 megarays), including the direction of each ray, something conventional cameras do not do. For further information see: https://www.lytro.com/press/releases/lytro-inc-unveils-the-worlds-first-consumer-light-field-camera (accessed March 1, 2018).

18 See Manuel DeLanda's interpretation of Deleuze and Guattari's distinction between the concepts of the Virtual and the Actual. Manuel DeLanda, 2015, 'The New Materiality', *Architectural Design* 85, 5, p. 18.

19 Gilles Deleuze, 1994, *Difference and Repetition*, New York: Columbia University Press, pp. 208–9.

20 Tom De Wolf and Tom Holvoet, 2005, 'Emergence Versus Self-Organisation: Different Concepts but Promising When Combined', *Engineering Self-Organising Systems*, Lecture Notes in Computer Science 3464, Berlin, Heidelberg: Springer, pp. 1–15.

21 According to James Grier Miller's Living Systems Theory, 'living systems' are open, self-organizing systems that have the special characteristics of life and interact with their environment. This takes place by means of information and material-energy exchanges. James Grier Miller, 1978, *Living Systems*, New York: McGraw-Hill.

22 Brian Massumi, 1998, 'Sensing the Virtual, Building the Insensible', *Hypersurface Architecture,* ed. Stephen Perrella, Architectural Design (Profile no. 133), 68, 5/6, May–June, p. 16.

23 About the project, see artist's website, available at: http://www.raphaelfabre.com/#cni/ (accessed March 1, 2018).

24 The term 'the distributed self' is often used in relation to 'selfie' photos. Although Sawada deliberately uses different photographic practices in order to explore the relation between photography and power structures, her works can be also analyzed in regard to the 'selfie culture'.

25 Zohar, 'Camouflage', p. 21.

26 *Stanford Encyclopedia of Philosophy*, available at: https://plato.stanford.edu/entries/genotype-phenotype (accessed March 1, 2018).

27 Chun, *Programmed Visions*, p. 117.

28 Ibid., p. 120.

29 There are still major limitations to computerized vision systems. However, there has recently been great progress in identifying people under varying conditions and times. See, for example, Zhihua Xie, Shuai Zhang, Guodong Liu, and Jinquan Xiong, 2018, 'Near Infrared and Visible Face Recognition Based on Decision Fusion of LBP and DCT Features', Proc. SPIE 10609, MIPPR 2017: Pattern Recognition and Computer Vision, 106091H (March 8).

30 Jamie Condliffe, 2017, 'Facial Recognition Is Getting Incredibly Powerful – and Ever More Controversial', *MIT Technology Review*, September, available at: https://www.technologyreview.com/the-download/608832/facial-recognition-is-getting-incredibly-powerful-and-ever-more-controversial (accessed March 1, 2018).

31 It is important to note that this process is based on statistics and relies on the performativity of the algorithms applied on given images or databases, and therefore its results are not absolute.

32 In this way it is always possible, regardless of the angle and distance from which an object is seen, to obtain the same object at varying sizes as seen from different positions, since the internal properties of the object have not been modified. William. M. Ivins, 1973, *On the Rationalization of Sight*, New York: Plenum Press, p. 9.

33 Supasorn Suwajanakorn, Steven M. Seitz, and Ira Kemelmacher-Shlizerman, 2017, 'Synthesizing Obama: Learning Lip Sync from Audio', University of Washington, *ACM Transactions on Graphics*, 36, 4, Article 95 (July), p. 1.

34 Martin Heidegger, 1962 [1927], *Being and Time*, trans. J. Macquarrie and E. Robinson,) New York: Harper & Row.

35 Tiziana Terranova, 2004, *Network Culture*, London: Pluto Press.
36 Ibid., p. 26.
37 Luciano Floridi, 2013, 'Technology's In-Betweenness', *Philosophy and Technology* 26, 2, pp. 111–15.
38 For instance, birds building their nests from materials found in nature.
39 Such as the way a person uses a screw and screwdriver to produce one action on a piece of wood, or the function of keys in relation to lockers or vehicles.
40 This progress is made possible mainly thanks to the ability to implement machine learning on large-scale image databases using neural networks which are trained using different learning methods, either supervised or unsupervised.
41 See reference to the concept of the 'quantified self' on page 93.
42 Sarah Kember, 2014, 'Face Recognition and the Emergence of Smart Photography', *Journal of Visual Culture* 13, 2, p. 186.
43 Trevor Paglen, 2016, 'Invisible Images (Your Pictures Are Looking at You)', *The New Enquiry* December, available at: https://thenewinquiry.com/invisible-images-your-pictures-are-looking-at-you (accessed March 1, 2018).
44 In 'The Body and the Archive', Allan Sekula has analyzed photography as an imaging technology that was, throughout its history, intertwined within the disciplinary institutions of the 19th century. Allan Sekula, 1986, 'The Body and the Archive', *October* 39, Winter, pp. 3–64.
45 See reference to the interrelations between biometrics and forensics in Anil K. Jain and Arun Ross, 2015, 'Bridging the Gap: From Biometrics to Forensics', *Philosophical Transactions of The Royal Society B*, 370, 1674, August.
46 Chun, *Programmed Visions*, pp. 7, 129.
47 Kember, 'Face Recognition', pp. 182–99.
48 Ibid., p. 197.
49 Technology from Face++ is already being used in several popular apps in China. For example, people transfer money through Alipay, using only their face as credentials, and Face++ software lets passengers confirm that the person behind the wheel of a car is a legitimate driver. 'Liveness' tests, conducted in order to prevent anyone from duping the system with a photo, require people being scanned to move their head or speak while the app scans them. Will Knight, 2017, 'Paying with Your Face: Face-Detecting Systems in China Now Authorize Payments, Provide Access to Facilities, and Track Down Criminals. Will Other Countries Follow?', *MIT Technological Review*, available at: https://www.technologyreview.com/s/603494/10-breakthrough-technologies-2017-paying-with-your-face (accessed March 1, 2018).
50 Kumba Sennaar, 2017, 'Facial Recognition Applications – Security, Retail, and Beyond', TechEmergence, 16 November, available at: https://www.techemergence.com/facial-recognition-applications (accessed March 1, 2018).
51 Corien Prins, 2006, 'When Personal Data, Behavior and Virtual Identities Become a Commodity: Would a Property Rights Approach Matter?', eds. Lucie Guibault and P. Bernt Hugenholtz, *The Future of the Public Domain*, The Hague: Kluwer Law International), pp. 270–303.
52 Kember, 'Face Recognition', p. 191.
53 Ibid., p. 186.
54 Zylinska claims that the automatism in photography manifests itself not only in automated systems but also in the ways that people take pictures. The manner in which they photograph is usually 'rechannelled through a whole database of standardised, pre-programmed, pre-existing image-frames, whose significance we are already familiar with and which we are trying to recreate in a unique way, under the umbrella of so-called individual experience'. Zylinska, 'The Creative Power', p. 140.
55 Paglen, 'Invisible Images'.
56 Eran Fisher, 2017, 'Between Freud and Zuckerberg: The Algorithms that Strangle your Identity' (in Hebrew), *Haaretz* August 30, available at: https://www.haaretz.co.il/blogs/thelab/1.4402127 (accessed March 1, 2018).
57 Gilles Deleuze and Felix Guattari, 1987, *A Thousand Plateaus*, Minneapolis, MN: University of Minnesota Press).

58 See the connection between the concept of camouflage and being imperceptible in Ayelet Zohar, 2014, 'Strategies of Camouflage: Depersonalization, Schizoanalysis and Contemporary Photography', eds. Ian Buchanan and Lorna Collins, *Deleuze and the Schizoanalysis of Visual Art*, London; New York: Bloomsbury Academic, pp. 173–201.
59 Ibid., p. 176.
60 Neil Leach, 2006, *Camouflage*, Cambridge, MA: MIT Press, p. 246.
61 Similarity is the core principle for the performance of supervised machine-learning systems for identification tasks. (See Russel and Norvig's definition of 'supervised learning' as the machine-learning task of learning a function that maps an input to an output based on example input-output pairs. Stuart J. Russell and Peter Norvig, 2010, *Artificial Intelligence: A Modern Approach*, Upper Saddle River, NJ: Prentice Hall.
62 Kember, 'Face Recognition', p. 195.
63 Chun, *Programmed Visions*, p. 129.
64 Many face recognition and computer vision algorithms are based on reductionism. M. Turk and A. Pentland, 1991, 'Eigenfaces for Recognition', *Journal of Cognitive Neuroscience* 3, 1, p. 71.
65 Epigenetics: the study of the way in which the expression of heritable traits is modified by environmental influences or other mechanisms without a change to the DNA sequence. See http://www.dictionary.com/browse/epigenetics (accessed March 1, 2018.
Click here to enter text.
66 Chun, *Programmed Visions*, pp. 130–1. Chun sees the desirability of 'moving away from the notion of a central power towards a decentralized network of agents' as an expression of neoliberal concepts.
67 Gilles Deleuze, 1993, *The Fold: Leibniz and the Baroque*, trans. Tom Conley, Minneapolis, MN: University of Minnesota Press.
68 See Ayelet Zohar's reference to the Deleuzian concept of the Fold in Ayelet Zohar, 'Strategies of Camouflage', p. 177.
69 Deleuze, *Difference and Repetition*, pp. 8–9.
70 Dana Coole and Samantha Frost (eds.), 2010, *New Materialisms: Ontology, Agency, and Politics*, Durham, NC: Duke University Press, p. 9.
71 Ibid., Introduction, pp. 1–43.
72 Karen Barad, 2003, 'Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter', *Journal of Women in Culture and Society*, 28, 3, p. 802.
73 Latour relates to the concept of 'centers of calculation' as a manifestation of 'inscriptions that can be superimposed, reshuffled, recombined, and summarized, and that totally new phenomena emerge, hidden from the other people from whom all these inscriptions have been exacted'. Bruno Latour, 1986, 'Visualization and Cognition: Drawing Things Together', *Knowledge and Society: Studies in the Sociology of Culture Past and Present*, 6, pp. 1–40.

8 Graven Images

Photography after Heidegger, Lyotard and Deleuze

Daniel Rubinstein

Exposition

This chapter connects Heidegger's critique of identity and metaphysics with his later work on the question of technology to propose that photography, understood as an image-making technology, provides a privileged point of entry into the question of ontological difference. The work of Lyotard and Deleuze, while not directly engaging with photography, seems to be pointing in this direction. My assertion is that the 'step back' out of metaphysics does not proceed by way of language (as Heidegger would have it) but by the way of the photographic image. For this reason, photography is the visual counterpart of non-representational thinking. Philosophy that wishes to free itself from the trappings of subjectivity and representation and to invent an image of thought that is commensurate with the age of advanced technology has to learn to work with photographic images instead or alongside language.

Representation and Identity

Although he rarely discusses it directly, representation (*vorstellung*) is arguably one of the central issues for Heidegger's thought because the logic of representation is tied to the principle of identity and by implication to his critique of metaphysics. This argument unfolds in the following way. The history of Western philosophy is a history of forgetting that there cannot be a ground that is not externally given. Thought cannot withdraw from metaphysics because thought is expressed in language, and language represents. Because language represents, it neglects to inquire after the origin of representation, therefore placing representation as the ground of thought and in this way inaugurating transcendental metaphysics.[1]

The suggestion advanced below is that photography, understood as technology that makes legible images, is a privileged point of exit out of metaphysics because photography does not get entangled in the tendency of language to operate through the implicit acceptance of the logic of representation and for that reason it is free from the norms of metaphysical thinking. The attempt to demonstrate that photography can succeed in 'leaping out' of metaphysics where language fails is significantly complicated by the fact that photography is usually and for the most part identified with representation. This widespread acceptance of photography as the sine qua non of representation was largely overlooked by scholars, and I aim to demonstrate here that this results in a one-sided and instrumental approach that tends to disregard the fact that in photography representation is both sustained and overcome precisely because the photograph is

an *automata*, i.e. it is an image created not through the agency of human subjectivity but through an imitation of it. In what follows I argue that photography is, on the one hand, an analytic category that characterizes contemporary culture as thoroughly representationalist while, on the other hand, suggesting a possibility of resistance to representation from within the same technical assemblage understood as a repetitive and reproductive process. In other words, photography is both a figure of representation and the means by which representation can be overcome. In effect, photography is both *identity* and *difference*.

We must pause here for a while to take stock of these four dovetailed terms: *representation*, *identity*, *metaphysics*, and *technology*, in order to explore how they come to define and organize the *episteme* in the Western world and what is their purchase on photography as the image of philosophy that is yet to come.

First of all, *identity* of which Heidegger says 'The usual formulation of the principle of identity reads: A=A. The principle of identity is considered the highest principle of thought'.[2] Identity makes the world knowable because it affirms that 'Everything is what it is' (Leibniz), or that subjects are identified by their predicates: A *cul-de-sac* (subject) is 'a street or passage closed at one end' (predicate). The predicate is what permits the subject to subsist, no matter where in the world the aforementioned cul-de-sac is found, while providing a categorical test of its cul-de-sac-ness: if it is not closed at one end it does not qualify, therefore eliminating the possibility of confused or mistaken identities. What gives the principle of identity its universal force is the little copula *is* that posits a necessary logical relation between the subject and predicate. In the formula 'A *is* A' the *is* guarantees the correspondence of the two parts of the equation. Here we come face-to-face with the forgotten origin of the principle of identity. For we have no way of guaranteeing the truth of this 'necessary logical relation'. We have just learned that subjects are known by their predicates, but how are we to learn what *is* means? We know which conditions must be meet for a street to be a cul-de-sac, but which conditions must be met for *is* to be 'necessary logical relation'? It appears that for 'A *is* A' to be of any value, we must accept beforehand the truth of the *is*. The formula 'A is A' therefore functions as a kind of laboratory that analyzes various statements about the world to establish if they are true or not. The statement '3+2 is 5' goes into the laboratory and the outcome is 'true'; the statement '3+3 is 5' goes into the laboratory and the outcome is 'false'. So far so good, but the caveat is that there is not, nor can there be, a laboratory in which we can place the formula 'A is A' itself to establish if it is true or not. The story of science is therefore a story of a laboratory that operates on unknown premises. In other words, the principle of identity is a 'black box' of which we are unable to say whether it provides true or false answers. Reflecting on this problem in *The Principle of Identity*, Heidegger summarizes the situation like this:

> Everywhere, wherever and however we are related to beings of every kind, we find identity making its claim on us. If this claim were not made […] there would then also not be any science. For if science could not be sure in advance of the identity of its object in each case, it could not be what it is. […] Thus, what is successful and fruitful about scientific knowledge is everywhere based on something useless.[3]

So on the one hand, without identity there would not be any science, because there would be no criterion to tell true and false statements apart; nor, on the other hand is

it possible to verify that the law of identity itself is true because identity is the verification principle, and unless one is Baron Münchausen, one cannot pull himself up by one's own bootstraps. Science that starts from the principle of identity is culpable of positing a ground without however providing the means with which this ground can be accounted for, and is therefore yet another form of religious thought that develops on the basis of transcendental principles, or as Heidegger succinctly puts it:

> Why is science theology? Answer: because science is the systematic development of knowledge, the Being of beings knows itself as this knowledge, and thus it is in truth.[4]

Metaphysics. What we habitually call 'objective knowledge' appears, at the last count, as nothing more than wishful thinking, for the principle of identity, whose explicit purpose is to rid knowledge of ambiguity and paradox, is exposed as both ambiguous and paradoxical. But it gets worse, as the principle of identity dominates not only scientific thought but also metaphysics which is supposed to keep science in check by studying the fundamental nature of knowledge. But rather than being the guardian of science, metaphysics is guilty of sleeping on the job, as it internalized the language of scientific reasoning, accepted 'A is A' as the expression of the grounding of being in logic, and is therefore complicit in the mediation of existence through *logos*. The tendency of philosophy to accept the principle of identity as its own foundation finds its fullest expression in German Idealism and culminates in Hegel's famous statement that 'What is rational is real and what is real is rational'.[5] Here the principle of identity, as the decisive expression of rationality, is officially elevated to the status of ultimate reality. Against Hegel's identification of reality with *logos*, and by implication with thought, Heidegger maintains that philosophy must free itself from the principle of identity by exposing the foundations of the principle of identity itself. This however is easier said than done, as 'A is A' is the ground of thinking. What is needed is a 'step back out of metaphysics into the essential nature of metaphysics' or in other words, Heidegger wants to get beyond the '*is*' in 'A *is* A', to a place of mutual belonging between the subject and the predicate. The task of philosophy is to uncover the *ontological difference* that got buried under the principle of identity.[6]

Representation. When rational discourse (backed up, as we saw by science and metaphysics) is considered as the only legitimate form of knowledge capable of overcoming illusions, correcting errors, and avoiding contradictions, representation is pressed into service as the de facto dominant mode by which the world can be known. Representation marks a break with older forms of knowledge in which divine revelation, the bible, or mysticism were the sources of truth. For in representation knowledge is not given from above, it is not received from outside by means of god, sorcery, faith, or myth, rather knowledge is arrived at empirically through representing the world by means of rational reasoning. 5 is represented as 2+3, and this is so not because that is what the bible says, but because it can be rationally verified. For this reason, representation is the threshold of modernity. As Heidegger puts it 'The essence of the modern age can be seen in the fact that man frees himself from the bonds of the Middle Ages in freeing himself to himself'.[7] It is precisely because in the modern age man sees himself as autonomous that representation comes to be the guarantor of truth. To be a human being in this age means to be a subject for whom the world is represented as a picture, and true knowledge is guaranteed by the correspondence between images and entities

in the world. However, for Heidegger representation – as a mode of knowledge that privileges rationality – is taking its bearings from the same *logos* as the principle of identity itself. Representation shares with metaphysical thinking the forgetting of the ground on which it stands, but while the principle of identity and metaphysics determine the development of science and philosophy respectively, representation plays a greater role in the development of art and technology.

There are two main ways by which photographic representation differs from representation in language. First, in photography representation is not camouflaged, but it is the very surface of the image. In other words, Heidegger says that in language 'the little word "is" appears "everywhere", yet it does not "appear expressly" – i.e. representation is usually hidden behind forms of expression such as logic, rhetoric, metaphor, and poetics.[8] However, in photography representation is explicit: it comes to the eye alongside the content of the photographic image, the very surface of the photograph is representational. Second, in language representation is concealed behind the intonation and the voice of the enunciator. Words – whether spoken or written – are always uttered by someone, which means that the notion of the speaking subject (present or absent) is inseparable from an utterance. In photography however the image is the outcome of a technical process. If technology is understood through Heidegger as *poēsis* it seems plausible that the 'voice' of photography is that of technology itself, rather than of a speaking subject. Even if for the time being it remains an open question whether the 'voice' of technology can be heard in the content of the image, or if this technology undermines and dissolves the distinction between content and form.[9]

Technology. In the first instance, the common way of thinking about technology (for example in disputes for and against technological determinism) is to define it as a field of human activity; the application of scientific knowledge for the construction of practical tools. However, Heidegger says that while this understanding is no doubt correct, it fails to account for the ontological significance of technology. For technology is not only instruments, machines, and industrial processes but a particular way of grasping the world, of getting to grips with that which is out-there: 'Technology is therefore no mere means. Technology is a way of revealing.'[10] This statement is of course entirely in line with Heidegger's previously explored strategy to excavate the primordial, preconceptual ground of Western science, philosophy, and art. In coming to deal with presupposed ground of identity, metaphysics, and representation Heidegger seeks in each case to uncover the original question that has to be necessarily forgotten for the ground to appear as solid foundation of thought. Science and metaphysics seek to ground the world in the principle of identity, determining in advance the shape of things to come. But, according to Heidegger, this grounding prevents one from asking the more fundamental question about the pre-ontological character of representation itself:

> [T]he step back out of metaphysics into the essential nature of metaphysics is the step out of technology and technological description and interpretation of the age, into the essence of modern technology which is still to be thought.[11]

Technology is therefore a specific way of getting to the truth of being. Rethinking technology as the poetic essence of the age allows Heidegger to move away from the formula 'truth = representation' to a form of truth that is discovered in the creative processes of making, fetching, and gathering. The human world is made through

technology that acquires the status of the original oneness in which thinking and being are simultaneously held apart and together in the event of mutual appropriation. Central to this manoeuvre is the understanding of truth not as a logical certainty but as a form of *revealing*. Technology is *revealing* because it replaces the principle of identity with a process of creating, constructing, and building, uncovering a deeper bond between humans and their world. However, this togetherness should not be understood as consistency, resemblance, or similarity for all of the above require a prior condition of arbitration by human subjectivity, and in any case judgments of resemblance can only be conducted in broad daylight, under the auspice of a logical procedure. In rejecting representation, Heidegger posits technology as the way by which a human being acquires a sense of identity through the process of acting in the world. For Heidegger, the self is formed in and through technology, because acting and creating in the world is the condition of being human.

> The person is not a Thing, not a substance, not an object […] Essentially the person exists only in the performance of intentional acts, and is therefore essentially *not* an object. Any psychical Objectification of acts, and hence any way of taking them as something psychical, is tantamount to depersonalization. A person is in any case given as a performer of intentional acts which are bound together by the unity of a meaning.[12]

Therefore Heidegger says that it is wrong to assume that one is using technology to achieve certain goals, rather, one *becomes* through technology and it is this becoming that constitutes what we later name 'identity', 'ego', 'subjectivity', or 'sovereignty' (Heidegger, 2012). Technology in Heidegger's sense is a pre-subjective, necessarily phenomenological relation that is capable of revealing the original difference between beings and being.

Photography and Difference

In the final paragraphs of *The Onto-Theo-Logical Constitution of Metaphysics* Heidegger concludes that despite the efforts made by philosophy to critique metaphysical thinking, representation, and subjectivity, there is an inherent difficulty in attempting to do so from within philosophical discourse because Western languages are built on the verb *to be*, and therefore are already imbued with the spirit of metaphysics:

> It must remain an open question whether the nature of Western languages is in itself marked with the exclusive brand of metaphysics, and thus marked permanently by onto-theo-logic, or whether these languages offer other possibilities of utterance – and that means at the same time of telling silence. […] The little word 'is,' which speaks everywhere in our language, and tells of Being even where It does not appear expressly, contains the whole destiny of Being […].[13]

In the remainder of this chapter I will suggest that while it is true that language itself is imbued with the spirit of metaphysics image-making technology is able to offer a way out of this impasse. Photography is the case in point, because it is a technical process that makes legible images that might just bridge the gap between the rational process of mechanical inscription by light and poetic expression. For Heidegger, as we have

seen, technology is a mode of revealing: it allows access to deeper truth that is not accessible to representational thinking. But this truth is concealed because technology presents itself as a means to an end, and its essence remains forgotten and hidden from view. In what follows I wish to argue that photography is not only a technology that makes images, but also the way by which technology inscribes itself into an image, and for that reason it is capable of making technology visible, allowing one to challenge the hegemony of representational paradigms and suggesting a possibility of a 'step back out of metaphysics' into the essence of modern technology. This is not to strip photography of its value as correspondence, but to allow correspondence itself to acquire cohesion and to appear as both the 'nothing' and 'something' that together situate photography both within and beyond representation. One could say that photographic exposure overcomes the principle of identity (and therefore of representation) because it is the technique that harnesses the power of indeterminacy, of contingency, and of repetition to establish a meaningful surface that is both present and intangible.

As Heidegger pointed out, the key metaphysical concepts such as 'subjectivity', 'identity', and 'representation' are also the key onto-theo-logical principles by which language operates, which means that at the precise moment when philosophy attempts to perform an autopsy on one of these concepts, by the very fact of doing so it is forced into a representational mode that becomes the basis of the examination.[14] For this reason Heidegger argues that while there is a fundamental divergence within thought that allows it to study itself, this divergence also ensures the impossibility of any thorough self-perception and radical self-examination, as any explicit attempt to examine representation or subjectivity is coming up against the implicit reliance of language on representation as its modus operandi. Heidegger further complicates the possibility of self-analysis by suggesting that this inability of language to represent representation to itself is also connected with the forming of subjectivity, which means that as soon as one posits oneself against representation to examine it, one is already taken over by representation to an extent that no radical examination is possible.[15] The subject, the 'I' that attempts to catch representation is itself formed by the process of representation.[16] Therefore, it seems that representation and subjectivity are destined to remain the black hole of Western philosophy because, as Judovitz says: 'we must rely on the language of metaphysics, on its form, logic and implicit postulations, precisely at the moment when we seek to contest them.'[17]

Yet, despite the entrapment of the subject by representation, Heidegger tentatively suggests that the possibility of questioning metaphysics 'must remain an open question'. The road map for this questioning is spelled out thus: 'The ground itself needs to be properly accounted for by that for which it accounts, that is, by the causation through the supremely original matter – and that is the cause as *causa sui*.'[18] The challenge therefore is to think the cause of philosophy, its non-philosophical beginning, as an origin that Heidegger ironically names 'the god of philosophy': 'Man can neither pray nor sacrifice to this god. Before *causa sui*, man can neither fall to his knees in awe nor can he play music and dance before this god.' Getting out of metaphysics requires no less than abandoning the self-referential, self-causing way of thinking that is taking for granted what it is trying to prove. Accomplishing this task necessitates a 'step back … out of metaphysics'.[19] In what follows it will be suggested that stepping out of metaphysics into the *causa sui* of thought, requires the technology of stepping out of the visual into the forbidden territory of the graven image that lies beyond representation. This step out of the visual opens a window onto the unexplored realm of the

photographic exposure, conceived here as the visual expression of the philosophical concept of difference.[20]

The Event of Exposure

The crossing of the metaphysical threshold and the clearing of an alternative path for thought is fraught with difficulties for, as Heidegger says, metaphysics are ingrained in modern technology which permeates all aspects of life and thought.[21] But even if this difficulty is somehow overcome, there remains the additional problem that 'Western languages are languages of metaphysical thinking'.[22] Stepping out of metaphysics therefore requires an altogether different way of doing philosophy, one that will not be bound to subjectivity and representation to the same extent as Western languages. Following Heidegger, several philosophers attempted to exit metaphysical thought and establish direct contact with the 'thought of the outside' (Foucault). Lyotard brands this escape route as the postmodern sublime, which 'puts forward the unpresentable in presentation itself'.[23] Lyotard approaches the sublime not as an image but as an event, an encounter with something immeasurable and pre-rational in which subjectivity is dissolved. Neither language nor visual representation can encompass these moments of the total dissolution of identity, which for Lyotard makes the sublime into a political problem, for it raises the question of accounting for the non-identical, minoritarian, culturally or politically unrepresented.[24] Deleuze names it as 'difference in itself' – a strange remainder that cannot be thought at all because it cannot be thought through with representational categories:

> [D]ifference in itself appears to exclude any relation between different and different which would allow it to be thought. It seems that it can become thinkable only when tamed – in other words, when subject to the four iron collars of representation: identity in the concept, opposition in the predicate, analogy in judgement and resemblance in perception.[25]

Heidegger's diagnosis of the metaphysical malaise is the 'oblivion of the difference as such': in metaphysical thought difference is subsumed under the copula 'is' (as in 'A is A') and the remedy is to think this forgotten and untamed difference not as an opposition to identity (for an opposition is still part of the same logic of representation) but as the arrival of presence that 'assigns the difference of Being and beings to perdurance as the approach to their essence'.[26] The relation of being and beings must not be understood as identity but as the movement toward the primordial conditions that make identity possible. Heidegger names this wild and unexplored terrain 'perdurance'.

> We attain to the nearness of the historic only in that sudden moment of a recall in thinking. … [this] holds true above all also for our attempt in the step back out of the oblivion of the difference as such, to think this difference as the perdurance of unconcealing overcoming and of self-keeping arrival.[27]

As Gillian Rose explains: '"perdurance" … captures the idea of perfect duration, is a felicitous but strange translation of *austag* which means "arrangement" or "settlement" in the litigious sense of settling something in court.'[28] The requirement therefore is to think the relation of being and beings outside the linearity of chronological time

as a kind of perfect duration that is not strictly temporal relation but a spatio-temporal event that holds being and beings apart as well as bringing them together. This highly complex notion of time can be perhaps understood as the 'now' – not in the sense of the present instant, or the orgiastic immediacy of religious ecstasy, but as the 'now' that marks the occurrence of an event, of something that happens. As Lyotard explains: 'An event, and occurrence – what Martin Heidegger called *ein Ereignis* – is infinitely simple, but this simplicity can only be approached through a state of privation.'[29] The event of perdurance dismantles the principle of identity because in it the subject and the object are held simultaneously together and apart. Deleuze explains it thus:

> Lightning, for example, distinguishes itself from the black sky but must also trail it behind, as through it were distinguishing itself from that which does not distinguish itself from it. It is as if the ground rose to the surface without ceasing to be ground.[30]

It seems that Deleuze found a way of grasping the 'perdurance of unconcealing overcoming and of self-keeping arrival'[31] as the moment of exposure that creates an event through a flash of lightning. It is possible that unknown to himself Heidegger opened a way for philosophy to move into a sphere where meaning is established purely through perdurance understood as exposure.

To think about photography from the perspective of exposure and not the image will require the re-evaluation of the photographic '*is*' as the factical correspondence between an image and the thing represented. Following Heidegger's methodology, it requires suggesting that the verisimilitude and the credibility of the photographic image conceals an 'event of appropriation' in which the photographic is released from its everydayness, and difference – rather than identity – is able to rise to the surface. In other words, what is not considered by histories and theories of photography is the very fact that representation can be posited as the ground of correspondence between and image and a thing. Instead of thinking of the photographic image as something 'given' to perception, a 'step out' of the *is* of representation betokens that there is an unseen image lurking beneath the visible in the photograph. This in turn can suggest that the photographic exposure is the specific image of the unity of technology and poesis in visual culture. Understood in this way, photography is no longer following the Platonic distinction between *eikōn* (image) and *eidos* (true reality) that dominated art history for two millennia. Understood as exposure, an image is not solely the subject of 'viewing', but rather it now reveals the essential origin of difference as the ground of representation. It also suggests that the *poiēsis* of photography is directly linked to exposure as the repeatable and unrepresentable action in which image and being belong together. Significantly, the recording of an exposure on photographic film results not in a visible image, as usually thought, but in an invisible latent image that remains unseen until the film is being chemically processed.[32] In the context of photography, the 'step out of metaphysics' can be specifically and concretely located in the notion of the latent image: the invisible image left on the light-sensitive surface by exposure.

> No impression can be seen, not even the slightest beginning of the picture, and yet the picture already exists there in all its perfection, but in a perfectly invisible state.[33]

The invisible (latent) state of the photographic image is generally overlooked in photographic theory, it is its blind spot.[34] however it is an indication that exposure pushes material perception beyond itself, into its origin as difference. By uncovering a pre-representational element of the photograph, the latent image allows to leap out of the '*is*' of representation toward an event of appropriation. The latent image permits to rethink photography as a step-back out of the visual image into the event of difference that underwrites representation. However, in order to establish photography as a fractal and mimetic surface, it is not enough to say that the latent image precedes representation, because the chronological relationship of 'before and after' is itself a form of causality. What is required is to show that the latent image reconfigures photography's relationship with time.

If the latent image is considered as the *is* of photography, it suggests that there are two temporal registers involved in the production of the image: the first register is the chronological time in which the image is marked by its connection to past events or situations. It is the biological time of living bodies and ticking clocks in which the image carries a time stamp of the past that marks its place along the straight line that stretches between the past and the future. The second temporal register, it is the time of the photographic exposure in which the invisible to the eye image subsists in perfect stillness. This is the time of the event, the 'now' which is outside of representation (the event that must be bracketed out by representation in order to constitute itself). It is the present that is constantly divided into past and future and is outside linear time, immeasurable and inhuman.

In *Logic of Sense* Deleuze describes these two temporal series as Chronos and Aion:

> Inside Chronos, the present is in some manner corporeal. […] The present measures out the action of bodies and causes among themselves. […] [Aion is] [t]he pure and measureless becoming of qualities threatens the order of qualified bodies from within. Bodies have lost their measure and are now but simulacra. The past and the future, as unleashed forces, take their revenge, in one and the same abyss which threatens the present and everything that exists.[35]

These two regimes of temporality appear for the first time in Nietzsche's *Thus spoke Zarathustra* where the time of Aion is linked to the eternal return:

> 'See this moment!' I continued. 'From this gateway Moment a long eternal lane stretches *backward*: behind us lies an eternity. Must not whatever *can* already have passed this way before? Must not whatever *can* happen, already have happened, been done, passed by before?' […] And this slow spider that creeps in the moonlight, and this moonlight itself, and I and you in the gateway whispering together, whispering of eternal things – must not all of us have been here before?'[36]

Two regimes of the image therefore: the visible image which is, as Deleuze says, 'The present measures out the action of bodies and causes among themselves' or in other words a monstration, an eruption, a revolution.[37] And the invisible, intangible exposure, which is motionless, where nothing ever happens, time of stasis and of surfaces without depth. The exposure is the fusion of subject and object that erases the distinction between them, it is the 'now' that is neither form, nor content, but it is not without duration. The duration of the exposure is the holding together and keeping

apart of beings and being. It is pre-individual because it is located in the temporal space of the event, before the emergence of subjectivity and the concomitant distinction between subject and object.[38]

According to this non-dialectical understanding of photography as exposure, the visible photographic image is not opposed to, or separate from that which is invisible and absent, rather, the visible and the invisible are co-present in the realm of the technological unfolding in which what is coming to presence is the event of non-chronological, immeasurable time. It is precisely because photography is generally considered as the technology that archives (chronological) time that it has a privileged relationship with the 'event of appropriation' (*Ereignis*) in which the ontological, non-chronological time is revealing itself as independent from past, present, and future. The difference between the image of photography and the event of photography is therefore connected with a conception of time: the photographic image, by force of its technology, presupposes the existence of reality outside itself and of a past of which it is an image. The photographic event, on the other hand, is the reality of technology itself as the revealing and concealing the way by which the actual reveals itself as the exposure of mechanical reproduction.

Graven Image: Heidegger and *Yahweh*

Heidegger suggests that the step out of metaphysics necessitates an event of presence and owning (*Ereignis*) that knows no chronological time because it is an instance of perfect duration: a direct, unmediated relation of Being and beings. Gillian Rose drily comments:

> It seems that unknown to himself, Heidegger has brought us into the orbit of Biblical Hebrew; a language which has imperfect and perfect tenses but no past, present and future tenses, and which has no possessive verb 'to have'; a language of the kind into which Heidegger attempts to transcribe German.[39]

Rose points out the similarities between perdurance as 'the highest most significant event of all / a giving of presence that prevails in the present, in the past and in the future'[40] and *Yahweh* (the god of Israel in the Hebrew Bible): 'In the Hebrew *Yahweh* speaks in the imperfect tense which announces His Perdurance: His presence in the future and past as well as present.'[41]

Rose further clarifies what exactly Heidegger is taking from the Jewish religion: 'Heidegger seems to give us *Yahweh* without *Torah*: the event seems to include advent and redemption, presence and owning'[42] However, Rose leaves out what is perhaps the most significant attribute of *Yahweh* for the understanding of perdurance: the ban on depicting the god of Israel in an image.

> Thou shalt have no other gods before me. Thou shalt not make unto thee any graven image, or any likeness of any thing that is in heaven above, or that is in the earth beneath, or that is in the water under the earth.[43]

It is significant that in these verses the ban on representing god follows immediately after the ban on having other gods and can be understood as a separate prohibition: it is forbidden to worship other gods and it is forbidden to make images of god.[44]

The two main justifications for the Hebraic ban on representation help to clarify the relevance of representation to the question of perdurance. The first is concerned with the use of predicates to describe god. Statements such as 'god exists' or 'god is one' create an impression of an object to which different predicates can apply, which contradicts the idea of god's unity.[45] Similarly, for Heidegger, the true nature of being understood as perdurance cannot be represented through predication:

> Someone wants to buy fruit in a store. He asks for fruit. He is offered apples and pears, he is offered peaches, cherries, grapes. But he rejects all that is offered. He absolutely wants to have fruit. What was offered to him in every instance *is* fruit and yet, it turns out, fruit cannot be bought. It is still infinitely more impossible to represent 'Being' as the general characteristic of beings.[46]

The second aspect of the ban on representation concerns the relationship of perdurance to time. According to Maimonides, who uses the Aristotelian definition of time as dependent on motion, the concept of time does not apply to god.[47] The ban on representation is therefore not only the assertion of the invisibility of god, but it is meant to determine the absolute otherness of god and the essential categorical difference between god and all other forms of being.[48]

The ban on graven images seems to be connected to the perfect and transitive presence that is outside of time and constitutes the event of all events. Heidegger's notion of perdurance is therefore related not only to the presencing of Jehovah – as Gillian Rose suggests – but also to the ban on representation and the general iconoclasm of the Judaic tradition. It follows that Perdurance is a leap out of visual representation into the essence of visual representation: 'The step out of metaphysics is the step out of technology and technological description … into the *essence* of modern technology.'[49] While Gillian Rose asserts that the step out of metaphysics takes Heidegger into Biblical Hebrew, it is the assertion of this chapter that this leap does not go far enough, as all languages – including Hebrew and German – are misleading and limited in the description of perdurance because they necessarily evoke the speaking subject. In any case, there are two reasons for the unsuitability of language for the task of capturing perdurance/exposure as the poetic fusion of technology with human perception. First the syntactic structure of language creates a duality between subject and predicate which makes it unsuitable to talk about oneness.[50] The second is that language that is used for the description of familiar reality is unsuitable for the description of the absolute other.[51] The normative linguistic categories of predication and existence do not apply to perdurance.[52] For that reason, the leap advocated on these pages is from the orbit of language into the orbit of photography. However, photography must be understood not as a representational mechanism, but as a constellation of recursive and self-replicating exposures.

Conclusion

According to the traditional view, photography has been universally accepted as the ipso facto representational mechanism, taking its bearings from the idea that light and light writing are the privileged modes of access to truth and understanding. As Plato first articulated in the fable of the cave, light gives men true knowledge about the world and in this way releases them from the prison of the senses. Following

on from Plato, the idealism of Descartes, Kant, and Hegel continued to privilege respectively doubt, reason, and logic over and above the messy materialities of sensual experience. However, as Lucy Irigaray has shown, the relentless focus of these thinkers on specular metaphors of projection, reflection, illumination, and objectivity places representation itself outside the field of view of philosophy by presenting thought as self-evidently self-representing and transparent to itself.[53] The invention of photography seems to confirm the metaphysical belief in the primacy of light as the source of truth and certainty. The difficulty with this worldview is the subordination of the distinct materiality of photography, its sensorial and embodied dimension – captured in the instant of exposure – to the idea that visual resemblance is equivalent to truth.

For centuries specular reflection was the faithful metaphor for truth; the mirror, its reflective surface mimicking whatever is placed in front of it, was the universal expression of the belief that truth is anchored in visual resemblance. The photograph was received as the technologically advanced extension of the mirror, expanding the notion of truth for the age of the machine. The era of mass production required a way of establishing the authenticity of the copy not by reference to an original but by the internal logic of technological reproduction. For its early practitioners, photography was a mirror with memory, prolonging and extending the instant of looking, overcoming by mechanical means the fickle and fleeting mirror image. Understood as a reflection, photography was the crowning achievement of the philosophy of idealism that took light as the source of eternal wisdom, and reflection as the primary model of knowing the world.[54]

The looking glass affirmed the deepest philosophical intuition that underpins metaphysical thought from Thales to Descartes and from Heraclites to Hegel: the world is bifurcated at its core into appearances on the one hand and existing things on the other. The task of philosophy was to establish which of the two is the real one: the world of thoughts, dreams, and fantasies or the world of organic, physical reality. At first sight, the photograph extended the reach of the mirror metaphor into the age of advanced technology, offering an immediate confirmation to the old Platonic distinction between the real and the image.

But reflection lost its truth-value in the digital age, which substitutes the original-copy paradigm with an unlimited number of cloned versions. Looking for 'Mona Lisa' in a search engine (Safe Search: Moderate) does not show a copy of the original but presents an ostensibly endless scroll of variations. It would be pointless to ask which of them is the real Mona Lisa, as even the one at the Louvre is only a version in a chain of infinite mutations.

Computers and processual algorithms do not reflect reality, they produce, distribute, and multiply information via a technical implementation of linguistic protocols that replace the basic veridictory model of the mirror (subject-image) with circular movement of information pushed through feedback loops. Properly understood, a cybernetically produced image is incomprehensible – not because it is illegible, but because its legibility conceals the fact that the digital image is a translation of algorithmic feedback loops and circuit diagrams into a visual form. As spectators of images we assume a position of passivity toward the world, which – as Heidegger suggested – ceases to be experienced as the abode of our existence and itself becomes a picture.[55] The digitally born photograph does not empty photography of its truth value, rather it 'represents' the death of truth.

Against the conception of photography as a two-dimensional clone of objects that exist in the real world, Heidegger, Lyotard, and Deleuze put forward an alternative kind of discourse that experiments with different ways of understanding images giving priority to experiences that transform, restructure and rearrange the certainties that underpin the visual field. Instead of a static and immobile image, contemporary philosophy proposes that we understand images as movements and flows that give visual or graspable form to the fusion of technologies, bodies, machines, and desires that taken together constitute what we still habitually call 'life'. The understanding of photography as the poetic expression of techne, implies that photography is the 'graven image' of the age of cybernetics and allows to suggest that a leap out of metaphysics is best performed not in the field of language but in the space of the technical image. This leap, if successful, might open a path toward philosophy that works with technical images instead, or alongside of language.

Notes

1 For a detailed discussion of representation in Heidegger see Claire Colebrook, 1999, *Ethics and Representation: From Kant to Post-Structuralism*. Edinburgh: Edinburgh University Press, pp. 55–92.
2 Martin Heidegger, 2002, *Identity and Difference*, trans. Joan Stambaugh, Chicago, IL: University of Chicago Press, p. 23.
3 Heidegger, *Identity and Difference*, pp. 26–7.
4 Heidegger, *Identity and Difference*, p. 54.
5 Georg Wilhelm Friedrich Hegel, 2005, *Philosophy of Right*, trans. S.W. Dyde, Mineloa, New York: Dover Publications, p. xix.
6 Heidegger, *Identity and Difference*, p. 52.
7 Martin Heidegger, 1977, 'The Age of the World Picture', *The Question Concerning Technology*, trans. William Lovitt, New York: Harper and Row, p. 128.
8 Heidegger, *Identity and Difference*, p. 73.
9 This understanding of poesis as an overcoming of form-content dualism is drawing on Walter Benjamin's notion of 'the poetized' as the expressive and pre-subjective essence of a poem. In 'Two Poems by Friedrich Hölderlin' he says: 'As a category of aesthetic investigation, the poetized differs decisively from the form-content model by preserving within itself the fundamental aesthetic unity of form and content. Instead of separating them, it distinctively stamps in itself their immanent, necessary connection.' Walter Benjamin, 2005, *Selected Writings Vol. 1. 1913–1926*, Cambridge, MA, and London: Belknap Press of Harvard University Press, p. 19.
10 Martin Heidegger, 1977, *The Question Concerning Technology, and Other Essays*, trans. William Lovitt, New York : Harper and Row, p. 12.
11 Heidegger, *Identity and Difference*, p. 52.
12 Martin Heidegger, 1962, *Being and Time*, trans. Edward Robinson and John Macquarrie, Malden, MA, Oxford: Blackwell, p. 73 (§4).
13 Heidegger, *Identity and Difference*, p. 73.
14 Ibid., p. 73.
15 This criticism of subjectivity and representation gets is fullest development in Heidegger's work on Kant. Heidegger, *Kant and the Problem of Metaphysics*. See also Heidegger, *The Question Concerning Technology*.
16 This is particularly clear in Heidegger, 'The Age of the World Picture', pp. 115–55.
17 Dalia Judovitz, 1988, *Subjectivity and Representation in Descartes*, Cambridge: Cambridge University Press, p. 3. See also Johnny Golding, 2010, 'Conversion on the Road to Damascus: Minority Report on Art', *Gest: Laboratory of Synthesis, #1*, eds. Robert Garnett and Andrew Hunt, London: BookWorks, in collaboration with Kingston University, London).
18 Heidegger, *Identity and Difference*, p. 72.

19 Ibid., p. 56.
20 Ibid., p. 72. Deleuze names the non-philosophical origin of philosophy as *Image of Thought,* see Gilles Deleuze, 2004, *Difference and Repetition*, trans. Paul Patton, London: Continuum: pp. 164–213.
21 Heidegger, *Identity and Difference*, p. 72.
22 Ibid., p. 73.
23 Jean-François Lyotard, 1984, *The Postmodern Condition: A Report on Knowledge*, trans. Geoff Bennington and Brian Massumi, Manchester: Manchester University Press, p. 81.
24 The political implications of the non-representational are developed by Lyotard in relation to questions of law and language-based schemas in *The Differend*, 1988, trans. Georges Van Den Abbeele, Manchester: Manchester University Press,, and in relation to the politics of the other in *Heidegger and 'the Jews'*, 1990, trans. Mark Roberts, Minneapolis: University of Minnesota Press.
25 Deleuze, *Difference and Repetition*, p. 330
26 Ibid., p. 67.
27 Heidegger, *Identity and Difference*, p. 67.
28 Gillian Rose, 1984, *Dialectic of Nihilism: Post-structuralism and Law*, Oxford: Blackwell, p. 78.
29 Jean-François Lyotard, 1989, *The Lyotard Reader*, Oxford, and Cambridge, MA: Blackwell, p. 197.
30 Deleuze, *Difference and Repetition*, p. 36.
31 Heidegger, *Identity and Difference*, p. 67.
32 Daniel Rubinstein and Katrina Sluis, 2013, 'The Digital Image in Photographic Culture: Algorithmic Photography and the Crisis of Representation', *The Photographic Image in Digital Culture*, 2nd ed., ed. Martin Lister, London: Routledge, pp. 22–41.
33 Michel Frizot, 1998, *New History of Photography*, trans. Susan Bennett, Liz Clegg, John Crook, and Caroline Higgitt, Paris: Könemann, p. 61.
34 As a rule, the latent image is mentioned very briefly in histories of photography, often in the context of Henry Fox Talbot's discovery of the calotype process. See Beaumont Newhall (1982), Beaumont Newhall (1983), Vered Maimon (2008), Frizot, *New History of Photography.*
35 Gilles Deleuze, 1990, *The Logic of Sense*, ed. Constantin Boundas, trans. Mark Lester and Charles Stivale, London: Continuum, pp. 186–7.
36 Friedrich Wilhelm Nietzsche, 2006, *Thus Spoke Zarathustra: A Book for All and None*, eds. Adrian Del Caro and Robert Pippin, trans. Adrian Del Caro, Cambridge and New York: Cambridge University Press, p. 126. See also Heidegger, 1991, *Nietzsche; The Eternal Recurrence of the Same*, San Francisco: Harper, pp. 37–44.
37 'The image is what takes the thing out of its simple presence and brings it to pres-ence, to *praes-entia*, to being-out-in-front-of-itself, turned toward the outside […] Thus the image is, essentially, "monstrative" or "monstrant".' Jean-Luc Nancy, 2005, *The Ground of the Image*, trans. Jeff Fort, New York: Fordham University Press, p. 21.
38 Jean-Jacques Lecercle, 2002, *Deleuze and Language*, Basingstoke, UK, and New York: Palgrave Macmillan, p. 117.
39 Rose, *Dialectic of Nihilism*, p. 78.
40 Heidegger, 'Time and Being', quoted in Rose, *Dialectic of Nihilism*, pp. 78–9 n. 8.
41 Ibid., p. 79.
42 Ibid., p. 80.
43 Exodus 20:3–4 (King James Bible).
44 Moshe Halbertal and Avishai Margalit, 1992, *Idolatry*, trans. Naomi Goldblum, Cambridge, MA: Harvard University Press, p. 37. As Halbertal and Margalit indicate, the claim that god has no image is one of the foundations of the neo-Aristotelian teaching of Maimonides, however there are other traditions within Judaism, particularly the rabbinic tradition and the cabala that contain literary descriptions of god. Ibid., pp. 46–7.
45 Ibid., p. 58.
46 Heidegger, *Identity and Difference,* p. 66.
47 'It is quite clear that there is no relation between God and time or space. For time is an accident connected with motion, in so far as the latter includes the relation of anteriority

and posteriority … and since motion is one of the conditions to which only material bodies are subject, and God is immaterial, there can be no relation between him and time.' Moses Maimonides (1904): Forgotten Books, (I,LII). See also Halbertal and Margalit, *Idolatry*, p. 58.

48 Ibid., p. 59.

49 Heidegger, *Identity and Difference*, p. 52.

50 Cf. 'It is impossible to represent in language anything that "contradicts logic" as it is in geometry to represent by its co-ordinates a figure that contradicts the laws of space, or to give the co-ordinates of a point that does not exist.' Ludwig Wittgenstein, 2001, *Tractatus Logico-Philosophicus*, trans. Brian McGuinness and David Pears, London and New York: Routledge, p. 13 (3.032).

51 Halbertal and Margalit, *Idolatry*, p. 59. In *What is Called Thinking* Heidegger suggests that the tendency of language to privilege logic can be overcome through poetry. Heidegger, 2004, *What Is Called Thinking?* trans. Glenn Gray, New York: Harper Collins, pp. 3–18. In *The Logic of Sense* Deleuze emphasizes the importance of paradoxes and portmanteau as a way of setting up new forms of rationality. Deleuze, *The Logic of Sense*, pp. 3–6, 7–15. See also Lecercle, *Deleuze and Language*.

52 'The difference of being and beings, as the differentiation of overwhelming and arrival, is the perdurance (Austrag) of the two in *unconcealing keeping in concealment*.' Heidegger, *Identity and Difference*, p. 65.

53 Irigaray, Luce, 1985, *Speculum of the Other Woman*, Ithaca, NY: Cornell University Press.

54 Gasché, Rodolphe, 1986, *The Tain of the Mirror: Derrida and the Philosophy of Reflection*, Cambridge, MA: Harvard University Press.

55 Heidegger, 'The Age of the World Picture'.

References

Benjamin, Walter. *Selected Writings Vol. 1. 1913–1926*. Cambridge, MA, and London: Belknap Press of Harvard University Press, 2005.

Colebrook, Claire. *Ethics and Representation: From Kant to Post-Structuralism*. Edinburgh: Edinburgh University Press, 1999.

Deleuze, Gilles. *Difference and Repetition*. Translated by Paul Patton. London: Continuum, 2004.

Deleuze, Gilles. *The Logic of Sense*. Edited by Constantin Boundas. Translated by Mark Lester and Charles Stivale. London: Continuum, 1990.

Frizot, Michel. *New History of Photography*. Translated by Susan Bennett, Liz Clegg, John Crook, and Caroline Higgitt. Paris: Könemann, 1998.

Gasché, Rodolphe. *The Tain of the Mirror: Derrida and the Philosophy of Reflection*. Cambridge, MA: Harvard University Press, 1986.

Golding, Johnny. 'Conversion on the Road to Damascus: Minority Report on Art.' In *Gest: Laboratory of Synthesis, #1*. Edited by Robert Garnett and Andrew Hunt. London: BookWorks, in collaboration with Kingston University, London, 2010.

Halbertal, Moshe, and Avishai Margalit. *Idolatry*. Translated by Naomi Goldblum. Cambridge, MA: Harvard University Press, 1992.

Hegel, Georg Wilhelm Friedrich. *Philosophy of Right*. Translated by S.W. Dyde. Mineloa, NY: Dover Publications, 2005.

Heidegger, Martin. *Being and Time*. Translated by Edward Robinson and John Macquarrie. Malden, MA, and Oxford: Blackwell, 1962.

Heidegger, Martin. *Bremen and Freiburg Lectures: Insight Into That Which Is and Basic Principles of Thinking*. Translated by Andrew J. Mitchell. Bloomington, IN: Indiana University Press, pp. 23–5, 38, 2012.

Heidegger, Martin. *Identity and Difference*. Translated by Joan Stambaugh. Chicago, IL: University of Chicago Press, 2002.

Heidegger, Martin. *Kant and the Problem of Metaphysics*. Translated by Richard Taft. Bloomington: Indiana University Press, 1997.
Heidegger, Martin. *The Question Concerning Technology, and Other Essays*. Translated by William Lovitt. New York: Harper and Row, 1977.
Heidegger, Martin. *Nietzsche; The Eternal Recurrence of the Same*. Translated by David Farrell Krell. San Francisco: Harper, 1991.
Heidegger, Martin. *What Is Called Thinking?* Translated by Glenn Gray. New York: Harper Collins, 2004.
Irigaray, Luce. *Speculum of the Other Woman*. Ithaca, NY: Cornell University Press, 1985.
Judovitz, Dalia. *Subjectivity and Representation in Descartes*. Cambridge: Cambridge University Press, 1988.
Lecercle, Jean-Jacques. *Deleuze and Language*. Basingstoke, UK, and New York: Palgrave Macmillan, 2002.
Lyotard, Jean-François. *The Differend*. Translated by Georges Van Den Abbeele, Manchester: Manchester University Press, 1988.
Lyotard, Jean-François. *The Lyotard Reader*. Oxford, and Cambridge, MA: Blackwell, 1989.
Lyotard, Jean-François. *Heidegger and 'the Jews'*. Translated by Mark Roberts, Minneapolis: University of Minnesota Press, 1990.
Lyotard, Jean-François. *The Postmodern Condition: A Report on Knowledge*. Translated by Geoff Bennington and Brian Massumi. Manchester, UK: Manchester University Press, 1984.
Maimon, Vered. 'Displaced Origins: William Henry Fox Talbot's the Pencil of Nature', *History of Photography* 32, 4, pp. 314–25, 2008.
Maimonides, Moses. *The Guide for the Perplexed*, 2nd ed., trans. Michael Friedlander, London, 1904.
Nancy, Jean-Luc. *The Ground of the Image*. Translated by Jeff Fort. New York: Fordham University Press, 2005.
Newhall, Beaumont. *The History of Photography: From 1839 to the Present*, New York: Museum of Modern Art, 1982.
Newhall, Beaumont. *Latent Image: The Discovery of Photography*, Albuquerque, NM: University of New Mexico Press, 1983.
Nietzsche, Friedrich Wilhelm. *Thus Spoke Zarathustra: A Book for All and None*. Edited by Adrian Del Caro and Robert Pippin. Translated by Adrian Del Caro. Cambridge and New York: Cambridge University Press, 2006.
Osborne, Peter. 'Infinite Exchange: The Social Ontology of the Photographic Image.' *Philosophy of Photography* 1, 1 (2010): 59–68.
Rose, Gillian. *Dialectic of Nihilism: Post-Structuralism and Law*. Oxford: Blackwell, 1984.
Rubinstein, Daniel, and Katrina Sluis. 'The Digital Image in Photographic Culture: Algorithmic Photography and the Crisis of Representation.' In *The Photographic Image in Digital Culture*, 2nd ed. Edited by Martin Lister. London: Routledge, 2013.
Wittgenstein, Ludwig. *Tractatus Logico-Philosophicus*. Translated by Brian McGuinness and David Pears. London and New York: Routledge, 2001.

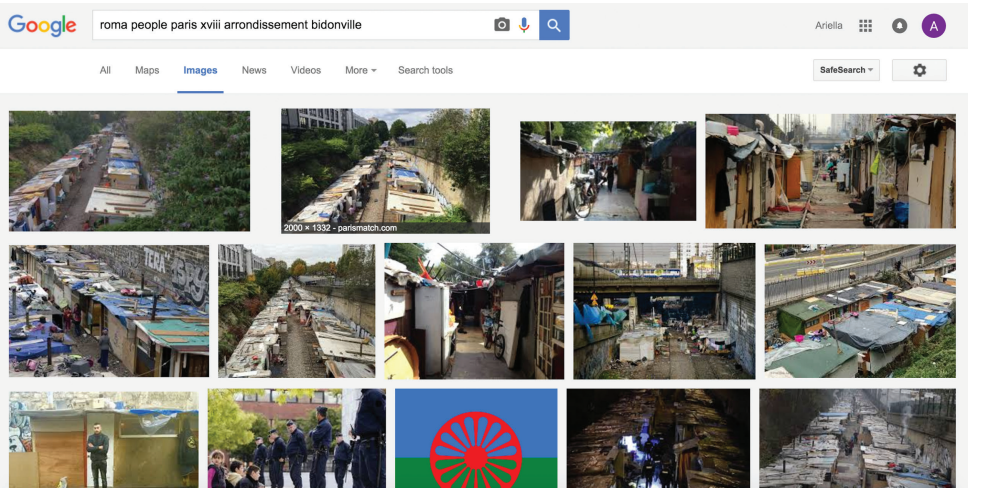


Plate 1 Roma people/encampment/Paris.

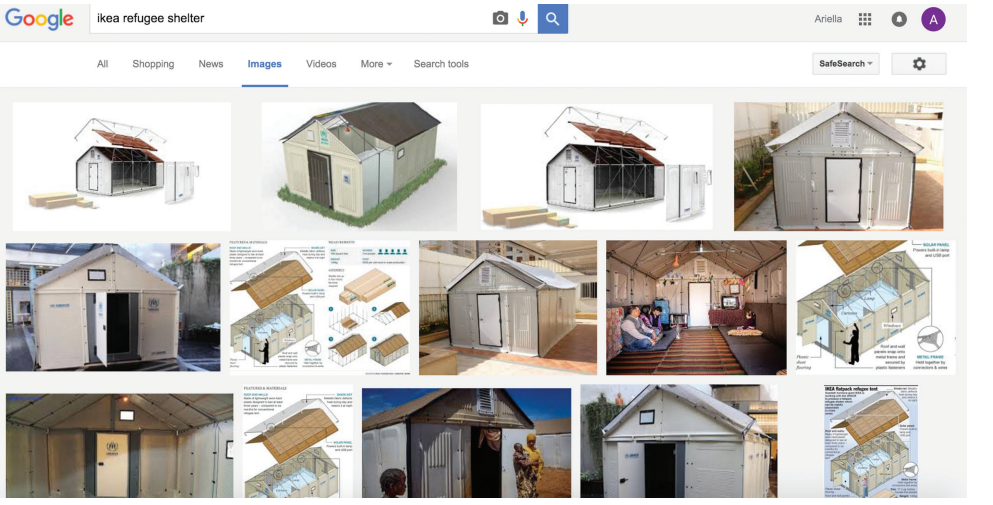


Plate 2 Ikea/refugee/shelter.

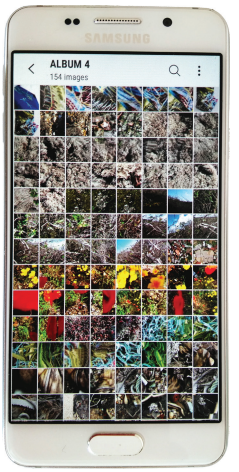


Plate 3 From Topography to Topology @ Susan Trangmar.

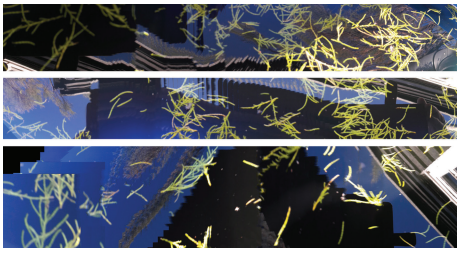


Plate 4 From Topography to Topology @ Susan Trangmar.

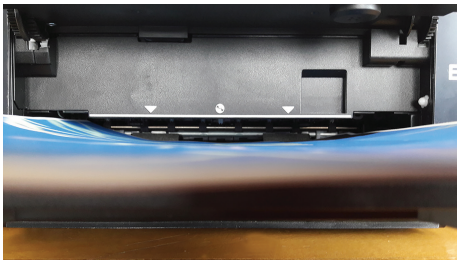


Plate 5 From Topography to Topology @ Susan Trangmar.

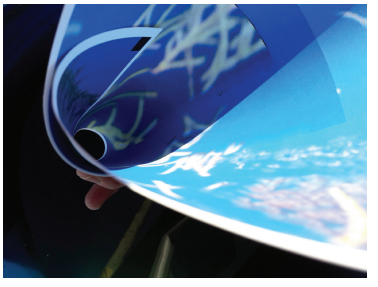


Plate 6 From Topography to Topology @ Susan Trangmar.

Plate 7 From Topography to Topology @ Susan Trangmar.

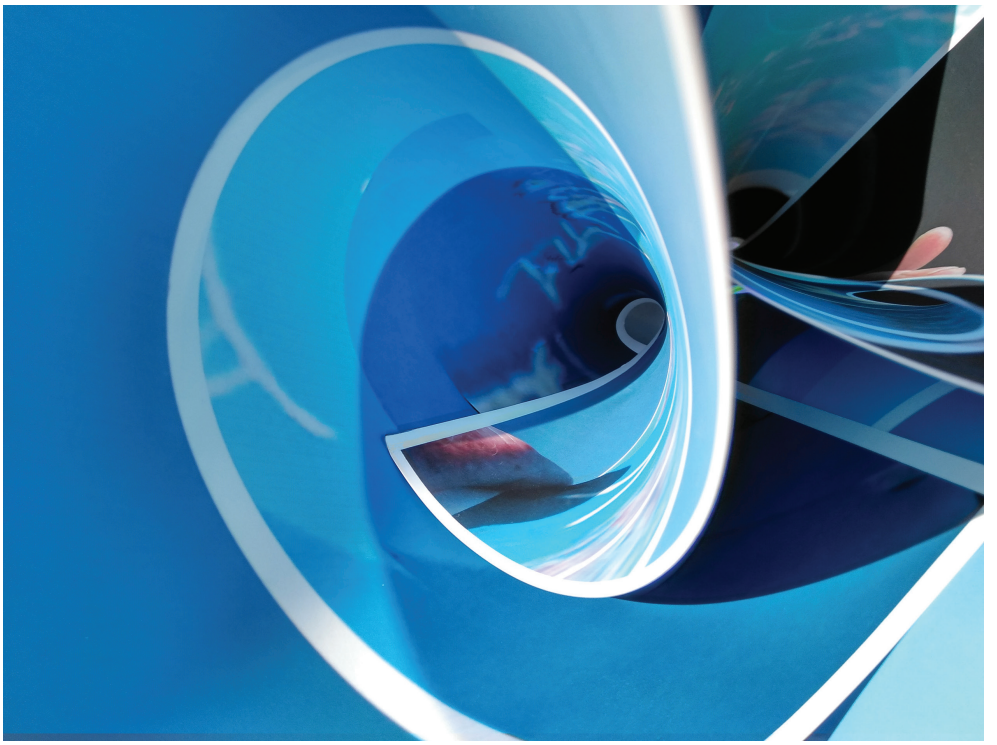


Plate 8 From Topography to Topology @ Susan Trangmar.

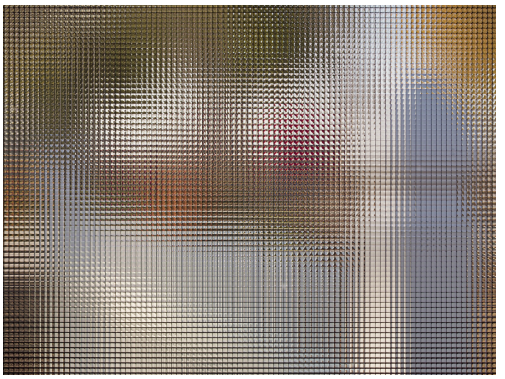


Plate 9 Plenoptic camera image. Copyright © 2018. Adobe Systems Incorporated. All rights reserved.

Plate 10 Plenoptic camera image. Copyright © 2018. Adobe Systems Incorporated. All rights reserved.

Plate 11 *Raphaël Fabre*, Carte Nationale d'Identité (CNI), 2017.

Plate 12 *School Days*, 2004. Copyright © Tomoko Sawada. Courtesy MEM, Tokyo.

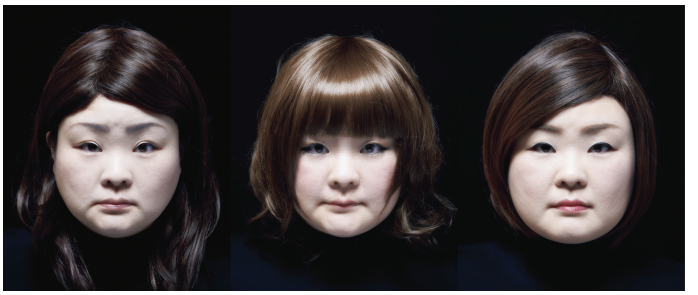


Plate 13 *Facial Signature* (detail), 2015. Copyright © Tomoko Sawada. Courtesy MEM, Tokyo.

Plate 14 *Nests 01*. Detailed view, Jakub Geltner. Urban space installation, Vltava waterfront, Prague, Czech Republic, 2015.

Plate 15 *Nests 05*. Installation view, Jakub Geltner. Urban space installation, sculpture by the sea, Aarhus, Denmark, 2015.

Plate 16 Domenico Ghirlandaio, *Adoration of the Shepherds*. Cappella Sassetti, Santa Trinita, Florence. 1485.

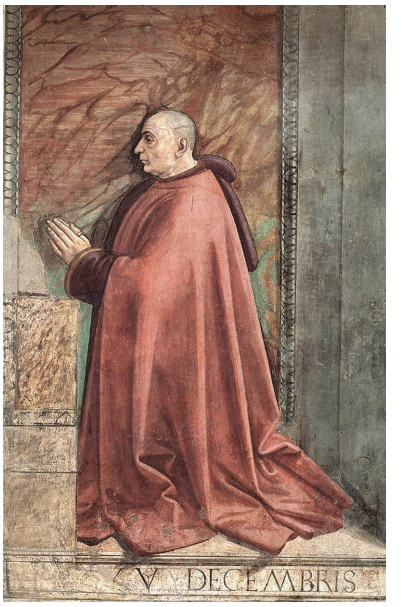


Plate 17 Sassetti is looking at the altar piece. Domenico Ghirlandaio, Cappella Sassetti, Santa Trinita, Florence. 1483-1486.

Plate 18 Detail from Ghirlandaio, *Adoration of the Shepherds* – the Triumphal arch and procession.

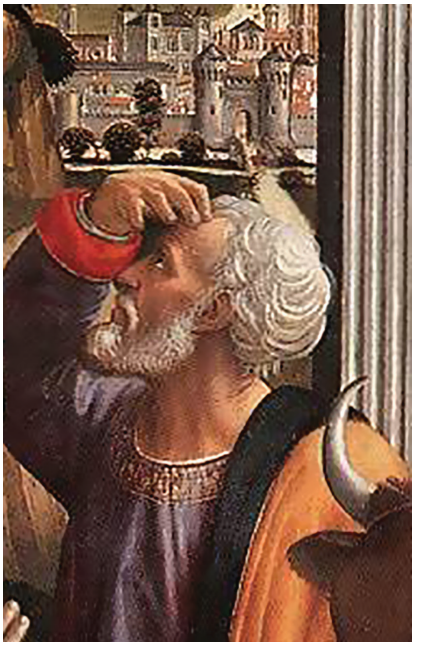


Plate 19 Detail from Ghirlandaio, *Adoration of the Shepherds* – Joseph.

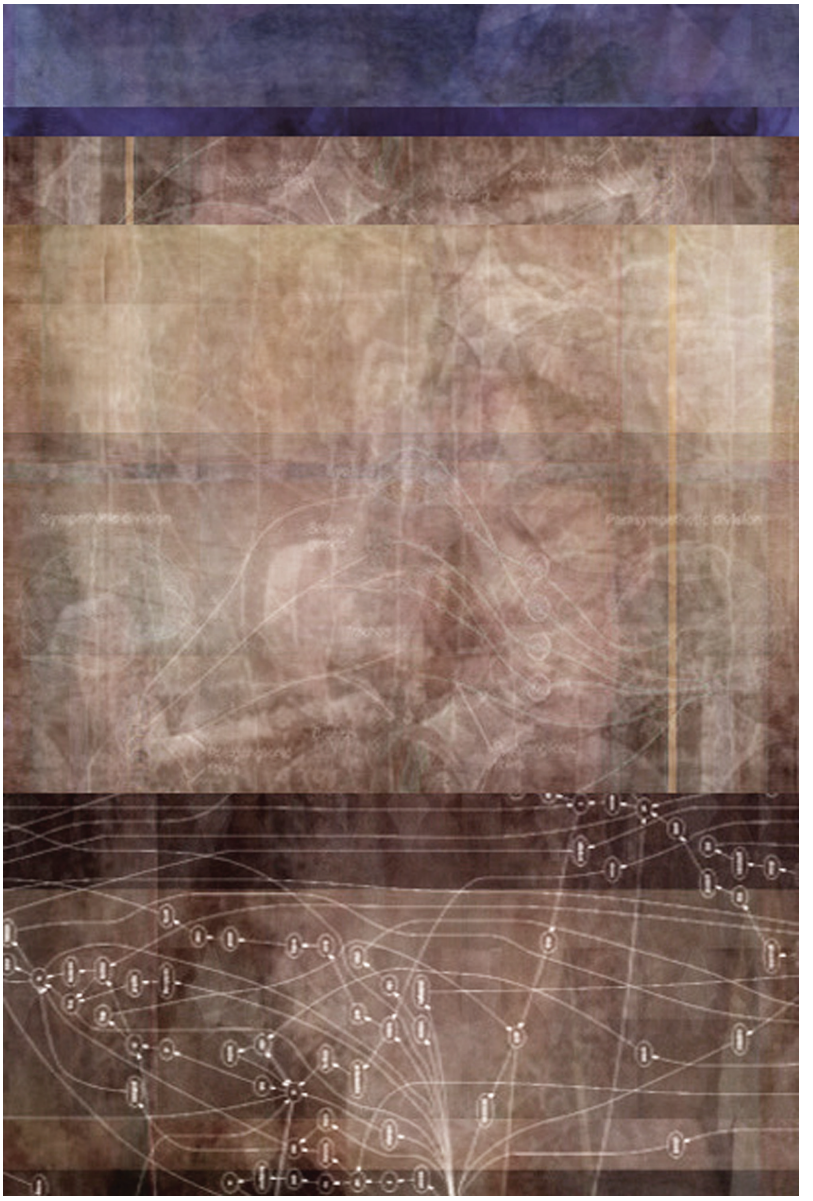


Plate 20 Joseph Nechvatal, *Drifting telemachus* (2014) 44 × 66 inches. Computer-robotic-assisted acrylic on velour. Courtesy Galerie Richard, New York.

Plate 21 Richard and Elise in simultaneous focus.

Plate 22 Time-travelling patterns.

9 Refuse to Let the Syntaxes of (a) History Direct Our Futures

Rosa Menkman

Moving Beyond Resolution

I wish I could open Google image search, query 'rainbow' and just listen to any image of a rainbow Google has to offer me. I wish I could add textures to my fonts and that I could embed within this text videos starting at a particular moment, or a particular sequence in a video game. I wish I could render and present my videos as circles, pentagons, and other, more organic manifolds.

If I could do these things, I believe my use of the computer would be different: I would create modular relationships between my text files, and my videos would have uneven corners, multiple time lines and changing soundtracks. In short, I think

Figure 9.1 Screenshot of QTzrk (2011) by Jon Satrom.

Technically, QTzrk (Jon Satrom, video installation, 2011) consists of two main video 'elements'. The first element, a 16:9 video, is a desktop video – a video captured from the desktop perspective – and features 'movie.mov'. Movie.mov is shown on top of the desktop, an environment that gets deconstructed during QTzrk. The second type of video element are the QTlets – smaller, looped videos that are not quadrilateral. The QTlets are constructed and opened via a now obsolete option in the Quicktime 7 software: Satrom used a mask to change the shape of the otherwise four-cornered videos and transformed them into 'video shards'. The QTlet elements are featured in QTzrk but are also released as stand-alone downloadables, available on Satrom's website; however, they no longer play properly on recent versions of Mac OS X (the masking option is now obsolete and playing these files significantly slows down the computer).

Story-wise, QTzrk starts when the movie.mov file is clicked. It opens inside a Quicktime 7 player, on top of what later becomes clear is a clean desktop that is missing a menu bar. Movie.mov shows a slow motion nature video of a Great White Shark jumping out of the ocean. Suddenly, a pointer clicks the pause button of the interface, and the Great White Shark turns into a fluid video, leaking out of the Quicktime 7 movie.mov interface buttons. The shark folds up in a kludgy pile of video, resting on the bottom of the desktop, still playing but now in a messily folded way. The Quicktime 7 movie.mov window changes into what looks like a 'terminal', which is then commanded to save itself as a QTlet named 'shark_pile'. The shark_pile is picked up by a mouse pointer, which kind of performs like an invisible hand, hovering the pile over the desktop, finally dropping it back into the Quicktime window, which now shows line after line of mojibake-data. This action – dropping the shark_pile inside the Quicktime window – seems to be the trigger for the desktop environment to collapse.

The Quicktime player breaks apart, no longer adhering to its quadrilateral shape but taking the shape of a second, downloadable QTlet. On the desktop, 35 screenshots of the shark frame appear. A final, new QTlet is introduced; this one consists of groups of screenshots, which when opened up show glitched png files. These clusters themselves transform into new video sequences (a third downloadable QTlet), adding more layers to the collage. By now the original movie.mov seems to slowly disappear in the desktop background, which itself features a 'datamoshed' shark video (datamoshing is the colloquial term for the purposeful deconstruction of an .mpeg, or any other video compression using intraframe/keyframe standard). After a minute of noisy droning of the QTlets on top of a datamoshed shark, the desktop suddenly starts to zoom out, revealing one Quicktime 7 window inside the next. Finally the cursor clicks the closing button of the Quicktime 7 interface, ending the presentation and revealing a clean white desktop with just the one movie.mov file icon in the middle. Just when the pointer is about to reopen the movie.mov file, and start the loop all over again, QTzrk ends.

TITLE: QTzrk
DIMENSIONS: expandable/variable
MATERIALS: QuickTime 7
YEAR: 2011
PRICE: FREE

my computational experience could be much more like an integrated collage, if my operating system would allow me to *make it so*.

In 2011, Chicago glitch artist Jon Satrom released his QTzrk installation. The installation consisting of four different video loops offers a narrative that introduced me both to the genre of desktop film and to non-quadrilateral video technology. As such, it left me both shocked and inspired. So much so that, in 2012, inspired by Satrom's work, I set out to build *Compress Process*, an application that would make it possible to navigate video inside a 3D environment. I too wanted to stretch the limits of video, especially beyond its quadrilateral frame. However, upon release of Compress Process, *Wired* magazine reviewed the video experiment as a 'flopped video game'.[1] Ironically, the *Wired* reporter could not imagine video existing outside the confines of its traditional two-dimensional, flat, and standardized interface. From his point of view, this other resolution – 3D – meant an imposed re-categorization of the work; it became a gaming application and was reviewed (and burned) as 'a flop'.

This kind of imposition of the interface (or the *interface effect*) is extensively described by NYU new media professor Alexander Galloway in his book *The Interface Effect*. Galloway writes that 'an interface is not a thing, an interface is always an effect. It is always a process or a translation'.[2] The interface thus always becomes part of the process of reading, translating and understanding of our mediated experiences. Thinking through this reasoning can also give an explanation of the reaction of Klatt in his *Wired* review of Compress Process, and it makes me wonder: is it at all possible to escape the normative or *habitual* interpretation of the interface?

As Wendy Hui Kyong Chun writes, 'New media exist at the bleeding edge of obsolescence. […] We are forever trying to catch up, updating to remain (close to) the same'.[3] Today, the speed of the upgrade has become incommensurable; new upgrades arrive too fast and even seem to exploit this speed as a way to obscure their new options, interfaces, and (im)possibilities. Because of the speed of the upgrade, remaining the same, or using technology in a continuous manner, has become a mere 'goal'.

Chun's argument seems to echo what Deleuze had already described in his *Postscript on the Societies of Control*:

> Capitalism is no longer involved in production […] Thus it is essentially dispersive, and the factory has given way to the corporation. The family, the school, the army, the factory are no longer the distinct analogical spaces that converge towards an owner – state or private power – but coded figures – deformable and transformable – of a single corporation that now has only stockholders. […] The conquests of the market are made by grabbing control and no longer by disciplinary training, by fixing the exchange rate much more than by lowering costs, by transformation of the product more than by specialization of production.[4]

In other words, the continuous imposition of the upgrade demands a form of control over the user, leaving them a sense of freedom, while actually becoming more and more restricted in their practices.

Today, the field of image processing forces almost all formats to follow quadrilateral, ecology dependent, standard (re)solutions, which result in trade-offs (compromises) between settings that manage speed and functionality (bandwidth, control,

power, efficiency, fidelity), while at the same time considering claims in the realms of value vs. storage, processing, and transmission. At a time when image-processing technologies function as black boxes, we desperately need to research, reflect, and re-evaluate our technologies of obfuscation. However, institutions – schools and publications alike – appear to consider the same old settings over and over, without critically analyzing or deconstructing the programs, problems, and possibilities that come with our newer media. As a result, there exists no support for the study of (the setting of) alternative resolutions. Users just learn to copy the use of the interface, to paste data and replicate information, but they no longer question, or learn to question, their standard formats.

Mike Judge made some alarming forecasts in his 2006 science fiction comedy film *Idiocracy,* which, albeit indirectly, echo science fiction writer Philip K. Dick's dystopian short story 'Pay for the Printer' (1956): in an era in which printers print printers, slowly everything will resolve into useless mush and kipple. In a way, we have to realize that if we do not approach our resolutions analytically, the next generation of our species will likely be discombobulated by digital generation loss – a loss of fidelity in *resolutions* between subsequent copies and trans-copies of a source. As a result, daily life will turn into obeying the rules of institutionalized programs, while the user will end up only producing monotonous output.

In order to find new, alternative resolutions and to stay open to refreshing, stimulating content, I need to ask myself: do I, as a user, consumer, and producer of data and information, depend only on my conditioning and the resolutions that are imposed on me, or is it possible for me to create new resolutions? Can I escape the interface, or does every decontextualized materiality immediately get re-contextualized inside another, already existing, paradigm or interface? How can these kinds of connections block or obscure intelligible reading, or actually offer me a new context to resolve the information? Together these questions set up a pressing research agenda but also a possible future away from monotonous data. In order to try to find an answer to any of these questions, I will need to start at the beginning: an exposition of the term 'resolution'.

Optical Resolution

In 1877, the English physicist John William Strutt succeeded his father to become the third Baron Rayleigh. While Rayleigh's most notable accomplishment was the discovery of the inert (not chemically reactive) gas argon in 1895, for which he earned a Nobel Prize in 1904, Rayleigh also worked in the field of optics. Here he wrote a criterion that is still used today in the process of quantifying angular resolution: the minimum angle at which a point of view still resolves two points, or the minimum angle at which two points become visible independently from each other. In an 1879 paragraph titled 'Resolving, or Separating, Power of Optical Instruments', Lord Rayleigh writes: 'According to the principles of common optics, there is no limit to resolving-power [of an instrument].'[5] But in a paper written between 1881 and 1887, Rayleigh asks: 'How is it […] that the power of the microscope is subject to an absolute limit […]? The answer requires us to go behind the approximate doctrine of rays, on which common optics is built, and to take into consideration the finite character of the wavelength of light.'[6]

When it comes to straightforward optical systems that consider only light rays from a limited spectrum, Rayleigh was right: in order to quantify the resolution of these optical systems, the contrast – the amount of difference between the maximum and minimum intensity of light visible within the space between two objects – is indispensable. Just like a white line on a white sheet of paper needs contrast to be visible (to be resolved), it will not be possible to distinguish between two objects when there is no contrast between these two objects. Contrast between details defines the degree of visibility, and thus resolution: no contrast will result in no resolution.

But the contrast between two points, and thus the minimum resolution, is contingent on the wavelength of the light and any possible diffraction patterns between those two points in the image. The ring-shaped diffraction pattern of a point (light source), known as an Airy Pattern, named after George Biddell Airy, is the result of diffraction and is characterized by the wavelength of light illuminating a circular aperture. When two point lights are moved into close proximity, so close that the first Airy disk's zero crossing falls inside the second Airy disk's zero crossing, the oscillation within the Airy Patterns will cancel most contrast of light between them. As a result, the two points will optically be blurred together, no matter the lens's resolving power. The diffraction of light thus results in the fact that even the biggest imaginable telescope has limited resolving power.

Rayleigh described this effect in his Rayleigh criterion, which states that two points can be resolved when the center of the diffraction pattern of one point falls just outside the first minimum diffraction pattern of the other. When considered through circular aperture, he states that it is possible to calculate a minimum angular resolution as:

$$\theta = 1.22 \lambda / D$$

In this formula, θ stands for angular resolution (which is measured in radians), λ stands for the wavelength of the light used in the system (blue light has a shorter wavelength, which will result in a better resolution), and D stands for the diameter of the lens's aperture (the hole with a diameter through which the light travels). Aperture is a measure of a lens's ability to gather light and resolve fine specimen detail at a fixed object distance.

As stated before, an angular resolution is the minimum distance between two points (light sources) required to stay individually distinguishable from each other. Here, a smaller resolution means there is a smaller resolution angle (and thus less space) necessary between the resolved dots. However, real optical systems are complex and suffer from aberrations, flaws in the optical system and practical difficulties such as specimen quality. Besides this, in reality, most often two dots radiate or reflect light at different levels of intensity. This means that in practice the resolution of an optical system is always higher (worse) than its calculable minimum.

All technologies have a limited optical resolution, which depends on, for instance, aperture, wavelength, contrast, and angular resolution. When the optical technology is more complex, the actors that are involved in determining the minimal resolution of the technology become more diverse and the setting of resolution changes into a more elaborate process. In microscopy, just like in any other optical technology, angular and lateral resolution refer to the minimum amount of distance needed (measured in rads or in meters) between two objects, such as dots, that still make it possible to just

tell them apart. However, a rewritten mathematical formula defines the theoretical resolving power in microscopy as:

$$\text{dmin} = 1.22 \times \lambda / \text{NA}$$

In this formula, dmin stands for the minimal distance two dots need from each other to be resolved, or minimal resolution. λ stands again for the wavelength of light. In the formula for microscopy, however, the diameter of the lens's aperture (D) is swapped with NA, or numerical aperture, which consists of a mathematical calculation of the light-gathering capabilities of a lens. In microscopy, this is the sum of the aperture of an objective and the diaphragm of the condenser, which have set values per microscope. Resolution in microscopy is thus determined by certain physical parameters that not only include the wavelength of light, but also the light-gathering power of the objective and lenses.

The definition of resolution in this second formula is expanded to also include the attributed settings of strength, accuracy, or power of the material agents that are involved in resolving the image, such as the objective, condenser, and lenses. At first sight, this might seem like a minimal expansion and lead to the dismissal of a simple rephrasing or rewriting of the earlier formula for angular resolution. However, the expansion of the formula with just one specific material agent, the diaphragm, and the attribution of certain values of this material agent (which are often determined in increments rather than a fluid spectrum of values) is actually an important step that illustrates how technology gains complexity. Every time a new agent is added to the equation, the agent introduces complexity by adding their own rules or possible settings, involving or influencing the behavior of all other material agents. Moreover, the affordances of these technologies, or the *clues* inherent to how the technology is built to tell a user how it can or should be used, also play a role that intensifies the complexity of the resolution of the final output. As James J. Gibson writes, 'affordances are properties of things taken with reference to an observer but not properties of the experiences of the observer'.[7]

In photography, for instance, the higher the aperture, the shallower the depth of field, the closer the lens needs to come to the object. This also introduces new possibilities for failure: if the diaphragm does not afford an appropriate setting for a particular equation, it might not be possible to resolve the image at all – the imaging technology might simply refuse or even state an 'unsupported setting' error message; in which case the technological assemblage will refuse to resolve an image entirely – the foreclosure of an abnormal option rather than an impossibility. Thus, the properties of the technological assemblage that the user handles, the affordances, add complexity to the setting of a resolution.

Aspect Ratio, Resolution, and Resolving Power

In optical systems, the quality of the rendered image depends on the resolving power and acutance of the technological assemblage that renders the image; the (reflected) light of the source or subject that is captured; and the context and conditions in which the image is recorded. Consider, for instance, how different objects (lens, film, image sensor, compression algorithm) have to weigh (or dispute) between standard settings (frame rate, aperture, ISO, number of pixels and pixel aspect ratio, color encoding

scheme, or weight in mbps), while having to evaluate the technologies' possible affordances: the possible settings the mediating technological architecture offers when connecting or composing these objects and settings. Finally, the resolving power is an objective measure of resolution, which can, for instance, be measured in horizontal lines (horizontal resolution) and vertical lines (vertical resolution), line pairs or cycles per millimeter. The image acutance refers to a measure of sharpness of the edge contrast of the image and is measured following a gradient. A high acutance means a cleaner edge between two details while a low acutance means a soft or blurry edge.

Following this definition of optical resolution, digital resolution should – in theory – also refer to the pixel density of the image on display, written as the number of pixels per area (in ppi or ppcm) and maybe extended to consider the apparatus, its affordances, and settings (such as pixel aspect ratio or color encoding schemes).[8] However, in an everyday use of the term, the meaning of digital resolution is constantly confused or conflated to simply refer to a display's standardized output or graphics display resolution: the number of distinct pixels the display features in each dimension (width and height). As a result, resolution has become an ambiguous term that no longer reflects the quality of the content that is on display. The use of the word 'resolution' in this context is a misnomer, since the number of pixels in each dimension of the display (e.g. 1920 × 1080) says absolutely nothing about the actual pixel density, the pixels per unit or the quality of the content on display, which may in fact be shown zoomed, stretched or letter-boxed and wrongly color encoded, to fit the display's standard display resolution.

Generally, these settings either ossify as requirements or de facto norms, or are notated as de jure – legally binding – standards by organizations such as the International Organization for Standardization (ISO). While this makes the process of resolving an image less complex, since it systematizes parts of the process, ultimately it also makes the process less transparent and more black-boxed. And it is not only institutions such as ISO that program, encode, and regulate (standardize) the flows of data in and between our technologies, or that arrange the data in our machines following systems that underline efficiency or functionality. In fact, data is organized following either protocol or proprietary standards developed by technological oligarchs to include all kinds of inefficiencies that the user is not conditioned or even supposed to see, think, or question. These proprietary standards function as a type of controlling logic that re-capsulates information inside various wrappers in which our data is (re-)encoded, edited, and even deformed by nepotistic, (sometimes) covertly operating cartels for reasons such as insidious data collection or locking the user into their proprietary software.

Just as in the realm of optics, a resolution does not just mean a final rendition of the data on the screen, but also involves the processes and affordances involved during its rendition – the trade-offs inside the technological assemblage which record, produce, and display the image (or other media, such as video, sound, or 3D data). The current conflation of the meaning of resolution within the digital – as a result of which resolution only refers to the final dimensions the image is displayed at or in – obscures the complexities and politics at stake in the process of resolving, and, as a result, presents a limit to the understanding, using, compiling, and reading of (imaging) data. Further theoretical refinements that elaborate on the usage and development of the term 'resolution' have been missing from debates on resolutions since it was imported from the field of optics, where it has been in use for two centuries. To garner a better understanding of our imaging technologies, the word 'resolution' itself needs to be resolved;

or rather, it needs to be disentangled to refer not just to a final output, but to a more procedural construct.

Untie&&Dis/Solve: Digital Resolutions

Resolutions are made, and they involve procedural trade-offs. The more complex an image-processing technology is, the more actors its rendering entails, each following their own rules or standards to resolve an image, influencing the image's final resolution. However, these actors and their inherent complexities are increasingly positioned beyond the fold of everyday settings, outside the afforded options of the interface. This is how resolutions function not just as an interface effect but also as a hyperopic lens, obfuscating some of what is most immediately at stake and possible alternative resolutions of media.

Unknowingly, the user and audience suffer from technological hyperopia: a condition of 'farsightedness' that does not allow the user to properly see what processes are taking place right under their nose. Rather, they just focus on a final end product. This is due to a shift from creating a resolution, to the setting of a resolution and, finally, to the imposition of resolutions as standard settings. Every time we press print, run, record, publish, render, we also press a button we could consider as 'compromise'. Unfortunately, however, what we compromise – settings between or beyond standards, and which deliver other, maybe unwanted, but maybe also desirable outcomes – is often obfuscated. We need to shift our understanding of resolutions and see them as disputable norms, habitual compromises and expandable limits. Through challenging the actors involved in the setting of resolutions, the user can scale actively between increments of hyperopia and myopia. The question is: has the user become unable to construct their own settings, or has the user become oblivious to resolutions and their inherent compromises? And how has the user become this blind?

One answer to this question can be found in a redefinition of the screen. For a long time the screen was just a straightforward, typically passive object that acted as a veil: it would emit or reflect light. Today, the term 'screen' may still refer to its old configuration: a two-dimensional material surface or threshold that partitions one space from the next, or functions as a shield. As curator and theorist Christiane Paul writes, the screen acts as a mediator of (digital) light.[9] However, over the past decades, technological innovations have transformed the notion of the screen into a wide variety of complex amalgamations.

But over time, the screen has transformed into a navigational plane, rendering it similar to an interface or GUI. Media archaeologist Erkki Huhtamo dabbles with the possibility of describing the contemporary screen as a framed surface or container for displaying visual information that is controlled by the user and therefore not permanently part of the frame. He finally argues that the screen exists as a constantly changing, temporally constructed interface between the user and information.[10] As Galloway explains in *The Interface Effect*,[11] the interface is part of the processes of understanding, reading, and translating our mediated experiences: it operates as an effect. In his book *The Interface Envelope*, James Ash writes:

> within digital interfaces, the specific mode of resolution of an object is carefully designed and tested in order to be as optimal as possible […]. In a digital interface,

> resolution is the outcome of transductions between a variety of objects including screened images, software, hardware, and physical input devices, all of which are centrally involved in the design of particular objects within an interface.[12]

Not only has the screen morphed from a flat surface to an interactive plane of navigation or interface, its content and the technologies that shape its content have developed into extremely complex systems. As Lev Manovich wrote back in 1995, 'Rather than being a neutral medium of presenting information, the screen is aggressive. It functions to filter, to screen out, to take over, rendering nonexistent whatever is outside its frame'[13] – a degree of filtering that varies between different screen technologies. The screen is thus not simply a boundary plane. It has become an autonomous object that affects what is being displayed; a threshold mediating different systems or a process oscillating between states. The mobile screen itself is located in-between different applications and uses.

In the computer, most of the interactions with our interfaces are mediated by software applications that act like platforms. These platforms do not take up the full screen, but instead exist within a window. While they all exist in the same screen, these windows follow their own sets of rules and standards; they exist next to and on top of each other like walled gardens. In a sense, these platforms are a modern version of frameworks; they offer a simulacrum of freedom and possibility. In the case of the platform Facebook, for example, content is reformatted and deformed: Facebook recompresses and reformats any posted data, text, sound, or images, while it has rules for the number of characters, and what characters and compressions can be used or uploaded. Facebook has even designed its own emojis for the platform. In short, the platform Facebook enforces its own resolutions. It is important to realize that the screen is a constant state of assemblage: delimiting and demarcating our ways of seeing and instead expanding the axial and lateral resolution to layers that are usually obfuscated or uncharted.

It is imperative to rethink the definition of 'resolution' and expand it from a simple measure of acutance. Because what is resolved on the screen and what is not depends not just on the material qualities of the screen or display, or the signal it receives, but also on the processes, platforms, standards, and interfaces involved in setting these measures, behind or in the depths beyond the screen or display.

So while in the digital realm, the term 'resolution' is often simplified to just mean a number – signifying, say, the width and height of a screen – the critical understanding of the term 'resolution' I propose also considers a depth (beyond its outcome). In this 'depth', beyond a screen (or when including audible technologies: membrane), protocols, and other (proprietary) standards, together with the technological interfaces and the objects' materialities and affordances, form a final resolution.

The cost of all of these media resolutions – standards encapsulated inside standard encapsulations – is that we have gradually become unaware of the choices and compromises they represent. We need to realize that a resolution is never a neutral settlement, but an outcome that carries historical, economic, and political ideologies that once were implemented by choice. While resolutions compromise, obfuscate, and obscure particular visual outcomes, the processes of standardization and upgrade culture as a whole also compromise particular technological affordances – creating new ways of seeing or perceiving – altogether. And it is these alternative technologies of

seeing, or obscured and deleted settings, that also need to be considered as part of resolution studies.

A Rheology of Data

In 1941, the Argentinian writer Jorge Luis Borges published *El Jardín de senderos que se bifurcan* (The Garden of Forking Paths), containing the short story 'The Library of Babel'. In this story, Borges describes a universe in the form of a vast library, containing all possible books following a few simple rules: every book consists of 410 pages, each page displays 40 lines and each line contains approximately 80 letters. Each book features any combinations of 25 orthographic symbols: 22 letters, a period (full stop), a comma, and a space. While the exact number of books in the Library of Babel can be calculated, Borges says the library is 'indefinite and perhaps infinite'.

The fascinating part of this story starts when Borges describes the behavior of the visitors to the library. In particular, the Purifiers, who *arbitrarily* destroy books that do not follow the Purifiers' rules of language or decoding. The word 'arbitrarily' is important here, because it references the fluidity of the library; the openness to different languages and other systems of interpretation. One book may, for instance, offer an index to the next book, or a system of decoding – a 'bridge' – to read the next. This provokes the question: how do the Purifiers know they did not just read the books in the wrong order? How can they be certain that they were not just lacking an index or a codex that would help them access the books to be purified (burned)?

When I learned about NASA's use of sonification – the process of displaying any type of data or measurement as sound, or as it says on the NASA website: 'the transmission of information via sound', which the space agency uses to learn more about the universe – I realized that with the 'right' listening device, anything can be heard. Even a rainbow. This does not always mean it makes sense to the listener, but rather, it is significant for the willingness of contemporary space scientists to build bridges between different domains – something I later understood as a 'rheology of data'.

Rheology is a term from the realm of physics, or, to be more precise, from mechanics, where it is used to describe the flow of matter – primarily in a liquid state, but also 'soft solids', or solids that respond in a plastic way (rather than deforming elastically in response to an applied force). With a 'rheology of data' I thus mean a study of how data can be read and displayed in completely different forms, depending on the context – software or interface. A rheology of data facilitates a deformation and flow of the matter of data. It shows that there is a possibility to 'push' data into different applications, and to show data in different forms. Thinking about the 'rheology of data' became meaningful to me when I first ran the open source Mac OS X plugin technology Syphon (first released in 2010 as *open video tap*, but later developed by Anton Marini in collaboration with Tom Butterworth as Syphon). With the help of Syphon, I could suddenly make certain applications (Adobe After Effects, Modul8, Processing, or Open Frameworks) share information, such as frames – full frame rate video or stills – with one another, in real time. Syphon allowed me to project my slides and video as textures on top of 3D objects (from Modul8 to Unity). The plugin taught me that my thinking in software environments or 'walled gardens' was flawed, or at least limiting. Software is much more interesting when I can leak and push my content through the walls of software, which normally work as closed architectures. Syphon showed me that data is more fluid than the ways in which I am conditioned to

perceive and use it; data can be resolved differently, if I *make it so*. And this is where I want to come back to Jon Satrom's QTzrk. QTzrk is a name that is not supposed to be spoken, it is a name referencing computer language, leaking back into human spoken language. In QTzrk, Satrom already prefigures what Syphon facilitates: the video shows a video software (Quicktime 7) leaking frames, data, from its container into a fluid puddle of data.

In the realm of computation, though, there is still very little fluidity. And the 'Library of Babel' still remains an asynchronous metaphor for our contemporary approach to computation. Computer programs only function when inserting certain forms of formatted data; data for which the machine has codecs installed. (The value of) RAW, non-formatted or unprocessed data is easily dismissed because it is often hard to open or read. There seems to be hardly any freedom in transgressing this. The insights I gained from reading about NASA opened a new approach in my computational thinking: I started teaching my students not just about the electromagnetic spectrum, but also about how NASA, through sonification and other transcoding techniques, could listen to the weather, hoping they would understand the freedom they can take in the processes of perceiving and interpreting data.

Only the contemporary Purifiers – software, its users, and computer systems in general – enforce the rule that when data is illegible, it must be invalid. Take, for instance, Satrom's QTlets, which have, after a lifespan of a little over five years, at least in my OS become completely obsolete and unplayable. In reality, it simply means that I do not have the right decoder, which is no longer available and supported. In general, it means that the string of data is not run through the right program or read in the right language, which would translate its data into a legible form of information. Data is not solid; it can flow from one context or environment to the next, changing both its resolution and its meaning – which can be both a danger and a blessing in disguise.

Refuse to Let the Syntaxes of (a) History Direct Our Futures

Resolution theory is a theory of literacy: literacy of the machines, the people, the people creating the machines, and the people being created by the machines. But resolution studies does not only involve the study of the effects of technological progress or the aesthetization of the scales of resolution, which has already been done in books such as Galloway's *The Interface Effect* or Chun's *Updating to Remain the Same*. Resolution studies also involves research on alternative settings that could have been in place, but are not, and the technologies and affordances that are, as a result, rendered outside the discourse of computation.

But how do we move more easily beside or beyond these generally imposed flows of data? How do we break away from our standard resolutions? First of all, we need to realize that a resolution is more than a formal solution; it involves a technological (dis)entanglement and also an inherent compromise – if something is resolved one way, it is not resolved or rendered in another way. Determinations such as standard resolutions are as dangerous as any other presumption; they preclude alternatives, and perpetuate harmful or merely kludged and kippled ways of running. Key to the study of resolutions is the realization that the condition of data is fluid. Every string of data is ambiguously promiscuous and has the potential to be manipulated into anything. This is how a rheology of data can take form, advocating fluidity in data transactions.

A resolution is the lens through which constituted materialities become signifiers in their own right. They resonate the tonality of the hive mind and constantly transform our technologies into informed material vernaculars. Technology is evolving faster than we as a culture can come to terms with. This is why determinations such as standards are dangerous; they can preclude an alternative. The radical digital materialist believes in *informed materials*[14]: while every string of *data* is ambiguously fluid and has the potential to be manipulated into anything, every piece of *information* functions within an environment that encodes and decodes, contextualizes, and embeds the data, and, in doing so, data gain meaning and become information. Different forms of ossification slither into every crevice of private life, while unresolved, ungoverned free space seems to be slipping away. There lies the power and danger of standardization.

The compression, software, platform, interface, and finally hardware such as the screen or the projector, all inform how a string of data is resolved; its presence, legibility, and its meaning. They enforce and deform data into formatted or *informed materials*. The infrastructures through which we activate or access our data always engender distortions of our perception. But at the same time, because there is some freedom for the trickster using the fluidity of data, the rightful meaning or 'factuality' of data should always be open for debate.

We are in need of a re-(Re-)Distribution of the Sensible. Resolution studies is not only about the effects of technological progress or about the aesthetization of the scales of resolution. Resolution studies is the study of how resolution embeds the tonalities of culture, in more than just its technological facets. Resolution studies researches the standards that could have been in place, but are not. As a form of vernacular resistance, based on the concept of providing ambiguous resolutions, resolution studies employs the liminal resolution of the screen as a looking glass. Here, 'technological hyperopia' – the condition of a user being unable to see clearly the processes that take place during the production of an image – is fractured and gives space to myopia, and vice versa.

Notes

1 Oliver Klatt, 2013, 'Compress Process', *Wired* (Germany), January, pp. 106–7.
2 Alexander R. Galloway, 2012, *The Interface Effect*, Cambridge: Polity Press, p. 33.
3 Wendy Hui Kyong Chun, 2016, *Updating to Remain the Same: Habitual New Media*, Cambridge, MA: MIT Press, p. 1.
4 Gilles Deleuze, 1992, 'Postscript on the Societies of Control', *October*, 59, Winter, Cambridge, MA: MIT Press, pp. 3–7.
5 Lord Rayleigh, 1879, 'XXXI. Investigations in Optics, with Special Reference to the Spectroscope', *The London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science*, 8, 49, pp. 261–74.
6 John William Strutt, Baron Rayleigh, 1900, *Scientific Papers*, Vol II, 1881–1887, Cambridge: Cambridge University Press, p. 410.
7 James J. Gibson, 1986, *The Ecological Approach to Visual Perception*, Hillsdale, NJ: Lawrence Erlbaum. http://smithiesdesign.com/wp-content/uploads/2016/09/05-Gibson-Theory-of-affordances.pdf.
8 The importance of the resolution of color encoding has been described in detail by Carolyn Kane in her book, 2014, *Chromatic Algorithms: Synthetic Color, Computer Art, and Aesthetics after Code*, Chicago, IL: University of Chicago Press.
9 Christiane Paul, 2015, 'Mediations of Light: Screens as Information Surfaces', *Digital Light*, eds. Sean Cubitt, Daniel Palmer, and Nathaniel Tkacz, London: Open Humanities Press, pp. 179–92.

10 Erkki Huhtamo, 2006, 'The Pleasures of the Peephole: An Archaeological Exploration of Peep Media', in: *Book of Imaginary Media: Excavating the Dream of the Ultimate Communication Medium*, NAi Publishers 2007: p. 74–155,
11 Galloway, *The Interface Effect*.
12 James Ash, 2015, *The Interface Envelope: Gaming, Technology, Power*, New York: Bloomsbury USA, p. 35.
13 Lev Manovich, 1995, 'An Archeology of a Computer Screen', *Kunstforum International* 132, pp. 124–135, see p. 125.
14 Here I borrow the term 'informed material' as used by B. Bensaude-Vincent and I. Stengers, 1996, *A History of Chemistry*, Cambridge, MA: Harvard University Press, p. 206. Matter is not just reshaped mechanically through chemical research and development, but is transformed into informed material: 'Instead of imposing a shape on the mass of material, one develops an "informed material" in the sense that the material structure becomes richer and richer in information. Accomplishing this requires a detailed comprehension of the microscopic structure of materials, because it is playing with these molecular, atomic, and even subatomic structures that one can invent materials adapted to industrial demands'. This term has earlier been adopted into the realm of research into digital materials by Susan Schuppli in her lectures on the *Material Witness*. Susan Schuppli: 'Dark Matters - Bearing Material Witness to Climate Change'. During Dark Ecology. 28 November 2015 – Aurora Cinema, Murmansk, Russia. https://vimeo.com/153480981.

10 Atoms and Worms (Ontologies of Fragments)

Jamie Brassett

> The nature of any type of existence can only be explained by reference to its implication in creative activity.
>
> Alfred North Whitehead, *Modes of Thought*, p. 93

> That's why you should let go of any terror of the new.
>
> Lucretius, *On the Nature of things*, Book 2, ll. 1031–1040

0. (fragments)

The power of the fragment was of crucial importance to the German Romantics especially the Schlegel brothers and their collections (Wheeler, 1984). This is examined in the first chapter of Philippe Lacoue-Labarthe and Jean-Luc Nancy's (1988) book on the theory of literature of the period and in which they write:

> To an even greater extent than the 'genre' of theoretical romanticism, the fragment is considered its incarnation, the most distinctive mark of its originality, or the sign of its radical modernity. […] Indeed, the fragment is the romantic genre *par excellence*.
>
> (Lacoue-Labarthe and Nancy, 1988: 39–40)

While we could deliberate over fragments that are accidental or involuntary and those purposefully crafted like so many ruined follies, there remains an intriguing ontological dynamism however they are created. This dynamism will be the focus of this chapter; but by way of entry into this, we will return to the German Romantics. 'A fragment, like a small work of art, has to be entirely isolated from the surrounding world and be complete in itself like a hedgehog,' writes Friedrich Schlegel in number 206 of the *Athenaeum Fragments* (originally published in 1798). For Lacoue-Labarthe and Nancy (1988: 59), fragmentation is the German Romantics' 'tendency' which 'finally dislocates and "unworks" texts'; with the fragment announcing both such an incompleteness and completeness (as it designates a Romantic System) at the same time (1988: 50).

Oscillating between different ontological states – remnants of an original unity or pieces of a whole work yet to come – these Romantic fragments enter into affective ontologies of their own. That is, neither past nor future unities adequately contain

them, and they can develop creative impact in a multitude of directions. Take them away from the historical contexts that determine how these fragments can be understood (both of the Schlegels' early 1800s and Lacoue-Labarthe and Nancy's 1980s) and we are at liberty to wonder how these little pieces, elements, fragments operate ontologically. Such a discussion announces others that relate wholes and parts, or unities and multiplicities, homogeneity and heterogeneity, holism and reductionism; each of which accesses millennia of philosophical investigation. I have spent some time writing about some of these things over recent years (e.g. Brassett, 2005, 2015; Brassett and O'Reilly, 2018), encountering several philosophers for whom these subjects are key (e.g. Deleuze and Guattari, 1984, 1988; Serres, 1982, 1995, 2000; Simondon, 1989; Souriau, 2009; Stengers, 1997). This chapter will not be able to cover everything that these topics require, but it will take a look at some of these philosophically to engage with fragments and photographic images.[1]

To do this I will adopt two conceits – understood as both poetic and conceptual constructions – in order to locate the ontologies under production. These are: atoms and worms. Just as with the Schlegels' hedgehog, there are no single points to these conceits, no single interpretation or set of interpretations that they encompass or exhaust.[2] In their (1994) *What is Philosophy?* Gilles Deleuze and Félix Guattari write of concepts as the creative production of philosophers; products that have important localizations in the context of philosophers' work, but which can be fragmented from their original milieus and put to work in other spaces, by other creative practitioners. Interpreting the truth of concepts is not the point, they argue; but – as Deleuze states in the interview 'Breaking Things Open, Breaking Words Open' (1995: 87) – experimenting with concepts, experiencing them differently in the creation of new work highlights the creativity of the philosopher. There are no points, only vectors: maybe this is the point of the hedgehog? Vectors as points launched out of a single place, breaking a unity into fragments that always head outward: atoms and worms writhing, ontologically fragmented and multiply creative.

1. (atoms, worms)

In Chapter One of his 1841 Ph.D. thesis, 'The Difference Between the Democritean and Epicurean Philosophy of Nature', Karl Marx (1975) writes of the atom being negated in the line. There is a sense of future dialectics here. It is as if the atoms in free fall become lines only through an act that requires their negation. Marx could not have had an inkling of the ways in which emergence happens in complex systems where neither the parts nor the wholes negate each other (e.g. Stengers, 1997); even while, as Michel Serres (2000) notes of Lucretius, atoms swerving provides an early account of complexity theory.[3] Still, the emergence of lines as smears of atoms falling and swerving provides an intriguing image: where atoms are neither the reductive creative units of lines, nor the insignificant precursor to a more valuable whole. Isabelle Stengers (1997) refuses to accept either the reductive or holistic interpretations of emergence, preferring a construction where the relation between parts and wholes is both non-determined by each other and in constant dynamic reconstitution. That is, the complex ontologies delivered through emergence not only move in 'zones of indiscernibility' – as Deleuze (2003) writes of Francis Bacon's work – but constitute them too. (We will return to Deleuze and Bacon a little later.) Neither atoms (singly or in concert) nor worms manage to capture the purpose of their relation in a way that controls what the other must be.

This is reminiscent of the way writer Kurt Vonnegut's Tralfamadorians (the alien beings that pop up in various places throughout his work) see humans. The Trafalmadorians' experience of time is so different to ours that they see humans as a very long worm, with a newborn baby-shaped end and a dead-person shaped end. While the worm might smear all the moments between birth and death, the relation between atomic individuals and the emergence of a life (Deleuze, 2001) is not a negating one. That is, at any one moment our individuality is not negated by the worm. As a life, the worm's specific locations are able to offer up a particular temporally specific individual that may be singled-out at any place. And while these moments do not tell the whole story, they are not negated by the process: the process neither totalizes all moments, nor is reducible to any one, or any single set, of moments. Difficult as it is for the non-specialist, we are able to accept that light can be either a particle or a wave depending upon our perspective at the point of looking and that we are unable to see them both at the same time. Vonnegut's Trafalmadorians have trouble noticing the individual at any moment; we spend time constructing ways of imagining that any of our individual moments have either duration or identity over time. Nevertheless, the non-dialectical relation between atoms and worms (or particles and waves) remains. In whichever way we articulate the swerving or smearing of atoms and worms, we are layering complex ontologies that characterize a variety of beings and becomings both in themselves and in their relations.

2. (fragmented becomings)

On the issue of the complex ontologies of being and becoming, Alfred North Whitehead (1978: 23) writes: '*how* an actual entity *becomes* constitutes *what* that actual entity is; so that the two descriptions of an actual entity are not independent. Its "being" is constituted by its "becoming". This is the "principle of process"' (original emphases). Becoming is what being does; with identity nothing more than an experience generated by the mythological extrapolation of a momentary feeling of stability in a universe of change. Where is the photographic image in all of this?

Photographs can be considered in terms of such an ontology in a number of ways. First, there is the perspective that sees any photographic image as a fragment of an event. This is a fairly simple notion and while courts appropriate critique – as Vilém Flusser (2000) does in a philosophy of photography context – I will examine the relation between a photograph and the event a little differently below (§4), with reference to the work of Deleuze (1993) and Whitehead. Second, we may view any photograph as an event in itself, even while presenting as a fragment of something else. This may be how the Schlegels might have approached photography. Yet the tension between an individual unity and a fragment of a whole remains: we will approach this by proposing a dynamic ontology of individuation with Gilbert Simondon.[4]

Individuation, for Simondon, is the becoming individual from a rich milieu of pre-individuating stuff. This approach was necessary, Simondon argued, because the production of an individual being needed adequate theorizing, not accepting as an ontological ground upon which an account of Being could be built. Though not entirely unproblematic (Stengers, 2002, 2004; Chabot, 2013), Simondon's work provides important insights into theories of processes of individuation and this conceptualization Deleuze found key (Deleuze, 1994, 2004a, 2004b; Voss, 2018).

In one of only a few books on Simondon to be published in English, Muriel Combes (2013: 28) writes:

> From the outset, in effect, the definition given by Simondon of the individual as 'reality of a metastable relation' […] invalidates an approach based upon preconstituted domains; such domains are dependent on the modality of individuation, and do not pre-exist it. Domains are a result of the manner in which the metastability of the individual/milieu system is conserved or, on the contrary, degraded after individuation.
>
> (Quoting Simondon, 2005: 237)

Here Combes highlights Simondon's approach to individuation. For Simondon it is a process that describes how an individual emerges from a pre-individuated field of potential. As Simondon has interests in information theory, technology, and thermodynamics, it is with reference to key concepts that cut through these disciplines that he characterizes important aspects of this process of individuation. So, when this pre-individuated field is in a *metastable* condition it has the possibility for individuation to emerge and to keep emerging; if a field is *homeostatic* all potential for creative development has been exhausted and the processes of individuation stall. Simondon's use of the thermodynamic concept of 'metastability' is important, therefore, and Simondon expert Anne Sauvagnargues unpacks it as follows:

> The concept of metastability intertwines the theory of information and the physics of phase shifts in matter, which Simondon gives a metaphysical extension by applying it to every field of individuation; metastability thus qualifies the conditions of every actualization. Metastable being, in disequilibrium, involves this state of asymmetrical disequilibrium which accounts for tension and the production of the new.
>
> Metastability thus becomes the key concept of a philosophy of becoming.
>
> (Sauvagnargues, 2012: 58)[5]

Any domain of being is characterized by whether or not its processes of individuation have exhausted its potentialities. Our modes of existence and the milieus that support, and depend upon, them are as fertile as their potentialities allow: metastable, and creativity abounds; homeostatic, and stagnation sets in. For Sauvagnargues (2012: 58) it is in this way that Simondon pushes his metaphysics of metastability to engage culture, extending 'material and vital individuation into the processes of psychic and collective individuation'. The processes of becoming that allow individuation to emerge from a pre-individuated field, therefore, act as much for sociocultural individuation as psycho-physical.

In the quotation from Combes cited above, she writes: 'Domains are a result of the manner in which the metastability of the individual/milieu system is conserved or, on the contrary, degraded after individuation' (Combes, 2013: 28). In this way Simondon emphasizes the immanent relation between milieu and individual, rather than take either as the basis for any discussion of existence.[6] This describes why he also takes being as something that needs creating and not the basis for creation. Individuals emerge from a field that has the potential to individualize, and this emergence either exhausts that potential (homeostatizes) or not (remains metastable).

We have here a particular way of thinking creativity that cuts across both Simondon and Whitehead: where creativity actualizes potential (Whitehead, 1967: 179) and does so without diminishing the potential of further actualizations (Simondon, 2009). Simondon's individual is either a fluid, dynamic churning of being always in the process of becoming, or the hypertelic exhaustion of all possibilities in a self that has no further potential to develop. The individual is a process not an identity, properly speaking more individuating than individual. He explains, in a passage echoing the quotation from Whitehead (1978: 23) used at the start of this section: 'Individuation must be understood as the becoming of being, and not as a model of being that would exhaust its signification' (Simondon, 2009: 10).

This discussion of dynamic ontological development via Simondon highlights an important aspect of photographic fragmentation that has been put forward so far here. A photograph, to keep its creative potential alive to possible future actualization, must not drain this potential in any single moment. Unlike the hedgehog of the Schlegels' fragment, such a photographic fragment should never be complete in itself or isolated from the world. A photographic image articulated as a fragment should exist in a metastable state such that any becoming into being either re-energizes the potential from which it individuates, or never quite depletes the pool of possibilities in its pre-individuating milieu.[7]

3. (accidental ontogeneses)

This section has opened with a photo of mine (Figure 10.1). To say this photograph is 'mine' is somewhat misleading, as this picture is a mistake. That is, it was taken as I returned my phone to my pocket after doing something or other that I cannot remember; the camera app must have been running and some confluence of body, software, and hardware led to this picture. This photo is not mine in the sense that I took it, but I was implicated in its taking somehow. Joanna Żylinska (2017) emphasizes the network of actors (human and non-human) involved in photographic creativity; and in so doing she recognizes that the prevalence of photographic technology distributed across our bodies and garments and in the fabric of our world, requires a new ontological speculation. Żylinska's work therefore does not only highlight non-human takers of photographs (drones, CCTV cameras, satellites, and so on) in her non-human remit, but includes other forms in which the non-human plays an important role in image-taking: for example, software and hardware, networked systems, apparatuses, and machines. In focusing upon a wider contextual network for ontological speculation than any one photograph plus subject plus object plus framing and so on can manage, Żylinska puts across a set of ontological layers for photography that announces its increasing complexity.

Within this complex array of, sometimes competing, ontological positions (tendencies to subject or object, contexts and frames, machinic and organic matter, and whatever else there may be), any photographic image is a fragment. The 'whole' of which it is a 'part' is not a larger capturing of an event that exceeds it, but an actualization of a network involving many modes of being each on its own journey of becoming (Souriau, 2009). To speak of 'wholes' is thus misleading; thought in this way, the edges defining any unity are never either fully or permanently inked in and remain, at least, porous. As we saw in relation to Simondon, this should help any individuation retain its metastability. It is possible, of course, for images to lock themselves down, to represent or identify, to become homeostatic, to drain all creative energy from their

Figure 10.1 Street Corner, Cincinnati, Ohio. © Jamie Brassett 2017. Essential PH-1 running its native camera app Autumn 2017.

pools of invigorating possibilities. Fragments can become stuck in closed systems. Nevertheless, as Żylinska shows, photography's escape from such ontological desiccation can come from recombining human and non-human in hitherto unimagined or accidental networks.

The work of Bonamy Devas is one of Żylinska's examples (2017: 35–7) of human–non-human networked creative production, particularly the 'Photo Tai Chi' project (Devas, n.d.). This project requires the photographer to take pictures of moving objects, or while moving the handset, while using a phone camera's panoramic mode; with the result that things become interrupted, dislocated, smeared, or repeated (see Figure 10.2). The combination of movement and panoramic mode (whether the movement is the world around or past the camera, or the camera itself) results in the imaging of strange beings. Distorted, cut, and pasted in stuttering positions, the images in this project unsettle as potentialities for disrupting reality proliferate as if intensified, or even revealed, by hallucinogenics. 'This process,' Devas (n.d.; see also: Devas, 2015) explains, 'deliberately subverts the iPhone's camera software to reveal the digital image for what it is: the algorithmic construct of an apparatus.' For Żylinska, Devas' work could provide a 'revolutionary' intervention in the circuits of those capital accumulators symbolized by Silicon Valley (Żylinska, 2017: 37). Devas' picture (Figure 10.2) is one of the subtlest of the series. Black-headed gulls hover, looking just past the camera, wings appear as if from nowhere, headless bodies suspended against the blue sky.

The affect here occurs in the misfiring relationship between a camera app's coding and human control and, as the non-human becomes a crucial actor in the production of an outcome, the power of the image owes much to human–non-human symbiosis

Figure 10.2 Untitled. Bonamy Devas, no date. Available from: https://www.bonamydevas.com/PhotoTaiChi.

and the accidental creative power of them not quite working together as planned by the app ad hardware developers.

However, there is something closed in the systems of Devas' distortions, for there are still subjects and objects, or controlling intentionalities that frame and cut (as Żylinska has it for all photographic ontology), the misfiring of the accidents become somewhat staged, even if the nature of the outcomes are uncertain. It would be worth taking a little detour into accidents.

Philosopher Cathérine Malabou (2012: 59) writes – of experience as recounted by Marguerite Duras – 'here the accident is the experiential dimension of ontology'. Malabou's (2012) essay is a meditation on being and becoming, destruction and ageing, and her characterization of the ontology of the accident is worth quoting in full:

> The possibility of an identity change by destruction, the possibility of an annihilating metamorphosis, does not appear as a constant virtuality of being, inscribed in it as an eventuality, understood within its biological and ontological fate. Destruction remains an accident while really, to make a pun that suggests that the accident is a property of the species, destruction should be seen as a species of accident, so that the ability to transform oneself under the effect of destruction is a possibility, an existential structure.
>
> (Malabou, 2012: 30)

One wonders, then, of the accidental fragment and its ontological status. In the sense generated by Malabou here, accident both destroys and underpins being itself and so

has a part to play in the deviation of being and becoming. As if some accidental swerve knocked atoms out of their regular path downward and set them into aleatory patterns of creative generation. Not only is accident the experiential dimension of ontology, but the inception of all ontology's creative potential (Lucretius, 2007; Brassett and O'Reilly, 2018). If the law of the same precludes any creativity, as Serres writes (2000: 21) – 'If we had only the principle of identity, we would be mute, motionless, passive, and the world would have no existence: nothing new under the sun of sameness' – Being must be destroyed to release creative becoming. The work of Jinkyun Ahn shown in *Foam* (2018) expresses similar ontologies.

A series of photographs of 'a mundane afternoon with [his] family […] were deleted by mistake and could not be restored' (Ahn, 2018: 11). In the three images presented, two – showing the top of a child's head, framed by an adult's hands and blue-clothed shoulders and chest – are about three-fifths 'fragmented into disorderly bits' (Ahn, 2018: 11). This disorder manifests as a block containing hundreds of multi-colored, horizontal striations, which mainly emerge as pink. The other image, larger, on the facing page, shows what may be the railings of a balcony through a window and a snippet of a curved building. Distorted into acidic purple and green, this image is crossed in the top third by the same kind of horizontal block of striations as in the other two photographs; though this block seems grayer than the others. This destructive intervention has happened after capture, however, the result of an aleatory act reworking the source code of sections of the photographs. While the original photographs have been taken by Ahn with intention, an outside force – we imagine at least electromagnetic – has crossed the material realities of these photographs, rendering them as different kinds of outcome. There is something deeply resonant with Malabou's words here in Ahn's work. Not only has the accident rendered the ontologies of the images differently, it has deeply affected the existential, familial, quality of the photographs. The outcomes are as if some cosmic force has sought to rub out Ahn's family; the resulting pictures are not affectively neutral.

Figure 10.1 differs from these other accidental photographs in important ways. With Devas' choreographed disturbances, insofar as these are recoded intentionally, the subjective and objective possibilities that result (Husserl, 1970; Derrida, 1989) remain intact. The senses of creative subject-as-origin, objectively real image and project framework endure, even as the picture space is disrupted and dislocated. These existential positions of taker and taken persist with Ahn's images, disruption notwithstanding: intentionality remains even while it has been transected by some disruptive, accidental force delivering difficult to understand work. 'My' picture, while being able to have recognizable content and identifiable technological modalities, is located rather as an event that exists with a complete lack of intention. An event that assembles a range of actors, each sharing in a diverse and ongoing ontogenesis.

The events captured by and as the photographs, but also captured in the process of photographing, are not exhausted by that capture. The disavowal of well-defined subject and object positions is required for this never-ending revitalization of the image to result. These images appear as distributions of intensities within the ontological spaces of the images themselves, but also in relation to the events that surround their capture: with each intensity pointing toward moments of a quickly receding present and to others currently burgeoning or yet to come. They are 'ontological events' (Whitehead 1966, 1967, 1978; Deleuze, 1993) and are in need of interrogation. Before doing this, it is worth making mention of Vilém Flusser's (2000)

disregard of the event in photographs. Early in his philosophy of photography, Flusser writes (2000, p. 9) that 'it is wrong to look for "frozen events" in images. Rather they replace events by states of things and translate them into scenes'. Flusser goes on to explain that 'technical images' (that is, those produced with the aid of 'apparatuses') are characterized ontologically by their symbolic representation of complex networks of concepts (Flusser, 2000: 14–20). While he quite quickly locks down his ontological opening to epistemological application (that is, he writes of the 'significance' of these symbols and the difficulties in 'decoding' them), Flusser's account works to remove simplistic discussions of subjects and objects of photographs. The issue with events appears to revolve around the sense that there is something real which is captured and pinned down in taking a photograph; Flusser, therefore, wants to keep within the realms of the photograph their 'magical nature', those scenarios highlighting 'states of things' (Flusser, 2000: 9) that thread photographs to the world. There is a way of thinking events, however, that allows Flusser's ontological complexity to flourish in relation to photography.

4. (some events)

When Deleuze devotes a whole chapter to Whitehead in *The Fold* (1993: 76–82) he does this as a discussion of the event. 'Events,' Deleuze writes (1993: 76), 'are produced in a chaos, in a chaotic multiplicity, but only the condition that a sort of *screen* intervenes' (emphasis added). This screen Deleuze (1993: 76) characterizes not only as 'a formless elastic membrane' or 'an electromagnetic field', but also as a type of filter that sifts ontological possibilities from chaotic multiplicity. Deleuze reads Whitehead here as providing four components to a definition of the event. First, extension. In terms of this component, an event is that which spreads over all its surroundings, in the same way that a notion of whole connects together its parts. Second, such extensions of events are distinguishable by their intensive qualities; the extensive, connective series establish conjunctions along lines of intensity 'converging toward limits, with the relation among limits establishing a conjunction' (Deleuze, 1993: 77). Third, an event is individual. That is, it is not only extensive and intensive, but a '"concrescence" of elements' (Deleuze, 1993: 78), writes Deleuze using a term coined by Whitehead. As these elements of an event coalesce into a particular event they become individual: extended and located in time and space, as well as positioned in relationship to other events.[8] Deleuze (1993: 78) explains further: 'the event is inseparably the objectification of one [individual[9]] and the subjectification of another; it is at once public and private, potential and real, participating in the becoming of another event and the subject of its own becoming.' The fourth, and final, component of an event that Deleuze sees in Whitehead, is 'eternal Objects' (the capitalization of 'objects' here is Deleuze's). As events 'are fluvia' (Deleuze, 1993: 79), as they are constantly being altered as pieces add and subtract from their make-up, any sense of permanence in this flux is given through a relation to eternal objects.[10] Deleuze explains, beginning with a very Whiteheadian phrase:

> Eternal objects produce ingression in the event. Sometimes these can be Qualities, such as a color or a sound that qualifies an extension; sometimes Figures, like the pyramid, that determine an extension; sometimes they are Things, like gold or marble, that cut through a matter. […] Inseparable from the process of actualization

> or realization into which they enter, they gain permanence only in the limits of the flux that creates them […].
>
> (Deleuze, 1993: 79–80)

Without this 'ingression', there would be no event, everything that would be extensive, intensive, or even individual would simply dissolve back into the chaotic flux from which it came. Without such participation in qualities, figures or things of permanence, there would be nothing. Deleuze emphasizes that such eternal objects do not preclude creative production, even at an ontological level, but enter into processes of creation at, or even as, the limits of the flux itself. There is a sense here in which the interaction between events, flux, and eternal objects delineate what Deleuze and Guattari (1984, 1988, 1994) call the 'plane of immanence', as none of these (events, flux, eternal objects, and the processes that cross them) exist outside of the empirical in some transcendent realm. The 'intervention of the screen' that filters events from chaos, which Deleuze notes in this chapter (1993: 76), becomes characterized more clearly now. It is a screen whose fabric is constructed by the interleaving aspects of extension, intensity, individualization, and ingression in the act of sifting. Screens come into being when the different elements of the event form in the act of screening that describes the becoming of an event; they are evident as the differential fields of forces of events coalesce. Various elements of event may be concretized in each individual photo, but these do not necessarily exhaust the images. The dynamic extensions, distributed intensities, processes and moments of individualization, and the ingression of various qualities, things, or figures remain, but the strings of other possible characteristics are not delimited by these moments. They may well repeat every day of my commute, as I stand and wait; and differentiate as my days differ and the other events to which they relate differ. The force fields constantly erupt, even while the events are sifted into view.

5. (intensive fields & figures)

This positioning of the photographic image as fragmentary event nebulizing across a range of ontogenetic modes, also alludes to Deleuze's (2003) work on the painter Francis Bacon. In one of his many attacks on representation (see also Deleuze, 1994), Deleuze accentuates the intensive fields coalescing or erupting across Bacon's work. When Deleuze posits the 'figural' as providing a pictorial mode other than the 'figurative' in Bacon, he does so in order to value an area of intensity within a painting without assigning it meaning through either representation or narrative (for example, Deleuze, 2003 2–3). Flesh and bones encounter each other through 'zones of indiscernibility' in Bacon's work, Deleuze states; zones where neither flesh nor bone, man nor animal, subjects nor objects, attain a definitive ontological presentation. Both non-determined and ever dynamic, Bacon's figural work deploys images through which the various and varying figures mark fields of intensity that exceed any simplistic and determining representation. Deleuze writes (2003: 28), as if emphasizing this point: '[t]he entire body escapes through the screaming mouth.' Then, after reinstating Artaud's body without organs into the frame, Deleuze (2003: 44) writes:

> Thus the body does not have organs, but thresholds or levels. Sensation is not qualitative and qualified, but has only an intensive reality, which no longer

> determines with itself representative elements, but allotropic variations. Sensation is vibration.

In escaping the body the figure maps the body without organs (see also Deleuze and Guattari, 1984, 1988): where sensation criss-crosses bodies in/as zones of indiscernibility and any organization is achieved only through the production of patterns of affective intensity.

As such, and especially in relation to his work with Bacon, Deleuze can be aligned with other philosophers of excess – Bataille, Blanchot, Klossowski, Artaud, and, of course, Nietzsche – where overflowing expressive intensities play important roles in creative production (for the most part in relation to literary work, but drama too[11]). It may well be that elements within any image are recognizable; that is, they can be formed into patterns attachable to actual things: people, places, and so on. But it does not have to end here. Objects do not remain objects, even if they have been subject to objectification, or the concrescence of any event into an actual occasion. If they still hold, or are transected by, intensive zones, the possibilities that they have for intensifying further affective experience are not exhausted in their capture. A fragment need not mark the destruction of a pre-existing unity, neither does it have to gesture toward a future whole. A fragment, as the Schlegels write, may be ontologically valid in itself even while not, in itself, representing a unity. A fragment can be or contain figural zones: those which arrange intensities and even as they concretize as recognizable are still open to realign into new patterns. The events that transect, and are transected by, any photographic fragment, are multiple. The keeping of these multiple possibilities alive is what Simondon calls metastability. In many ways such affects can be said to proliferate, insofar as the image designates itself as its own set of experiences, as well as those that it is capturing (Goffey, 2008). The photographic image thus produces new vectors of affect that, while appearing to capture a moment, launch into a multitude of new directions.

As we saw in relation to Marx's take on Epicurus's atom, any single image is in fact a momentary concrescence of an event within the smearing of a number of fragmented lines of affective intensity, such that these lines always spread out from the photograph keeping it in contact with what Flusser (2000: 9) calls the 'state of things'. As with Vonnegut's Tralfamadorian perception of human individuals, any image will exist within a string of elements – person, landmark, background, and so on – each of which is on its own becoming facilitated by other actual occasions (photographer, apparatus, software, and so on) each on their own becoming too. Vonnegut's human characters feel affronted by the Tralfamadorian disregard of their own feeling of identity. Our certainty of a photograph's ontology delivering well-constituted subjects and objects may show a similar lack of imaginative power as Vonnegut's humans.

6. (last words?)

This last section was to be a simple 'note on the text', as on completing the first draft I noticed something: each section has emerged as a fragment. This is a lucky accident. The more psychoanalytical among you may consider some unconscious forces at work, generating form at levels below my intentionality. However one may, or may not, wish to assign causality, the fragments remain. The nature of fragmentation and the direction where we may find possible wholeness is not easily pinned down. There are

similar concepts I have worked with over the years in a range of different articles and chapters, with specific thinkers and philosophers recurring: as such, these fragments could connect with other writing events of mine and others. To make a 'whole' (narrative, argument, chapter, and so on) is not necessarily unidirectional and patterns can emerge from taking strange, sideways steps. In this way the ontologies of fragments discussed in this chapter transect drives to unify them under well-identifiable, stable, or stagnant wholes and provide many points of contact with other multiplicities.

From Deleuze's encounter with Whitehead's event, we have the intriguing prospect of intensive atoms and extensive worms, or momentary atoms and enduring worms, filtered as both specific occurrences and eternally externalizing concepts. The lack of fixity of Being should be creatively exciting. If the accidental images shown here can be used to uncover such ontogenetic drives, they neither necessarily nor exclusively locate this type of creativity. Maybe even the most frozen, homeostatic photographs have atoms and worms writhing somewhere in their cracks; and if they do not, we can simply leave them to wither.

Notes

1 There is a characterization of Mandelbrot's fractals that can align with fragmentary ontologies thought this way. As aggregates with fractional dimensions, fractals can be both more and less than the whole dimensions to which they point (Deleuze and Guattari, 1988: 486–8). They play a part in understanding complexity and the way that complexities remain at different scales. Thanks to Daniel Rubenstein for noticing this relation.

2 In an essay on this hedgehog fragment and Schubert, Richard Kramer (1997) leaves till the final footnote a discussion of the hedgehog itself, dealing mainly with Romantic notions of unfinished poetry in relation to the composer's Sonata in C Major. The footnote (Kramer, 1997: 148 n. 21), marked against the final word of the essay, opens up consideration of the first concept of the title – the hedgehog – just as the paper, supposedly, finishes.

3 Louis Kaplan (2009) mentions atoms and Lucretius' *clinamen* via the work of Nancy (2000) within an evaluation of photographing nakedness. While Kaplan (following Nancy) highlights the relational ontology that Lucretius' atomism delivers, such relations (being-in-common) seem to accentuate Being. My emphasis here is rather on creative becoming; see also Brassett and O'Reilly (2018) on this in relation to design practice.

4 Another noteworthy process philosopher (along with Whitehead and Simondon) is Henri Bergson, on whose work Deleuze (1988) is an important intervention, originally published at a time (1966) when it was deeply unfashionable to be interested in Bergson (Dosse, 2010: 140). For important recent work investigating all these philosophers, see: Williams (2005, 2009), Shaviro (2009), and Stengers (2011); on Whitehead see Deleuze (1993); on Bergson see Ansell Pearson (2018); and on Simondon see De Boever et al. (2012) and Combes (2013).

5 Deleuze, on whose work Sauvagnargues is also expert, says this of metastability: '[it can be explained as] endowed with a potential energy wherein the differences between series are distributed. (Potential energy is the energy of the pure event, whereas forms of actualization correspond to the realization of the event.)' (Deleuze, 2004b: 119). In a footnote in his book on Kant, Whitehead, and Deleuze. Steven Shaviro (2009: 81 n. 7) provides an elegant definition of metastability: 'In chemistry and physics, "metastability" refers to a physical state that is stable, but just barely. Even a small disturbance will be enough to destabilize it. For instance, a supersaturated solution is metastable.'

6 The influence of one of Simondon's thesis advisers, Georges Canguilhem (2001), is evident here in the relation of living and milieu. Philosopher and illustration expert John O'Reilly (2015) brings Canguilhem and Deleuze and Guattari on milieu together with works by Saul Steinberg and Chris Ware.

7 I have examined similar concepts in relating creative work to complexity theory (Brassett, 2015) and emergence and entropy (Brassett, 2005). Interestingly, in relation to this discussion

of Simondon, complexity biologist Stuart Kauffman (1993: xvi) remarks that creative evolution needs not only emerge from a 'moderately complex mixture of catalytic polymers', but to carry on needs to create future possibilities for catalyzing each other's potential for further catalysis (see also Kauffman 2008 for his further development of creative evolution). It is worth noting, too, the relationship between these concepts and that of *autopoeisis*, especially as it is used in the biological and neurophenomenological work of Varela (1996) and Maturena and Varela (1980) – thanks to Daniel Rubinstein for highlighting this alignment.

8 Deleuze also uses the Whitehead concept 'prehension' here, to describe this act of individuation. 'Prehension is individual unity', he writes (Deleuze, 1993: 78). This is a complex concept in Whitehead in which a number of different acts converge – becoming subject and object, private and public – and Deleuze has something of a digression into it here. I will leave it alone, for now, for brevity's sake. However, Goffey (2008) provides a very good account, not only of Whitehead's prehension but the use to which it is put by Deleuze. Alliez (2008) also provides an account of prehension in his critical reading of Stengers (2008) that is worth a look.

9 Deleuze really uses 'prehension' at this point, but my substitution is made in light of the rest of Deleuze's discussion here, for the reasons noted in the footnote just above.

10 Brian Massumi (2011: 184), referencing Deleuze (1990), aligns Whitehead's Eternal Objects with Deleuze's singularities.

11 Note here, Félix Guattari's sci-fi love story screenplay *A Love of UIQ* (2012). A strange eruption of an infradimensional universe into ours, with squatters, political activists, schizophrenics, and children populating a world that is becoming increasingly hybrid.

References

Ahn, J. 'A Brief View of a New Work.' *Foam International Photography Magazine* 51, Issue: Seer/Believer (2018): 10–11.

Alliez, E. 'A Constructivist Flight from "A Constructivist Reading of *Process and Reality*".' *Theory, Culture and Society* 25, 4 (2008): 111–17.

Ansell-Pearson, K. *Bergson. Thinking Beyond the Human Condition*. London: Bloomsbury, 2018.

Brassett, J. 'Entropy (fashion) and emergence (fashioning).' In *Fashion & Modernity*. Edited by C. Evans and C. Breward, 197–210. Oxford: Berg, 2005.

Brassett, J. 'Poised & Complex. The Becoming Each Other of Philosophy, Design and Innovation.' In *Deleuze & Design*. Series: Deleuze Connections. Edited by B. Marenko and J. Brassett, 31–57. Edinburgh: Edinburgh University Press, 2015.

Brassett, J., and J. O'Reilly. 'Collisions, Design & The Swerve.' In *Advancements in Philosophy of Design*. Series: Design Research Foundations. Edited by P. Vermaas and S. Vial, 71–98. Berlin: Springer, 2018.

Canguilhem, G. 'The Living and Its Milieu.' Translated by J. Savage. *Grey Room* 3, Spring [1952] (2001): 6–31.

Chabot, P. *The Philosophy of Simondon. Between Technology and Individuation*. Translated by A. Krefetz and G. Kirkpatrick. London: Bloomsbury, [2003] 2013.

Combes, M. *Gilbert Simondon and the Philosophy of the Transindividual*. Translated by T. LaMare. Technologies of Lived Abstraction Series. Cambridge, MA and London: The MIT Press, [1999] 2013.

De Boever, A., Murray, A., Roffe, J., and Woodward, A. (Eds.) *Gilbert Simondon: Being and Technology*. Edinburgh: Edinburgh University Press, 2012.

Deleuze, G. *Bergsonism*. Translated by H. Tomlinson and B. Habberjam. New York: Zone Books, [1966] 1988.

Deleuze, G. *The Logic of Sense*. Translated by M. Lester and C. Stivale. Edited by C.V. Boundas. London: The Athlone Press, [1969] 1990.

Deleuze, G. *The Fold. Leibniz and the Baroque*. Translated by T. Conley. London: The Athlone Press, [1988] 1993.

Deleuze, G. *Difference and Repetition*. Translated by P. Patton. London: The Athlone Press, [1968] 1994.

Deleuze, G. 'Breaking Things Open, Breaking Words Open.' In *Negotiations*. Edited by G. Deleuze. Translated by M. Joughin, 83–93. New York: Columbia University Press, [1986] 1995.

Deleuze, G. *Pure Immanence: Essays on a Life*. Translated by A. Boyman. New York: Zone Books, [1995] 2001.

Deleuze, G. *Francis Bacon. The Logic of Sensation*. Translated by D.W. Smith. London and New York: Continuum, [1981] 2003.

Deleuze, G. 'On Gilbert Simondon.' In *Desert Islands and Other Texts 1953–1974*. Edited by D. Lapoujade. Translated by M. Taormina, 86–89. Los Angeles, CA and New York: Semiotext(e), [1966] 2004a.

Deleuze, G. *The Logic of Sense*. Translated by M. Lester with C. Stivale. London and New York: Bloomsbury, [1969] 2004b.

Deleuze, G., and Guattari, F. *Anti-Oedipus. Capitalism and Schizophrenia 1*. Translated by R. Hurley, M. Seem and H.R. Lane. London: The Athlone Press, [1972] 1984.

Deleuze, G., and Guattari, F. *A Thousand Plateaus. Capitalism and Schizophrenia 2*. Translated by B. Massumi, London: The Athlone Press, [1980] 1988.

Deleuze, G., and Guattari, F. *What is Philosophy?* Translated by H. Tomlinson and G. Burchill, London and New York: Verso, [1991] 1994.

Derrida, J. *Edmund Husserl's The Origin of Geometry: An Introduction*. Translated by J.P. Leavey Jr. Lincoln, NE and London: University of Nebraska Press, 1989.

Devas, B. #PhotoTaiChi. (no date). Accessed July 23, 2018. https://www.bonamydevas.com/PhotoTaiChi.

Devas, B. Photographic Tai-Chi. *Photomeditations Machine*. 2015. Accessed October 26, 2018. http://photomediationsmachine.net/2015/05/22/photographic-tai-chi/.

Flusser, V. *Towards a Philosophy of Photography*. Translated by A. Matthews. London: Reaktion Books, [1983] 2000.

Goffey, A. 'Abstract Experience.' *Theory, Culture and Society* 25, 4 (2008): 15–30.

Guattari, F. *A Love of UIQ*. Translated by S. Maglioni and G. Thomson. Minneapolis, MN: Univocal, 2012.

Husserl, E. 'The Origin of Geometry.' In *The Crisis of European Sciences and Transcendental Phenomenology*. Edited by E. Husserl. Translated by D. Carr, 353–78. Evanston, IL: Northwestern University Press, [1936] 1970.

Kaplan, L. 'Being Exposed. Thinking Photography and Community in Spencer Tunick's Naked World through the Lens of Jean-Luc Nancy.' In *Photography. Theoretical Snapshots*. Edited by J.J. Long, A. Noble and E. Welch, 125–45. London and New York: Routledge, 2009.

Kauffman, S.A. *Reinventing the Sacred*. New York: Basic Books, 2008.

Kauffman, S.A. *The Origins of Order: Self-organization and Selection in Evolution*. New York and Oxford: Oxford University Press, 1993.

Kramer, R. 'The Hedgehog: Of Fragments Finished and Unfinished.' *19th-Century Music* 21, 2 Franz Schubert: Bicentenary Essays (Autumn, 1997): 134–48.

Lacoue-Labarthe, P., and Nancy, J.-L. *The Literary Absolute. The Theory of Literature in German Romanticism*. Translated by P. Bernard and C. Lester. New York: State University of New York Press, [1978] 1988.

Lucretius [55BCE]. *The Nature of Things*. Translated by A.E. Stallings. London: Penguin Books, 2007.

Malabou, C. *Ontology of the Accident. An Essay on Destructive Plasticity*. Translated by C. Shread. Cambridge and Malden, MA: Polity Press, [2009] 2012.

Marx, K. 'Difference Between the Democritean and Epicurean Philosophy of Nature.' In *Collected Works: Volume One*. Edited by K. Marx and F. Engels, 1835–43. London: Lawrence & Wishart, [1841] 1975.

Massumi, B. *Semblance and Event. Activist Philosophy and the Occurrent Arts*. Cambridge, MA and London: The MIT Press, 2011.

Maturana, H., and Varela, F. *Autopoesis and Cognition: the Realization of the Living*. Boston Studies in the Philosophy of Science. Edited by R.S. Cohen and M.W. Wartofsky. Dordrecht: D. Reidel Publishing, [1972] 1980.

Nancy, J.-L. *Being Singular Plural*. Translated by R.D. Richardson and A. O'Brien. Stanford, CA: Stanford University Press, 2000.

O'Reilly, J. 'Milieu and the Creation of the Illustrator: Chris Ware and Saul Steinberg.' In *Deleuze & Design. Series: Deleuze Connections*. Edited by B. Marenko and J. Brassett, 191–218. Edinburgh: Edinburgh University Press.

Sauvagnargues, A. 'Crystals and Membranes: Individuation and Temporality.' Translated by J. Roffe. In *Gilbert Simondon: Being and Technology*. Edited by A. De Boever, A. Murray, J. Roffe, and A. Woodward, 57–70. Edinburgh: Edinburgh University Press, 2012.

Serres, M. 'The Origin of Language: Biology, Information Theory and Thermodynamics.' In *Hermes Literature, Science, Philosophy*. Edited by J.V. Harari and D.F. Bell, 71–83. London and Baltimore, MA: Johns Hopkins University Press, 1982.

Serres, M. *Genesis*. Translated by G. James and J. Nielson. Ann Arbor, MI: University of Michigan Press, [1982] 1995.

Serres, M. *The Birth of Physics*. Edited by D. Webb. Translated by J. Hawkes. Manchester: Clinamen Press, [1977] 2000.

Serres, M. *Times of Crisis. What the Financial Crisis Revealed and How to Reinvent Our Lives in the Future*. New York, London, New Delhi and Sydney: Bloomsbury, [2009] 2014.

Shaviro, S. *Without Criteria. Kant, Whitehead, Deleuze, and Aesthetics*, Technologies of Lived Abstraction Series. Cambridge, MA and London: The MIT Press, 2009.

Simondon, G. *L'individuation à la lumière des notions de forme et d'information*, Paris: Éditions Jérôme Millon, [1964/1989] 2005.

Simondon, G. *Du modes d'existence des objets techniques*. Paris: Aubier, [1958] 1989.

Simondon, G. 'The Position of the Problem of Ontogenesis.' Translated by G. Flinders. *Parrhesia* 7 (2009): 4–16.

Souriau, E. *Les différents modes d'existence*. Paris: Presses Universitaires de France, [1943] 2009.

Stengers, I. 'A Constructivist Reading of *Process and Reality*.' *Theory, Culture and Society* 25, 4 (2008): 91–110.

Stengers, I. *La vie et l'artifice: visages de l'émergence*. Cosmopolitiques vol 4. Paris: Editions La Découverte, 1997.

Stengers, I. 'Pour une mise à l'aventure de la transduction.' In *Simondon*. Edited by P. Chabot, 137–61. Paris: J. Vrin, 2002.

Stengers, I. Résister à Simondon? *multitudes* 18 (Autumn). Special Issue: Politiques de l' individuation. Penser avec Simondon. 2004. Accessed July 05, 2018. http://www.multitudes.net/Resister-a-Simondon/.

Stengers, I. *Thinking With Whitehead. A Free and Wild Creation of Concepts*. Translated by M. Chase. Boston, MA: Harvard University Press, [2002] 2011.

Varela, F. 'The Early Days of Autopoesis: Heinz and Chile.' *Systems Research* 13, 3 (1996): 407–16.

Voss, D. 'Simondon on the Notion of the Problem.' *Angelaki* 23, 2 (2018): 94–112.

Wheeler, K. ed. *German Aesthetic and Literary Criticism: The Romantic Ironists and Goethe*. Cambridge: Cambridge University Press, 1984.

Whitehead, A.N. *Adventures of Ideas*. New York: The Free Press, [1933] 1967.

Whitehead, A.N. *Modes of Thought*. New York: The Free Press, [1938] 1966.

Whitehead, A.N. *Process and Reality. An Essay in Cosmology, Corrected Edition*. Edited by D.R. Griffin and D.W. Sherburne. New York: The Free Press, [1927–8] 1978.

Whitehead, A.N. *The Concept of Nature*. Mineola, NY: Dover Publications Inc, [1920] 2004.

Williams J. 'Deleuze and Whitehead: The Concept of Reciprocal Determination.' In *Deleuze, Whitehead, Bergson*. Edited by K. Robinson, 89–105. London: Palgrave Macmillan, 2009.
Williams, J. *Encounters and Influences: The Transversal Thought of Gilles Deleuze*. Manchester: Clinamen Press, 2005.
Żylinska, J. *Nonhuman Photography*. Cambridge, MA: The MIT Press, 2017.

11 Photographic Futures

Armen Avanessian and Anke Hennig

Introduction

> The true content of a photograph is invisible, for it derives from a play, not with form, but with time.
>
> John Berger[1]

We would like to continue a conversation we began last year with Mario Garcia Torres, a conversation about the temporality of photographic images.[2]

Our idea, our attempt then was to get beyond the statement that, because they are recordings, photographic images institute a past. Of course, when a photographic image reaches us, we never fully forget that it was previously recorded by someone. Someone decided on this moment and transformed it, with the help of the camera, into a past moment.

- The camera has detached the image of the space from space.
- The camera has detached the image of the thing from the thing.
- The camera has detached the image of the moment from the moment at which the camera was present.

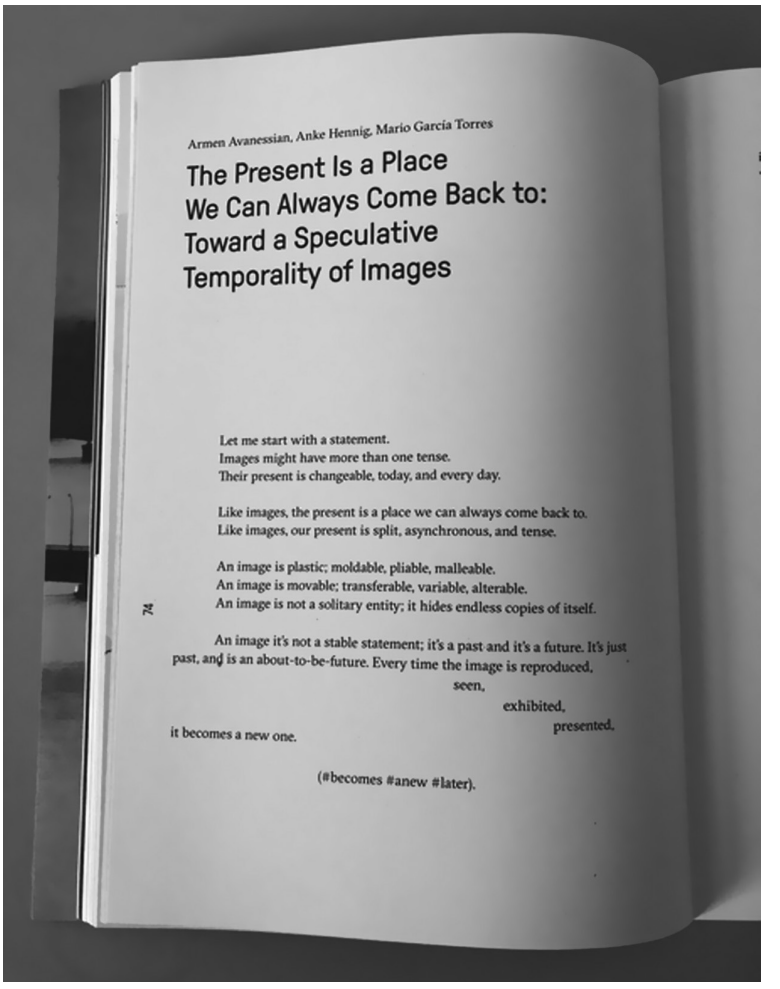
In photographic images, the past is magical because we cannot see it anywhere else. We are tempted to say and write: whenever we see a past, we have an image before our eyes.

We wanted to see what happens when we change perspectives and start with the spectators for whom and in whose constantly changing present the photographic image is embedded. This present is a place we can always come back to.

There is, however, a question we didn't touch on in our conversation last summer, and it has been haunting us ever since. What about photographic futures? Do photographic images participate in the practice of preemption we encounter everywhere in an age of digital data control? Or can we imagine in its stead a photographic contemporaneity that would take the form of a contemporaneity with the future?

Contemporaneity

> They are a grammar and, even more importantly, an ethics of seeing.
>
> Susan Sontag[3]



Armen Avanessian, Anke Hennig, Mario García Torres

The Present Is a Place
We Can Always Come Back to:
Toward a Speculative
Temporality of Images

Let me start with a statement.
Images might have more than one tense.
Their present is changeable, today, and every day.

Like images, the present is a place we can always come back to.
Like images, our present is split, asynchronous, and tense.

An image is plastic; moldable, pliable, malleable.
An image is movable; transferable, variable, alterable.
An image is not a solitary entity; it hides endless copies of itself.

74

An image it's not a stable statement; it's a past and it's a future. It's just past, and is an about-to-be-future. Every time the image is reproduced,
seen,
exhibited,
presented,
it becomes a new one.

(#becomes #anew #later).

Figure 11.1 Armen Avanessian, Anke Hennig, and Mario García Torres, 'The Present Is a Place We Can Always Come Back to: Toward a Speculative Temporality of Images', in Mario García Torres, 2017, *An Arrival Tale*, eds. Daniela Zyman and Cory Scozzari, Berlin: Sternberg Press, p. 74.

In analyzing contemporaneity with the present, the past, or the future, we refer to pictorial practices, spatial design, and architecture from a poetic perspective. Our goal is always the creation (poiesis) of a space where real shifts can operate. Our supposition concerning pictorial media, for example, is that they serve a function for visuality that resembles the function the 20th-century present-tense novel served for language: novels in the present tense endow this tense with a new quality, namely the capacity for shifting positions of the self in space and time, which the present tense does not possess in everyday usage. In Kevin Vennemann's novel *Nahe Jedenew* (Close to Jedenew), for instance, we can move between her position, a collective we position, or the position of an I in at least three different places and at three different times.

> [W]e do not breathe. We look at each other breathlessly the moment we're lying down, finally, and we know, we think: she is crossing the country lane like me earlier or like I cross the lane when it is my turn next to cross the lane, we think: she doesn't have to admit it, we think, I know it, she knows it, it doesn't make a difference, nothing makes anything anymore, we think: it makes no difference that we're lying, lying to ourselves, lying to each other downright shamelessly and regularly, making believe, we don't know what, nothing makes anything anymore. That, immediately before our eyes, our house and everything we are, is being emptied out.[4]

Now, concerning pictorial media, John Berger's reciprocity of seeing does describe the constitution of our field of vision to depend on our visibility, but it does not take into account the emancipatory perspective that is opened up by the shifting of my seeing and my visual orientation in the world.

Let's take the example of an older media topos concerning photography that describes a peculiar temporal shift, namely a shift toward a visibility of the past. Roland Barthes insisted – certainly influenced by his reflections on the way in which narratives presentify the past – that in the photographic image the mode of the past represents the only decisive moment for understanding photography. In photographs, the presence of the past is a real presence even if it is given only in the image. Outside of the image, time has changed, has gone, or simply progressed on its path. In the image, in contrast, it has remained this – arbitrary, perhaps – past. While the simple past tense allows us fictionally to shift our present to another place and another time (before or after our own), in the photographic image, we encounter a present at the site of its past without anything fictional coming into play. The rise of photography thus has subliminally and permanently changed our perception of the past. Photography has made the past *perceptible* whereas in language, the presentification of the past is an *act of imagination*. The change of the form of time has also changed the mode of the past. A past, in photography, is undoubtedly real. What arouses suspicion, however, is that it does not pass, that it remains present in the image. When the past becomes visible in images merely as the accumulation of different presents, the image of time in images seems to flatten. What exactly constitutes its pastness becomes mysterious. Such a conflict between present and past in the image makes it difficult to picture the present and the past as equally real or, vice versa, equally unreal. This conflict, you say, is a modal conflict.

We've encountered similar difficulties in the phenomenon of preemptive police work. Emblematically articulated in Philip K. Dick's 1956 sci-fi short story 'The Minority Report', it has become not only a movie by Steven Spielberg, but also a reality in police departments across the world. What we're seeing here is an ominous identification of a present future and a future present: the preemptive logic of time in its entirety refers to events that – and this is the philosophical (temporal and moral) paradox of making arrests 'in time' – will perhaps never have taken place. Preemptive events are present only as future events.

This paradox resembles the one we find in photography. Images make something visible that is present only as something past. Preemption creates events that are present only as something futural. Temporality is joined by modality, and modality features as much in photography's reality conflict as it does in the reality paradox created by preemption. Perhaps modality even must come into play if contemporaneity with the past and the future, if real contemporaneity is to be possible?

Touching Screens

One question that returns in the digital age is that of the correlation of subjects and their bodies to their sense objects: how do we, as subjects, relate to images we see and things we touch? It is very tempting to posit a mythic immediacy that has at some point been lost or been undermined by media and technology. And in that case, the only choice is to make the journey back, the same journey back to the time that is past.

Opposing this temptation, McKenzie Wark writes:

> If one took the long view, one could say that the human hand is already an interface shaped over millennia by tools. That ancient interface now touches very new ones. The interface layer mediates between users and the technical layers below. Interface connects and disconnects; telescopes, compresses, or expands layers – routing user actions through columns that burrow up and down through the stack.[5]

And in *The Stack,* Benjamin Bratton posits a similar myth for images: 'The Stack turns tech into images and images into tech. Once an image can be used to control what it represents, it too becomes technology: diagram plus computation equals interface.'[6] Recall Vilém Flusser's concept of techno-imagination, which says of all digitally generated images that they do not represent objects but processes of thinking. The digital image of an airplane, according to Flusser, is the representation not of an airplane but of an airplane being thought. And as early as 1928, Alexander Rodchenko, in his famous photo text 'Against the Synthetic Portrait, for the Snapshot', saw in the photo of an airplane the representation not of an airplane but of a stage of the technological development of the airplane – or, as Wark and Bratton would say, of the camera.

What is interesting about Bratton's view is that he valorizes the inverse movement: under the conditions of the Stack, technology becomes image. In turn the image becomes, according to Wark, the way we touch. But how exactly are techno-logical relations transformed into pictorial relations and pictorial relations transformed into even simpler haptic relations? Above all we must ask, how can we escape the temptation to see what we're thinking anyway and willingly to enjoy the media's massage Marshall McLuhan spoke of more than 50 years ago?

Thomas Hirschhorn's 2012 video *Touching Reality* is a shocking example. There we see the tips of a white woman's fingers sliding across a touch screen showing images of mutilated bodies from wars in our time. Something in us resists describing in detail what can be seen in the photos, what occasionally is zoomed into with the tender fingers of this woman before she has the pictures shrink again and swipes on.[7] The bodies in the images are dead, male, of color, torn apart to varying degrees, lying in their own blood. 'I' doesn't find it easy to manipulate the touch screen. And yet another 'I' corrects this phrase and seeks to find a description for the image in our mind that shows a man's jaw torn open. Two of the woman's fingers zoom into the face. The eye of the dark-skinned, young, dead man is still open. The two fingers zoom out again. I and I again type the words *revulsion, nausea*.

Perhaps we get a better understanding of our experience with this video if we give it a mereological interpretation (mereology being the theory, developed since the Middle Ages, of the relationships parts enter into with wholes). In viewing Hirschhorn's video,

we see on the surface the manicured hand of the white woman glide across photos of male victims of a conflict in the Middle East. Reading this image mereologically, we see the politics of violence in the age of global confrontation where, most of the time, victims in one half of the world are viewed in images in the other half of the world. On a mereological reading, the hand is a part of the body; as an interface, the hand is an extension of the body and relates, as a part, to a whole. The dead male bodies belong to the experience this woman has of her own body. This sexual subtext, too, contributes to the unbearability of the video.

Enough seen. Back to the texts. Just as the interface forms the hand, it probably also forms the eye and the extension of its reach. The mereological relationships between the two body parts hand and eye, the interface, and the body thus reveal themselves to be very complex. What is missing from McKenzie Wark's description, however, is the hand of an other and the gaze of an other. *Touching Reality* alerts us to the illusionary nature of the situation Wark outlines, in which singular subjects are said to relate to objects such that this relation affects only their own organization. Yet a long tradition of cultural criticism – from Marx's assertion that in things, we encounter reified social relationships, via Freud's description of the fetish to Lacan's analyses of our objects of desire – teaches us that we encounter objects at first as small others (the ominous *objet petit a*). Only with difficulty do we then succeed to socialize via alienation – after which we no longer recognize ourselves in the other – and reification – at the end of which, even in objects, we are aware of the other only as the appeal of the interface. Because they are rooted in the other, alienation and reification are more than just objects of a cultural criticism of the present. They are also processes of a politics, a politics in favor of alienation of the kind demanded by the xenofeminist collective. A politics of images would first have to become a politics in favor of reification if it is to go beyond the present. How else are we to imagine the future of digital images if we don't want to end up propagating a post-human technophilia?

Our Others

> Such is the straying and secret I am of the photo. Thus it does not say, 'I is an other'; rather, it proffers the wholly other 'I am' whose text consists in 'we others'
>
> Jean-Luc Nancy[8]

We are interested in how temporal and subjective asynchronies enter into relationships.

A photograph says *I am* in a mysterious way. There is an I that we usually regard as the first I of a photograph. A photographer presses the shutter release and leaves a photographic trace. He is invisible in the image. Someone or something other is in the image. The picture may have been developed much later, may have been seen much later. But at some earlier point, the shutter release was pressed, and the machine can maintain this contact in a state of latency a long way into the future.

There is a second I in the image, and although not all photos are portraits – many show other things instead – there is good reason for conceiving of the subjectivity of photography by starting with the portrait. Things in photos have a face. But the photo does not say: *I am the other*. Nor does it say: *I am what is seen*. And it does not say: *I am the face of things*, either. It really does not say anything. It is a silent call to recognize oneself in the other, to mirror oneself in what is seen, to find oneself among the things. If photos remind us of anything, it is this: this alienation of the self in the

other and in things not only represents an alienation rightly criticized as the result of exploitation; it also contains a utopian moment.

What does this utopia consist in? A subject that sees its humanity only in itself is condemned to narcissist navel-gazing and to dogmatically anthropomorphizing the world. Its knowledge will never go beyond the correlationism criticized by the speculative materialist, Quentin Meillassoux. According to correlationist theories, we only know what falls within our faculties, i.e. ourselves. The promise of an othering that is structurally embedded in photography, by contrast, goes beyond the human faculties. Othering is a speculation that can, unfortunately, be exploited. Alienation is an exploited othering, but like every utopia, it opens up a horizon that goes beyond the context of exploitation from which it arises.

A third I looks at the photo or swipes its fingers across the screen. In the past, this third I was at a great temporal remove from the two others. It was separated from them at least by the time it took to develop the photo, often by years or decades. What it saw was something it was holding in its hands, usually a rather small piece of (photographic) paper. This third I did not have a machine when it was looking at a photo. Digital photography has radically changed that. We know that in the digital age, the documentary ontology of the photograph has yielded to an ontology of experience or existential phenomenology of seeing that has left the evidence of the photographic trace, founded on the chemistry of photosensitive metals, behind it. Like the impression of light, transferred chemically from film to paper, the evidence of the photographed has disappeared as well. This also makes the foundation of photography on the first I – the I of the photographer – a thing of the past.

Since the advent of digital photography, the third I has been tied to a machine as much as the two that precede it. It swipes through images on a tablet or smartphone. It holds before its eyes the same kind of screen the photographer used to frame the image. In principle, it can perform the same operations of color filtering, magnification, and reduction (albeit in a less professional way and more dependent on pre-programmed formats). From now on, it is tied into the circulation of what Hito Steyerl calls 'poor images' as tightly as never before and comes into immediate contact with an acceleration of the fragile ethics of the image. The digital image does not say: *I am*. Nor does it content itself with the silent call for me to estrange myself, to open up to the other and to a change. The digital image circulates by being shared. The other is only a tap away. The utopia of 'us others' has moved much closer in time.

A Photo of the Future

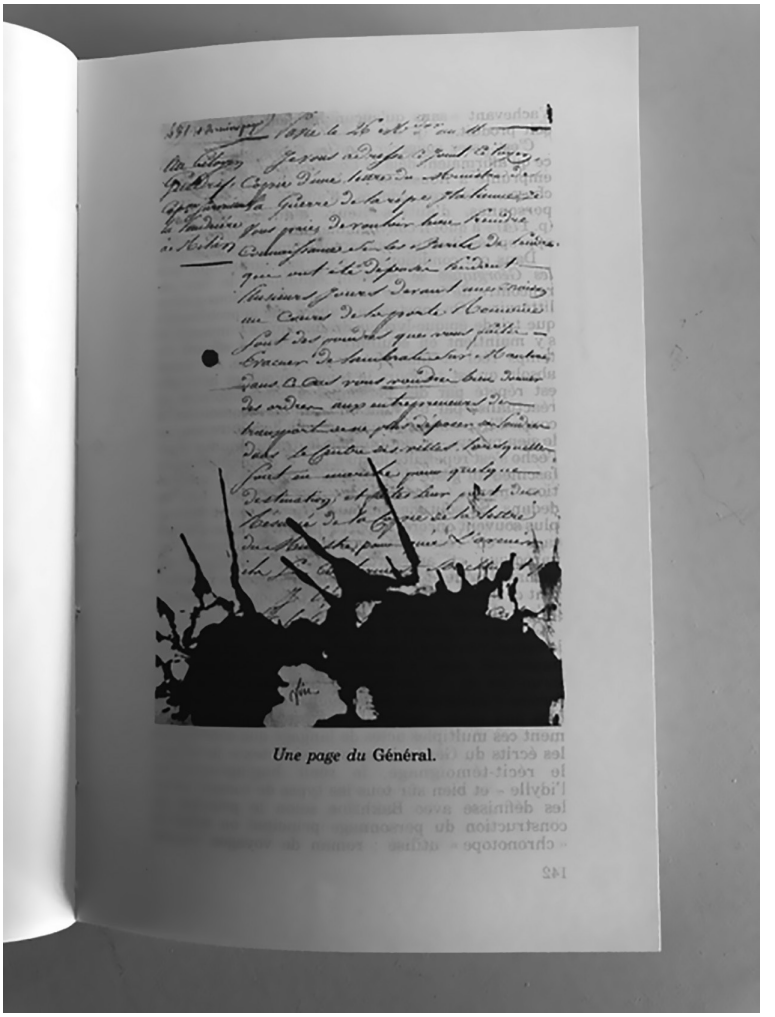
> The image of man is always intrinsically chronotopic.
>
> Mikhail Bakhtin[9]

A chronological image of time is the ideal image of a contemporaneity that implies all three time aspects and relates them to each other in a seamless form. In a chronological time image, *the present was futural, is present, and will be past*. This image of time privileges a *present that is present*, that in the future will have been, and that has yet to arrive in the past. For all its focus on the present, though, chronology cannot operate without the other two aspects. In a chronological time image, past and future are more complex than the present, in which the temporal noun, adjective, and verb

simply seem identically present, in keeping with an implicit and apparently tautological motto: *the present is present*.

There is a widespread tendency in the philosophy of language and in literary theory to classify the *present tense* not as a tense but as a preliminary stage, a pre-tense. The reason given is that unlike past and future tense, the present 'tense' is incapable of operating a shifting of events and/or speakers.[10]

In photography, the past is even more than complex: it is paradoxical. This paradoxical past allows us to hope that preemption, which parasitically inhabits any chronological image of time, will be worn down by the temporal complexity of photography's future. The idea of fixing the future, however, is uncannily similar to the idea of taking a photo of the future. While something like a preemptive image seemed impossible in analog photography, the entanglement of photography in digital technology is so



Une page du **Général.**

Figure 11.2 Lucien Dällenbach, 1988, *Claude Simon*, Paris: Éditions du Seuil, p. 141.

opaque as to give new life to the nightmare of a photograph of the future – at least as long as we hold on to a chronological time image. Fortunately, though, photographs time and again raise doubts about a chronological image of time because their present, already, is complex and cannot simply be present.

We were hesitating when we said of the camera that it detached the image of a moment from the moment of its presence: whose present is more essential in photography, the present of the machine or the present of the others, the photographer, the model, and the viewer of the photograph? With regard to the present of the photograph, this hesitation cannot, fortunately, be resolved. The apparatus and the others are not present in the same way, and their coming together is much more mysterious than a purely machinic pictoriality, in which machines record images that can be read only by machines. This coincidence is also much more mysterious than a purely subjective moment of shared visuality, in which ego and alter ego behold each other. The mechanical eye of the camera opens up a gaze never seen before.

Reflections on photography have often stressed how much it estranges what is familiar, on the one hand, and to what extent it subjects seeing to an unyielding objectivism on the other. It does so by excluding from the image the one whose gaze it records. The photographer is present in the image only as absent – when she took the picture, she was present only as the one whose gaze was being cut off from what was seen by a machine. The role photography plays in processes of social alienation and technocultural reification give rise to the idea that photographic estrangement might serve as a means for analyzing alienation and that the techno-imagination propagated by Vilém Flusser might show the way to integrating the apparatus into our thinking of photography. Photography has strengthened our expectation that seeing procures knowledge. The camera is a machine with which it is possible to think visually. Digital photography has brushed aside any lingering doubt about the cognitive character of photography. At the same time, however, photography also becomes the object of a critique of the algorithmic age, of post-humanism, and the Anthropocene – at least for as long as no ophthalmological camera with a social conscience of global extension has been engineered. The objective as well as the subjective view of photography, however, agree that in photography, subjectivity and objectivity constantly clash and part ways again.

The camera constantly detaches the image of the future from the future.

Originally published as the Blog series ‘Still Searching’, https://www.fotomuseum.ch/en/explore/still-searching/series/154689_photographic_futures.

Republished with kind permission of the Fotomuseum Winterthur.

Notes

1 John Berger, 2013, ‘Understanding a Photograph’, *Understanding a Photograph*, ed. Geoff Dyer, London: Penguin, p. 19.
2 Armen Avanessian, Anke Hennig, and Mario García Torres, 2017, ‘The Present Is a Place We Can Always Come Back To: Toward a Speculative Temporality of Images’, *Mario García Torres, An Arrival Tale*, eds. Daniela Zyman and Cory Scozzari, Berlin: Sternberg Press, pp. 74–81.
3 Susan Sontag, 1990, *On Photography*, New York: Picador, p. 3.
4 Kevin Vennemann, 2005, *Nahe Jedenew*, Frankfurt: Suhrkamp, p. 85. Unfortunately we could not consult the original translation for this blog entry.
5 McKenzie Wark, 2016, ‘The Stack to Come. On Benjamin Bratton’s The Stack’, December 28.

6 Benjamin Bratton, 2016, *The Stack: On Software and Sovereignty*, Cambridge, MA: MIT Press, p. 220.
7 We thank Andrew Fisher for countless eye-opening conversations on contemporary photography and for pointing us to this video in particular.
8 Jean-Luc Nancy, 2005, 'Nous Autres', *The Ground of the Image*, trans. Jeff Fort, New York: Fordham University Press, p. 106.
9 Mikhail Bakhtin, 1985, 'Forms of Time and of the Chronotope in the Novel', *The Dialogic Imagination*, trans. Caryl Emerson and Michael Holquist, Austin: University of Texas Press, p. 85.
10 For a revision of this conception with regard to the present-tense novel as it emerged in the 20th-century and to an 'asynchronous present tense' fashioned by the present-tense novel, see Armen Avanessian and Anke Hennig, 2015, *Present Tense: A Poetics*, trans. Nils F. Schott, London: Bloomsbury. In the context of the questions raised by photography, the novels of Claude Simon in particular deserve a closer look.

Part III

The Materialism of Networked Intelligence

12 Empathy and Gesture

Aby Warburg in *La cappella Sassetti*

Andrew Benjamin

0.

The relevance of Aby Warburg for any concern with the image that is identified with the contemporary is clear. Warburg's approach complicates conventional understandings of how the work of historical time is understood. Consequently, the limitations of Warburg are of central importance for understanding art history at the present. The importance of any image for the contemporary does not have to do with the contemporaneity of the image. Rather, what matters is the conception of historical time within which images are thought. And then, reciprocally, the effect of images on how that thinking then takes place. The contemporary is as much a philosophical or theoretical concern as it is one in which works bear the date of their own creation. Images do not just occur. Indeed, art's history is the history of images that are themselves already sites of meaning. And yet, they are not just sites of meaning. They are already located in the passage of time which, no matter how that passage is itself understood, it is equally a site of meaning(s). Time, once freed from that form of naturalization that equates time with chronology, is a topos that allows for original forms of complexity which can sustain conflicts concerning how historical time is itself to be understood.[1] The more general aim of this paper however is to continue to work through the way the components of the formulation *art's history* – a formulation in which specific practices and sets of images are interarticulated with a thinking of time – are to be understood philosophically. Within that undertaking it is equally true that the question of the nature of the work of art, i.e. the artwork's work – is implicated. As a result, the questions that arise from the project of opening up *art's history* refuse any easy separation of a philosophy of art and a philosophy of history. While the questions outlined above have a form of generality they need to be made specific. The context here is Aby Warburg's engagement with *La cappella Sassetti* in the *Basilica di Santa Trinità* in Florence.[2] The significance of this work is that not only is it one of the most sustained projects by Warburg, but that it provides the setting in which that project, given its overall importance, can be evaluated.

Ghirlandaio's creation therefore becomes the setting. Warburg's point of departure was clear. If there were to be a 'formal consideration of the image' that this had to confer on it the status of 'a biologically necessary product'; one which could be situated between 'religion and art practice'.[3] What comes with this point of departure is both a repositioning of gesture and an introduction of bodily movement. The challenge is how their connection is understood.

Gesture is the point at which the body and the conditions for meaning intersect.[4] And note the claim pertains, at this stage at least, to the conditions for meaning. What is left open as a result is the question as to whether those conditions themselves have a meaning or a form of expression. If the answer were in the negative, that is, were the conditions for meaning or expression to be themselves expressionless, then it would be possible to engage with the presence of what has already been thought as the gesture *as such*. Equally, given such a setting, it would then be possible to argue that gesture was a form of stylized movement the meaning of which lay purely and completely in the movement and not in the stylization; (the latter would then be an informed process of effectuation, informing the 'stylization' which would then become form, form as always already both informed and materially present). However, emphasizing a possible identification of movement with the gesture, and therefore the restriction or reduction of gesture solely to movement and then the further restriction of movement to itself, would work to present a conception of gesture as complete, such that the gesture in existing as itself is there as a self-completing finality. Such a designation is, of course, inextricably bound up with the possibility of gesture *as such*, which would be gesture, to deploy Agamben's formulation as a form of pure 'mediality'. Gesture for Agamben 'is the exhibition of a mediality, it makes visible a means *as such*' (*è l'esibizione di una medialità, il render visibile un mezzo* ***come tale***. Emphasis added.)[5] It is essential to be clear here. There are two possibilities that circumscribe this project. The first is that there is just the movement of the body. Points of comparison between and possible juxtaposition of figures would then be located in the movement. The dramatic entry of the nymph in Ghirlandaio's fresco in the Tornabuoni Chapel is a clear example, for Warburg, of such movement. Centrality, therefore, would have been given to the presence of movement *as such*.

The other possibility, and the one that will come to form the basis of the critical engagement with Warburg that will be presented here, the presentation of form that is not already informed. In sum, there cannot be movement *as such*. The fact that Warburg believed it to be possible is clear from the claim that:

> The introduction of forwardly moving figures forces the viewer to exchange comparative viewing for anthropomorphistic viewing. The question is no longer: 'What does this expression mean?', but rather 'What is its direction?'[6]

The position is straightforward. Movement has displaced meaning. The argument in response has to be therefore that the body cannot be reduced either to movement or the presentation of affect. There could not be an account of an interconnection between the image and the construction of subjectivity were either that reduction or restriction to obtain. The body is always more and thus movement – the movement of either singular or multiple bodies – is always in excess of a possible reduction to any one singular determination. In broad terms the argument has to be that despite the significance of Warburg's insistence on the need to identify historical time with simple chromoly, which has to be understood as the naturalization of historical by his emphasis on the 'afterlife', that life is linked to the afterlife of modalities of movement. Movement becomes central. Displaced at the same time therefore is any possibility of the reworking of the given such that it comes to acquire meanings and forms of understanding that were neither noticed or even possible at the time of the object's actual creation. Even though it is true that objects are located in fields of activity,

the equation of figures with movement, in which the figure becomes its movement, entails that what is displaced, at the same time, is the possibility that meaning can itself stem from the disruption of enforced and enforcing continuities.

1.

It is essential to begin, however, with the simple evocation of gesture. What is raised by the gesture and thus what is already there in the possibility of there being the gesture *as such*, is the presence of a form of containment. Maintaining the *as such* is to contain it; e.g. to present it as simple movement as though the movement of the body functioned as an end in itself. The presentation of movement, even emotion's presentation, would be the end in question. In his text 'Art of Portraiture and the Florentine Bourgeoisie', Warburg, in writing about the relationship between differing modes of worldly engagement, be they forms of paganism or Christianity, both of which are there in their proliferation in terms of how they appear in both artworks and historical documents of the period, makes the suggestion that while these modes sustain differing and conflicting 'psychic impulses', they are, nonetheless, 'reconcilable'. And it should be noted that it is the impulses, the presence of affect that is his exclusive concern. Recalled by this formulation is the description of the grisailles in the Sassetti Chapel as amongst other things the 'symbolism of energy'.[7] Warburg then goes on to note that this occurs through the production of what he calls '*künstlerischen Ausgleichserzeugnissen*', namely 'outputs' (or 'products') that evince an 'artistic balance'. Balance (*Ausgleich*) would be all. (However, balance is more than just a desired end. As will be suggested, it has a necessary presence in the project in which balance and empathy are codependent.) Gesture is integral to balance and thus to reconciliation precisely because within the domain of artworks it is either the body or the body's movement, or that which is positioned in relation to bodies, that stage this balance.[8] With, of course, the essential addition that the gesture is the single movement and moment. Bodily movement as a pure singularity. What obtains therefore is, once again, the gesture *as such*.

Accepting that the place in which the argument is worked out is a succession of images, and thus what is at stake is an engagement with the image (and where the document would be interpreted as staging the concerns of the image), the position to be advanced in what follows is that what are presented more generally in Warburg's work as '*plastische Ausgleichformel*' (plastic formulae of balance/reconciliation) are not only inseparable from the work of gesture thus construed, they open up the complex ways in which gesture is, in fact, present.[9] The claim is that gesture understood as uninformed – the gesture *as such* – and thus contemporaneous with it movement as pure and thus as a singular presentation is only possible if the *as such* and purity are in fact produced. If it can be argued that purity and the *as such*, which were taken to be prior and therefore to have priority, are in fact produced then the insistence on movement occurs to the extent that there is a related withdrawal of concern from that which moves. (Withdrawn are the complex configurations of meaning.) The production of pure movement means that the pure is always impure. Gesture is therefore, ab initio, always already integrated into the staging of 'balance' and thus 'balance' as a question – a question rather than a putatively uninformed (perhaps 'uncoded') given – would then have to be an effect and as result is always already informed. This opens the space for another possibility, thus another way of understanding movement's presentation.

Allowing for impurity is the *counter-measure*. In other words, were the identification of gesture with a staging of balance to become impossible for the precise reason that balance is itself an impossible possibility, thus possible only because it is an after-effect (and thus not balance at all) this would lead, inevitably, to a transformation in how gesture is understood. The project of the *counter-measure* is not to produce or demonstrate that which is (or becomes) unbalanced, rather it is to show that in its production, rather than there being balance, compromise, or equanimity there is, in fact, the disguised presence of a victory. The language of victors repositions balance since it recalls Benjamin's insight that 'empathy with the victors … comes to benefit the current rulers every time.[10] Balance therefore, both its assumed as well as its demonstrated presence, would in such contexts be premised on the elimination of the effects of an original disequilibrium of power. The projected rapprochement between balance and empathy – clear in Warburg – is itself of great significance. Indeed, what will be developed henceforth as the doubling of gesture will trouble, thus in the end counter, firstly gesture's link to balance, if this were taken to be mere balance in which there was an apparently simple play of forces – a play that for Warburg comes from Nietzsche's understanding of the relationship between the Apollonian and the Dionysian – and thus if the force of balance's own constituent elements were themselves assumed not to have already been marked in advance. Secondly, as indicated, what is called into question as a result is the very possibility of gesture *as such*. How then to develop this opening weave? Answering this question will allow for what has already been alluded to as gesture's doubled presence to emerge with greater clarity.

2.

While it clear that Warburg is content to move between documents, artworks traditionally conceived, coins, magazine illustrations and what might otherwise be viewed as ephemera, e.g. matchbox covers, it is equally as true that what is a work is a specific relation between subject and object. Indeed, it can be argued that the insistence on balance is not just to locate at the center of his project a subject/object relation in which there is the subject's relation to an object whose presentation involves balance, more significantly what is essential is that it is a relation within an already given determination. Both subject and object are configured in advance in terms of balance. Balanced in themselves, they balance each other. The reciprocity here is fundamental. While there are a number of ways that the relation between subject and object can be understood, in this context it will be taken up in terms of 'empathy' and, given their clear impact on Warburg's thought, the presence of empathy within the writings of both Friedrich Theodor Vischer and Robert Vischer set the measure. [11]

More generally, of course, balance is a predominating theme for Warburg as it provides artworks and texts with a specific form of internal relationality. Indeed, it allows for that relation. Hence, the crucial letter from Ficino to Giovanni Rucellai that is fundamental to Warburg's interpretation of the Sassetti Chapel is presented in terms of what Warburg describes as Ficino's 'influential philosophy of balance' (*einflußreiche Ausgleichsphilosophie*).[12] Affinities proliferate. In the text on Manet, he claims of the Renaissance, though in a way that informs the interpretation of *Dejeuner sur l'herbe* that there is the presence of 'dynamic underlying laws' that are inextricably bound up with what is described as 'the drive towards beauty that belongs to the artistic culture of the Renaissance' which 'looks for harmony in a given reality'.[13] What is significant

here is not the reference to beauty but the location of beauty within a drive that is itself to be understood as a play of forces in balance. The interplay of beauty and balance for Warburg is naturalized in advance. To which it might be added that the response – the *counter-measure* – would involve the denaturing of nature, thus the analysis of beauty's remainder in terms of the presence of 'beautiful semblance' would, as a result, be another opening toward Walter Benjamin.[14]

While it would be essential to return the letter from Ficino to Rucellai in terms more of a sustained engagement with the larger context of Warburg's analysis of Fortune as present in the context of the analysis of the Sassetti Chapel, for the purposes of this chapter it is essential to stay with the Vischers. While there are noticeable differences between them, there endures an important affinity. At the outset that affinity is provided by the centrality of 'empathy' once it is understood that empathy names of the relation between subject and object and thus both subject and object are constructed such that empathy then functions as a specific mode of relationality. The reciprocity here is both structural and necessary. Its identity sustaining effects are fundamental.[15]

Given that what is at work within empathy is the subject /object relation, within that relation, perhaps facilitating the movement that sustains the presence of relationality, is the affective. Here affect is the work of a form of pleasure. Pleasure is identified by Robert Vischer in the following terms:

> We have seen how the perception of a pleasing form evokes a pleasurable sensation and how such an image symbolically relates to the idea of our own bodies – or conversely, how the imagination seeks to experience itself through the image. We thus have the wonderful ability to project and incorporate our own physical form into an objective form in much the same way as wild fowlers gain access to their quarry by concealing themselves in a blind. What can that form be other than the form of content identical with it? It is therefore our own personality that we project into it.[16]

In Friedrich Vischer's formulation of 'empathy', and thus in his account of the relation between subject and object, it is possible to locate the important conditions of possibility underpinning it. Recourse is made to the body's physiological place within this setting and invoked in the process is both the 'mind' and the 'nerves'. The significant point is however that the body does not feel in isolation. It feels before an object. Nervous energy involves a movement toward. In feeling, with feeling, the movement toward the object is occasioned. The object has to be considered since occasioning that movement is the object as that which both elicits and sustains feelings. While it is a subject/object relation, at work here are two objects and thus their accord. Staged here, as a result, is the interplay of identity and identification. Empathy, the argument would then run, describes the movement of one toward the other. It is a relation. Hence, the question to be addressed concerns what type of relation it is. In the formulation of Robert Vischer, human observation of objects is delineated by what he describes as 'the wonderful ability to project and incorporate our own physical form into an objective form'.[17] (Again, there is identity and identification.) While there is more at work in this formulation of relationality than the merely physiological, insofar as even though feeling comes to play a central role, it does so in relation to an object, an important question remains: i.e. What characterization best captures the nature of these objects? In other words, what needs to be discerned is the nature of the objects

with which empathy is in fact a possibility. Empathy cannot be just posited. It has to be grounded in the conception of subject and object that that enables and sustains an empathetic relation in the first place. In sum, what has to be identified is what allows for that accord that becomes the subject/object relation? These questions can continue to be refined. However, the basis of any answer is already there in a formulation that Friedrich Vischer provides in his account of empathy. Note the following description of the 'soul' and its relation to the object:

> If the soul feels something thereby, namely, desire, aesthetic desire, it can only be because the soul itself, with its nerves and entire body, is a unity in multiplicity and it rediscovers itself where it finds the same (*eine Einheit in Vielheot ist und sich da wiederfindet, wo sie solche findet*). [18]

To which it should be added that, again in Vischer's formulation, the subject, the human being is 'a multiplicity ordered into unity'. What is discovered is that the object is equally 'a multiplicity ordered into unity'. The significant point here is that the subject/object relation is neither abstract nor undetermined. Both subject and object are there, present, as multiplicities 'ordered into unity'. While not identical they are nonetheless the same. Friedrich Vischer argues that what occurs is the projection of life into a lifeless form. Yet the project presupposes a sameness that is the basis for such a projection. What is significant therefore is the presence of a reciprocity that allows for the relation between these two objects, i.e. the viewer and the viewed. (To which it might be added, albeit parenthetically, thus why the relations between victors and victims cannot be thought in empathetic terms.)

The subject/object relation sketched above provides a productive way into elements of Warburg's own way of understanding the sense of relationality that informs his work. Balance, both as a formula, and as a desired end, presupposes that the subject and the object within the subject/object relation can be 'ordered into unity'. While the expressive may reveal a play of forces that play is quelled within the appearance. While the question that obtains concerns the specific sense of unity, and thus its details, that would be at work in the constitution of the particularity of any one locus of interpretation, and thus no matter how complex that locus may become, it remains uncontestable that what underpins claims about balance and its determining hold on both subject and object is the reclaiming of unity. Polarities devolve into unity. Not a unity in which there is an identity. Rather, it is the unity that is sustained by, and as, balance. If the Sassetti Chapel is taken as the point of orientation then there are two specific modes of viewing, which while far from exhaustive provide a way into two modalities of the subject/object relation within the Chapel and which will have an important impact on the place and role of gesture. In the first instance there is Sassetti's own presence within the Chapel. He appears kneeling to the right of painting. He overlooks the presence of the Ghirlandaio's the *Adoration of the Shepherds*.

See Plate 16.

Then, in the second, there is the viewing of that setting. Inscribed into the first viewing is the necessity that it too becomes an object; i.e. the viewer is viewed. The overall point is that the interpretation of the Sassetti Chapel is advanced by Warburg in terms that are sustained by the conception of the subject/object relation that emerges from

the structure of empathy outlined by the Vischers.[19] Moreover, it is this conception that is also there in the way the position of Sassetti is understood by Warburg in relation to *Adoration of the Shepherds*. Given the enormity of the detail of the Chapel as a whole only those aspects noted above will be discussed.

The question of what does Sassetti see cannot be taken as straightforward. It divides. The division presents a range of interpretive difficulties. There is the question of what Warburg takes him to be seeing and thus what type of subject/object relation figures within it. Then there is the question that while having its prompt in Warburg will in the end move beyond the circumscribing presence of balance. It is the question of what else might Sassetti have seen. In other words, what did he *not* see? The latter is both a possible and an important question. It escapes Warburg and yet it is there in the work. To see what Sassetti did not see is to allow for another possible form of the after-life and thus another sense of the *Nachleben der Antike*. It would be a concern in which centrality would be given to a different, yet nonetheless insistent question; namely, what does the after-life stage *now*? This is the after-life defined by the presence and thus the exerted pressure of the now. Now, what can be seen is both what Sassetti does not see, and what Warburg did not see him not seeing. The significance of what is there as the yet-to-be-seen is that not only does it allow for another sense of the after-life more significantly it opens a conception of the after-life that would be premised on the interplay of the not-seen, seeing, and the yet-to-be-seen. They would insist within the now, where the latter, the now, is understood as the interruption of what is given within a coming-to-see. Within that now, it would no longer be possible, firstly, for balance to define both the subject and the object, or secondly, to maintain empathy as that which allows for movement between the subject and the object. Once this position can be sustained what then emerges is the *counter-measure* to empathy, namely the emergent centrality of interruption and thus the presence of an image whose affinity would be to the Benjaminian conception of the 'dialectical image'.

Agamben argues in *Nymphs* that 'the dialectical image' occurs 'where meaning is suspended'.[20] Thus he goes on to write that the image in question involves 'an unresolved oscillation between estrangement and a new event of meaning'. It becomes, therefore, what he further describes as a 'semantic void' While there is some justification in Agamben's use of Enzo Melandri's formulation that the dialectical image is 'bipolar and tensive', that irreconcilable state, a state which is held in place because of an insistent irreconcilability and thus, equally, dependent on a pervasive middle is only possible precisely because of meaning. While Adorno – cited by Agamben to this end – may have viewed the dialectical image as 'the moment of indifference between death and meaning' it is unclear that what is then involved is without meaning or even the suspension of meaning. Evidence for this interpretation is clear in Benjamin's own writings.

Warburg was not alone in his concern with body. Benjamin also acknowledged the significance of bodily movement. He writes that when Eduard Fuchs spoke of Daumier, 'all his energies came to life'. Writing of those works and the response to them Benjamin adds that 'the slightest impulse became significant'[21] The formulation needs to be noted. Within it movement and meaning are not separated. If there is the beginning of a riposte to Warburg, and it might be added then it can be located in Benjamin's holding to the imbricated presence of meaning and bodily movement. Hence, the important point here is that energy, life, and impulses cannot be separated from a concern with significance and thus with meaning. Movement is linked to

meaning. In addition, the relationship between energy and meaning has to be thought in relation to the position announced earlier in the essay on Fuchs where Benjamin argues that 'historical materialism', which needs to be understood in this context as naming an informed sense of recognition or knowledge, disrupts 'the powerful forces' (*die gewaltigen Kräfte*) of historicism in the name of an 'experience' (*Erfahrung*) which is 'directed towards a consciousness of the present that explodes the continuum of history'.[22] That position is a *counter-measure*. The position in which experience and knowledge are given priority over the bodily, though it is a prioritization that allows for the body's inscription within it, also occurs in *On the Concept of History*. In that context Benjamin's argument is that what is involved is a mode of perception that is precisely not merely physiological. On the contrary, and once again, 'the image is perceived by historical materialism'.[23] This means that it is an informed perception. Moreover, that accounts for why in the same section of text he will also claim that the 'past can be seized only as an image that flashes up at the moment of its recognizability (*Erkennbarkeit*), and is never seen again'.[24] It is not just that what is identified here as 'recognizability' (*Erkennbarkeit*) is as mode of knowing, it is also a mode that can then be linked to judgment. Recognition is not empathy. Moreover, recognition as a form of knowing is informed from the start. The argument here would be that recognition, precisely because it is informed, is already a form of judgment. Locating the limits of Agamben's interpretation and in so doing to insist on the move to judgment – even accepting that judgment is not Benjamin's term – opens up the interpretive questions concerning what Sassetti sees and, of course what he does not.

3.

What is Sassetti taken to be seeing? A question that cannot, of course, be differentiated, in the context of Warburg's analysis, from the biographical question: Who is Sassetti taken to be? Integral to the answer to both are forms of division. Sassetti is positioned between worlds. One of the most telling is the description of him as a man who was prepared to engage in what is described by Warburg as a struggle with the presence of pagan gods. The famous description of Sassetti by Warburg at the end of his study provides a more than adequate point of departure:

> In all good faith, Francesco Sassetti could thus display his Christian piety amid the signs and potents of the Roman world; not because he was at all capable of kneeling in guileless prayer, like one of the shepherds, oblivious of the alien stone work all around, but because he believed that he has laid the unquiet spirits of antiquity to rest by building them into the solid conceptual architecture of medieval Christianity. The apparently bizarre incompatibilities between the shepherds' Flemish garb and the panoply of the Roman general, between God and Fortune, between David with his sling, and the centaur, between *mitia fata mihi* and '*à mon pouvoir*' between the earth of the Saint and the death of the Meleager, may therefore be viewed as a whole. This was the organic polarity that existed within the capacious mind of the cultivated early Renaissance man who, in an age of transformed self-awareness, strove for a positive balance of his own.[25]

In this passage Warburg is referring to the 'incompatibilities' (between forms of presentation. In the case of the opposition, thus apparent incompatibility, between

mitia fata mihi as marking a form of subjection to fate or *fortuna*, and '*à mon pouvoir*' as designating the possibility, and power, to oppose both, analyzed in the text in connection to a letter from Ficino to Rucellai, in terms of Fortune's relation to individual power. The careful analysis of these polarities shows the distancing or the space that is created. Within them Warburg locates Sassetti's striving for 'balance'. The striving, in becoming an object, becomes that with which the viewer's own striving would find an accord. This is what Kesner describes as a 'dialectics or oscillation between affect and reason'.[26] And, moreover, this is what the demands of empathy would themselves have demanded. Indeed, this is the point already noted pertaining to the question of what is at stake in Sassetti as a viewer. Given that he is not merely 'kneeling in guileless prayer' what informs the form taken by his being at prayer and thus in what informs the constancy of his oversight? If kneeling can be understood as a gesture, then the question at hand concerns what is presupposed within this gesture as the presence of balance? What is, and what is there, in this gesture? In responding to these questions the argument is going to be that while there is an opposition, or a polarity that may have been presented as reconciled, even if the locus of that reconciliation is what Warburg describes as a 'bivalent dynamics', it remains the case that the polarity – its having both emerged and for it to endure – is itself the sign of a form of victory, a victory which persists precisely because it is not recognized as a victory. That non-recognition – as it pertains to both Sassetti as a viewer and Warburg as a viewer of Sassetti viewing – results, to return the position noted above, in Warburg's case, from having privileged a concern with movement over a concern with meaning. Noticing that specific delimitation is to allow for another sense of life; one no longer delimited by physiology and movement. Moreover, once the presence of the victorious is inscribed with the presence of ruins, then what is overlooked is the precise force that ruins, and in particular Ghirlandaio's presentation of ruins, bring into play.

See Plate 17.

What is he taken to be seeing? Integral to the process is the appearance of antique gestures marking a complex relation of movement and stalling between the Middle Ages and the High Renaissance. Antique gestures are recalled. In being recalled they make possible the bodies of Renaissance figures. As Warburg notes Ghirlandaio had a sketchbook that provided him with the *pathosformel* that enables his then contemporary forms of motion to occur. Occurring within them, occurring as what they are is the antique. They were informed by the drawings within that sketchbook. As the detail of this position continues to be worked out it accounts for the presence of form when form is understood as presentation. In other words, an account can be given of the form of form. And yet, the possibility of informed form still endures. Warburg keeps insisting that what is at work here is an 'idealised antique rendering of motion' (*idealisch-antiker Beweglichkeit*). The description therefore is of form's form. A question still remains: What is this motion? Again: Is motion just motion? Note the way that Warburg addresses what is being asked within these questions:

> We now understand the symptomatic significance of the triumphal arch in the Adoration, through which the Kings lively, antique cavalcade passes (with its purely artistic delight in mobile form this serves as a Renaissance counterweight to the medieval concern – that of illustrating a religious truth *pro voto*, to fulfil

> a vow – which here summon revived antiquity into the presence of the new born king to bear witness to its own demise. [27]

Here the play of forces is taken to have been reconciled. Rather than simply remaining with the balancing effect of the 'counterweight', or modelling as a simple transference of form, which is not to deny that such response to these images is always possible, what if other questions were asked? What if another approach to the triumphal arch were possible? Warburg address the triumphal arch in another context. There he wrote the following:

> Thanks to the marvels of the human eye the same fluctuation of the emotions has stayed alive in Italy for later generations, outlasting the centuries, preserved in the rigid stone sculpture of antiquity. In works of architecture (for example, *the triumphal arch*, the theatre) or artistic representations (from the sarcophagus to coins) the pictorial language of gesture, frequently reinforced in verbal inscriptions by the language of the word that addresses the ear, forces, by means of such memory function, and through the ineradicable force of its expressive character, a repetition of the full range of human emotion in its tragic polarity, from passive suffering to *active victoriousness*. (Emphasis added.)[28]

While this passage, taken from the *Einleitung* to the *Mnemosyne Atlas*, names the triumphal arch while describing triumph and being victorious as human emotions, what is not taken up – even though the triumph is acknowledged as present – is what might be described as the logic of triumph; a logic in which the arch should have been inscribed from the start. Indeed, the argument here is going to be that it is only by ignoring the original presence of that logic – this is, of course the exclusion of informed form (the ideational) and the retention of mere form (reiterating the structure of the gesture *as such*) – that it is then possible to identify emotion as given within the 'pictorial language of gesture' as the object of analysis. In the *Einleitung*, in fact in the next paragraph Warburg goes on to write that in the triumphal arch there is the 'affirmation of life' (*das Jasagen zum Leben*).[29] What is left out of consideration – left in the hope of sustaining forms of reconciliation and balance – is the recognition that triumph will always have demanded victims. It should be recalled here that Benjamin argued that 'empathy with the victors' (*in den Sieger*) always benefits 'the rulers'. Not only does this undo any sense of neutrality within empathy and thus also within affect and movement, it indicates that victory as an integral part of the logic of triumph can only be understood when the opposition victor/victim is recognized as that which is constructed and then maintained by it.

Ghirlandaio's *Adoration of the Shepherds* will be approached in terms of a number of its defining elements. The ruined sarcophagus both recalls and is informed by a Meleager Sarcophagus. What is retained with the sarcophagus? The question has to be answered beyond the claim of its relation to an ancient form. It is not as though Roman sarcophagi were without their own complex set of determinations.[30] The sarcophagus in this instance held the bones of an augur. Fulvio had predicted that his tomb would 'serve a new deity'. Franz Saxl demonstrated that the text could be traced to a proclamation made at the time of Augustus' birth, namely *dominium terrarum orbi natum*.[31] The evocation of birth as a form of interruption is already the mark of a beginning predicated on both interruption and ruination. There is, of course a complex network

of relations that can be established and re-established within the altarpiece. On one level it is clear that the presence of Child marks the truth of the proposition announced on the sarcophagus. That the sarcophagus is ruined inscribes the advent of Messianic moment within a form of ruination. Creation demands ruination. It is of course the presence of ruination that is present with the triumphal arch in the painting.

See Plate 18.

It is there at least twice. In the first instance it is because the form of the arch is of necessity informed by the Arch of Titus which is itself located on the *Via Sacra* in Rome. In other words, it is already positioned on a 'way' that is sacred. Neither ground nor place is ever neutral. The Arch was built as a result of orders from the Emperor Domitian. It was an act of commemoration to mark the conquests and victories of his recently deceased brother Titus. Perhaps the most significant of these victories, or at least the ones whose spoils are inscribed on the south panel, relate to the siege of Jerusalem (70 CE). The Latin inscription on the top of the triumphal arch in the painting – GN. POMPEI MAGNO HITCANUS PONT. P – inscribes on another level the arch's place in the history of victories over the Jews (by Pompey in 63 BCE). Remembering, of course, that Fulvio, the occupant of the sarcophagus and who predicted the advent of new deity, died during Pompey's siege of Jerusalem. It is not just that names therefore mean beyond themselves it is also the case that the arch that appears within the *Adoration of the Shepherds* cannot be separated from the history of arches. Nor moreover can the triumphal march be separated from what been described above as the logic of triumph. In the case of Ghirlandaio's altar piece it is the relationship of the movement through the arch to the triumph over the Jews and thus the production of Jews as the victims of the victors. The Jew figures within the setting that constructs and maintains its figured presence.[32] Movement and the arch are incorporated into the continuity of the production of the figure of the Jew. This other possibility – which is doubling of the gesture since movement has this now identified double quality – is effaced if movement is attributed interpretive priority since it produces movement as apparently neutral. Moving through the arch, in triumph through the 'triumphal arch' victors and victims become who they are. There can never be just movement. The 'antique cavalcade' is also, and at the same time a victory march. (If that movement can be understood as a series of gestures then, again, this is the doubling of gesture.) The *bewegten Form* is the form taken by the victors. This is the way of form. The important point is that while it is no longer possible to see the movement of bodies as just form and thus once form is taken to be informed, then it becomes possible to locate the singular within a new work of relations such that the locus of investigation is between elements, and thus between gestures. Informed form occurs within the relations. Again, what has become impossible is the gesture *as such*.

While there is a clear connection between destruction and creation as figured in the sarcophagus and the presence of inscriptions there is, equally, the extraordinary gesture of Joseph.

See Plate 19.

While there is a similar gesture in the *Stigmatisation of St Francis* by Gentile da Fabriano positioned in relation to light, and a slightly later one made by one of the

Kings in Holbein's *The Oberried Altarpiece*, here there is a body in moment whose movement does not recall the antique in any direct way. Even the overpowering angel in Gentile da Fabriano is absent. What if Joseph were not engaged by any element with the painting? What if, as is consistent with other elements of Ghirlandaio's overall strategy, he is allowing a gesture to undo the work's presence as a self-completing finality. And, as a result, refusing on a formal level, the possibility of the work's unity (again this is the undoing of empathy's condition of possibility). Rather than looking out the way a number of figures appear, e.g. Giuliano de Medici, who is looking out while Poliziano looks in the *Confirmation of the Franciscan Rule* panel, Joseph also looks within but is not held by any other element within the work. It is as though the refusal of engagement signals the problem that revelation – which is the precise project of the sarcophagus – will always have, namely, its potential disavowal. Revelation can always be refused. Refusal, disavowal, and ambivalence all remain as potential responses to the insistence of revealed religion. Joseph is uncertain. He is not distracted by the procession. Nor does the immediacy of the Child's presence hold him. He evinces uncertainty. Neither uncertainty nor the fear of disavowal is benign. Moreover, it is the uncertainty that will turn triumph into triumphalism. Though, equally, it would also account for why triumphalism's own lack of surety would then be linked to the history of violence. Joseph's gesture retains an ambivalence. The meaning of that ambivalence only emerges in the necessity of its irreducibility both to the movement of bodies through the arch and the movement of his own body. Those bodies, as has been suggested, are not 'mobile form'. They do not express 'pure artistic delight'. Indeed, the impossibility of that purity reiterates the impossibility of gesture *as such*. If there is an opening in the work – a space that has not been dominated and thus the construction of a genuine locus of interpretation – then it resides in the presence of a founding irreducibly that itself can only be accounted for in terms of the presence of gestures that are always already informed in advance. This presence of this founding irreducibility can be seen *now*. Hence, it is precisely what Sassetti would not have seen. Or more significantly it is precisely what Warburg will not allow him to see. Once questions of seeing open up in this way, seeing becoming recognizing, it is then clear that the object is not 'a multiplicity ordered into unity'. Understanding the image with such a setting allows the truth of the image to appear. Truth is not content. The truth of the object is the conditions that allow it to become and then to be a locus of meaning.

Notes

1 This chapter is part of a project which attempts to take up and develop the connection between philosophy and art history that I first developed in my *Art's Philosophical Work* (2015, London: Rowman and Littlefield International). It is clear that there is not just an important movement within contemporary philosophy that is engaged with the historical temporality of art, it is equally the case that thinking the interconnection between art history and philosophy has become an important consideration its own right. In regard to the former – while their projects are different – the writings of Georges Didi-Huberman and Peter Osborne are both concerned with art and historical time. See Georges Didi-Huberman, 2000, *Devant le temps*, Paris: Editions de minuit, and Peter Osborne, 2018, *The Postconceptual Condition*, London: Verso. By far the most important contribution to a rethinking of time in the context of art history has been provided by Anthony Nagel and Christopher S. Wood, 2010, *Anachronic Renaissance*, Cambridge, MA: MIT Press. For an important engagement with the question of historical time as integral to an understanding

of the present as a locus of pluralized temporalities see Peter D. Thomas, 2017, 'Gramsci's Plural Temporalities', *The Government of Time: Theories of Plural Temporality in the Marxist Tradition*, eds. Vittorio Morfino and Peter D. Thomas, Leiden: Brill Academic Press, pp. 174–209). In regard to investigations of the relationship between philosophy and art history see Adi Efalm 2016, *Figural Philosophy. Panofsky and the Science of Things*, London: Bloomsbury.

2 On the Sassetti Chapel see Enrica Cassarino, 1996, *La Cappella Sassetti nella chiesa di Santa Trinita*, Lucca: Pacini Fazzi editore, and Marilyn Aronberg Lavin, 1990, *The Place of Narrative. Mural Decoration in Italian Churches, 431–1600*, Chicago, IL: University of Chicago Press, pp. 203–7.

3 This passage is cited in a number of places.

4 Figal, Günter, and Bernhard Zimmermann, eds. *Focus: Hermeneutics and the performing arts =: Schwerpunkt: Die Hermeneutik und die darstellenden Künste*. International Yearbook for Hermeneutics, 16 (2017). Tübingen: Mohr Siebeck, 2017.

5 Giorgio Agamben, 1996, *Mezzi senza fine. Note sulla Politica*, Milan: Bollati Borlinghieri, p. 63.

6 Cited in Philipp Ekardt, 2016, 'Certain Wonderful Gestures: Warburg, Lessing and the Transitory in Images', *Culture, Theory and Critique* 57, 2, p. 96. The reference to the Warburg Archive is: WIA, 43.1.1.

7 References to Aby Warburg – where appropriate – will be to: Aby Warburg, 1999, *The Renewal of Pagan Antiquity*, trans. David Britt, Los Angeles, CA: The Getty Research Institute Publications (henceforth RPA plus page number), and Aby Warburg, 2010, *Werke in Einem Band*, Frankfurt: Suhrkamp (henceforth WEB plus page number). Here RPA 247/ WEB 275 respectively.

8 Spyros Papapetros describes Warburg's movement as between 'motifs' as a form of 'mapping'. See his 2012, *On the Animation of the Inorganic. Art, Architecture and the Extension of Life*, Chicago, IL: University of Chicago Press, p. 52.

9 RPA 242/WEB 267.

10 References to Walter Benjamin are to Walter Benjamin, 2004–6, *Selected Writings*, 1–4, ed. Michael W. Jennings, Cambridge, MA: Harvard University Press (henceforth SW), followed by 1980, *Gesammlete Schriften*, ed. Rolf Tiedemann and Herman Schweppenhäuser, Frankfurt: Suhrkamp Verlag. (henceforth GS). Here GS 1.II. 691.

11 For an analysis of the of the role of empathy in Warburg see Philipp Ekardt, 2011, 'Sensing – Feeling – Imitating: Psycho-Mimeses in Aby Warburg', *Ilinx: Berliner Beiträge zur Kulturwissenschaft_* 2, pp. 101–21, accessed online September 21. https://edoc.hu-berlin.de/handle/18452/7316

12 RPA 255/WEB 261.

13 WEB 653.

14 See the discussion of 'beautiful semblance' in Jan Mieszkowski, 2004, 'Art Forms', *The Cambridge Companion to Walter Benjamin*, ed. David Ferris. Cambridge: Cambridge University Press, pp. 43–5.

15 See to this end the following comment made by Gérard Jorland and Bérangère Thirioux, 2008, 'Note sur l'origine de l'empathie', *Revue de Métaphysique et de Morale*, 2, pp. 269–80.

> Il doit émerger du rapport sensible à l'objet une harmonie entre le sujet et l'objet qui en fasse un rapport analogique. La forme de l'objet doit etre analogue à la furme de notre corps, c'est à cette condition seulement que l'objet sera dote par le sujet d'une forme harmonieuse correspondanat à sa proper harmonie en lui.
>
> (272–3)

It should not be thought that empathy has not be subject to critical examination more generally within the field of art history. See, for example, Juliet Koss, 2006, 'On the Limits of Empathy', *The Art Bulletin*, 1 March, 88, 1, pp. 139–57.

16 Robert Vischer, 1873, 'On the Optical Sense of Form: A Contribution to Aesthetics' (Ueber das optische Formgefühl. Ein Beitrag zur Aesthetik, p. 20), *Empathy, Form, and Space*, ed. Harry Mulgrave, Leipzig: Herman Credner, p. 104.

17 Ibid.

18 Friedrich Theodor Vischer and Holly A. Yanacek, 2015, 'The Symbol', *Art in Translation*, 7, 4, pp. 417–48, esp. pp. 443–4; originally published 1887, 'Das Symbol', *Philosophische Aufsätze. E. Zeller zu seinem fünfzigjährigen Doctor-Jubiläum gewidmet*, Leipzig: Fues Verlag, p. 188.
19 Claudia Wedepohl adds in relation to Vischer that 'Warburg assumed the existence of an analogy between subjective and objective expressions; hence the type would combine an image in the imagination with one drawn from the collective memory of common human experience'. Claudia Wedepohl, 2014, 'Mnemosyne, the Muses and Apollo: Mythology as Epistemology in Aby Warburg's *Bilderatlas*', *The Muses and their Afterlife in Post-Classical Europe*, eds. Kathleen W. Christian, Clare E. L. Guest, and Claudia Wedepohl, London: The Warburg Institute, p. 221.
20 Giorgia Agamben, 2013, *Nymphs*, trans. Amanda Minervini, London: Seagull Books, p. 29.
21 SW. 3.282/GSII. 2.501.
22 SW. 3.262/GSII. 2.468.
23 SW. 4. 390/GS.I. 2.695.
24 SW. 4. 390/GS.I. 2.695
25 RPA 249/WEB 276.
26 Ladislav Kesner, 'The Warburg/Arnheim Effect: Linking the Cultural/Social and Perceptual Psychology of Art', *Journal of Art Historiography*, 11, December, p. 21.
27 RPA 249/WEB 276.
28 Aby Warburg, 2009, 'The Absorption of the Expressive Values of the Past', *Art in Translation,* 1, 2, pp. 282. Aby Warburg, 2003, *Der Bilderatlas MNEMOSYNE*, Berlin: Akademie Verlag, p. 5.
29 Warburg, 'The Absorption of the Expressive Values of the Past', p. 282. Warburg, *Der Bilderatlas MNEMOSYNE*, p. 5.
30 See in this regard, Jas Elsner, 2012, 'Decorative Imperatives Between Concealment and Display: The Form of Sarcophagi', *RES: Anthropology and Aesthetics*, 61/62, Sarcophagi, Spring/Autumn, pp. 178–95.
31 F. Saxl, 1940, 'The Classical Inscription in Renaissance Art and Politics: Bartholomaeus Fontius: Libermonumentorum Romanae urbis et aliorum locorum', *Journal of the Warburg and Courtauld Institutes*, 4, 1/2 (October 1940–January 1941), pp. 19–46.
32 I have tried to develop a sustained argument concerning the construction of the figure of the Jew. See my 2010, *Of Jews and Animals*, Edinburgh: Edinburgh University Press. David Nirenberg makes the important point that 'figures of Judaism' were produced by and for what he describes as Christian Hermeneutics. David Nirenberg, 2014, '"Judaism" as Political Concept: Toward a Critique of Political Theology', *Representations*, Fall, 128, 1, p. 3.

13 Post-Photographic Frenzy

Joseph Nechvatal

If there is to be art, if there is to be any aesthetic doing and seeing, one physiological condition is indispensable: frenzy.

—Friedrich Nietzsche, *Twilight of the Idols*

What is real is the becoming itself, the block of becoming, not supposedly fixed terms through which that which becomes passes.

—Gilles Deleuze and Félix Guattari,
A Thousand Plateaus

Imagine an eye unruled by man-made laws of perspective; an eye unprejudiced by compositional logic …

—Stan Brakhage, *Metaphors on Vision*

I wish to suggest that in the realm of aesthetics, post-photographic frenzy is that use of the photographic image that both destroys lens-based image values and creates novel aesthetic values that allow for other intensities to flourish. This chapter will address the aesthetic state of post-photographic frenzy achieved through the intelligent sensuality of art through a body of work that the author (Joseph Nechvatal) has executed in 2013–14 called the *Odyssey Palimpsest*. My concern here is with the ethical and liberating use of anti-representationalism within the broader image environment, so I would like to explain a bit of how *Odyssey Palimpsest* functions while simultaneously promoting the aesthetics of obscurity.

I am a philosophically inclined contemporary artist interested in liberation politics. Thus post-photographic frenzy will be theorized here as image energy directed against the clear figure-ground,[1] photographic, network-centric condition, so that a more nimble art representationalism may emerge and resonate within a web of interconnected, molecular, and viral relational affects and intensities of visual noise, dissonance, and deviation.

Effectively, such an artistic and perceptual shift in representational ontology (a shift which involves many fundamental changes in aesthetic perception) can be expected to engender extraordinarily deep artistic conflicts. So to proceed will entail a review of past and present approaches toward semi-representational aesthetics – for our imagined representations of possible futures depends on the kinds of astute and discriminating questions we seek to construct in our aesthetic philosophy and art historic practices.

Post-photographic frenzy emphasizes affective states over captured images – states of mind/body that we may enter into as a form of creative expression of our will to self-empowerment. Today the meeting of neuroaesthetics and network technology is one of the vital arenas in which interesting currents align for art. My endeavor in this chapter is to give the reader evidence of this fruitful meeting through my recent meshwork series of artworks called *Odyssey Palimpsest* that were created for an exhibition in New York City at Galerie Richard in late 2015 called *Odyssey pandemOnium*. These works symbolically return the mind to Homer's ancient lost hero: Odysseus. The characters Odysseus, his son Telemachus, his waiting wife Penelope, Polyphemus, Poseidon, and a lyric siren loosely come together to suggest the beauty and pain of the migrating world. Present in the paintings is a partially hidden world of people and places (and images) lost and at ideological drift, looking for scenic alternatives.

A mix of digital photography and computer graphics, these images have been digitally painted on suede-like velour canvas in dusty and subtle colors. The suede support contributes to the fugitive nature of the floating and migrating imagery. And that double intricacy is what *Odyssey pandemOnium* is about, in one sense: being misplaced and adrift. The viewer's eye must navigate the visual pandemonium in a way that suggests Odysseus's wanderings.

Odyssey Palimpsest places Odysseus's somewhat odd odyssey in relationship to an artistic post-photographic frenzy that philosophically is concerned with the recent *speculative realism*[2] turn in continental philosophy and aesthetics. It addresses those concerns through an elaborate ornamental scene-sequence that seeks to transmit a lyrical sense of primordial joy and pain. The personages vaguely seen in *Odyssey Palimpsest* epitomize two famous aesthetic formulations based on Dionysus (the god of intoxication, orgies, forces of nature, and music) and Apollo (god of individuation, illusion, form, and order). *Odyssey Palimpsest*'s lyrical premise is that through post-photographic frenzy there is a fusion of Dionysian and Apollonian artistic impulses needed to form artistic tragedies. It is the dialectical interplay of these two opposing – and at the same time complementary – aesthetic elements that exemplifies a central principle of post-photographic frenzy.

Odyssey Palimpsest attempts to hypothesize and demonstrate an art of *latent excess*: an idea for art that was specifically inspired by the rhizomatic thinking of Gilles Deleuze and Félix Guattari. The philosophic, rhizomatic theory of Deleuze and Guattari, at a general level, supports *Odyssey Palimpsest*'s art of noise approach, as rhizomatic theory encourages philosophic non-linear and non-restrictive ruminating and imagining. A rhizome literally is a root-like plant stem that forms a large entwined spherical zone of small roots which criss-cross. In the philosophical writings of Deleuze and Guattari the term is used as a metaphor for an epistemology (a philosophy concerned with theories of knowledge) that spreads in all directions simultaneously.[3] More specifically, Deleuze and Guattari define the rhizome as that which is 'reducible to neither the One or the multiple. (…) It has neither beginning nor end, but always a middle (milieu) from which it grows and which it overspills. It constitutes linear multiplicities with n dimensions having neither subject nor object'.[4]

It is pertinent that in *A Thousand Plateaus* Deleuze and Guattari describe this shift toward boundlessness as one's becoming a *body without organs* (BwO) in terms of our self-shifting representational planes emerging out of our field of compositional consistency, for the BwO (according to them) is an insubstantial state of connected being beyond representation which concerns pure becomings and nomadic essences.[5]

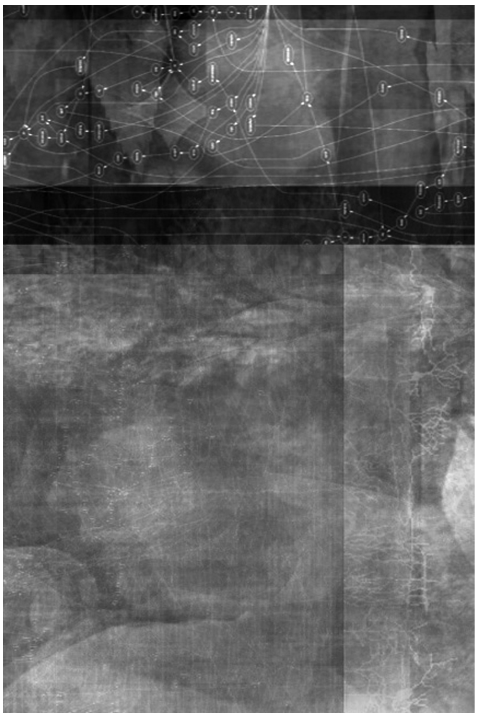


Figure 13.1 Joseph Nechvatal, *nimble Odysseus* (2014) 44 × 66 inches. Computer-robotic-assisted acrylic on velour. Courtesy Galerie Richard, New York.

This idea re-establishes an ambiguously private critical distance for the art viewer: a distance achieved through the connective disparity between pleasure and frustration.

Furthermore, *Odyssey Palimpsest* is a prime example of an art of noise that demands of society an active visualizing participation – and thus is a legitimate metaphor for contemporary art as a form of simulation-shattering engagement. It is an art that can problematize the pop simulacra and hence enliven us to the privateness – and unique separateness – of the human condition in lieu of the fabulously constructed social-net spectacle that engulfs us. This private separateness offers us a personal critical distance (gap), and thus another perspective on (and from) the given social image networked simulacra.

Through the destructive-creative bacchanalia at the root of *Odyssey Palimpsest*'s art of latent excess (circuitous, excessive, and decadent), the viewer is provoked to lose the position of detached observer. As such, *Odyssey Palimpsest* demands engaged intellectual and perceptual production. The images in the series fuse chaotic disturbance with beautiful classical forms in an attempt at situating the viewer somewhere between the surface of empirical-diverse reality and the chasm of shattering incoherence, where they must pick through the image meshwork and recover figurative meaning out of the entangled ground. This visualization approach to art relates to my book *Immersion Into Noise* (2011)[6] where I have mapped out a broad spectrum of aesthetic activity I call the *art of noise* by tracing its past eruptions where figure/ground merge

and flip the common emphasis to some extent. *Immersion Into Noise* concludes with a look at the figural aspect of this aesthetic lodged within the ground of consciousness itself.

But to understand the benefits of *Odyssey Palimpsest* we must address noise aesthetics and the art context within the murmur of our broad-spectrum, data-monitoring environment of background machine-to-machine gigabyte communications – and think through and deploy *Odyssey Palimpsest* as an embedded subject within the web of ubiquitous computing, cognitive capitalism.[7] In brief, the noise art aesthetics of *Odyssey Palimpsest* is a zone where qualitative shifts of coordinates take place in which it is possible to carry out figure/ground art reversals. As the representational imagery is classically consequential, what the noise art aesthetics of *Odyssey Palimpsest* offers is the possibility of understanding established things in a different way by shifting boundaries and departing from established functions. By flipping traditional figure/ground emphasis, *Odyssey Palimpsest* makes use of variously formed segments, stratas, and rhythms which involve territorializing as well as deterritorializing. It is this nomadic non-representational counter-mannerist representation which breaks the eye out of the fascination and complicity with the photographic image and the mass media mode of communication it supports.[8]

As an artist-thinker, I am interested with *Odyssey Palimpsest* in encouraging a fresh contemporary art based in uncertain unseeability that focuses on a commitment to the challenging aesthetics of *becoming imperceptible*[9] As such, I am interested with *Odyssey Palimpsest* in a post-photographic aesthetics that is bent on combining the felt, vibrant world embedded within a wider vision of political awareness that includes private numinous themes accessible through the generative subjectivity of each individual. This is an aesthetics of perception breaking free from capture technologies based on felt resonances.

The *Odyssey Palimpsest* post-photographic frenzy is based in an image nihilism that can transform a metamorphosis subject to the flickering formative forces of emergence.[10] Thus, *Odyssey Palimpsest* is not an example of a passive art form, but of a generative, virulent, and curative (if nihilistic) art that unleashes forces of visual reverberation to emerge and resonate like a web of interconnected, molecular and viral relational affects and intensities. Such a noisy, dissonant, deviation, for me, is at the heart of great art and is what enables art to express hope within the reality of tragedy. However, this desimulating openness, which an inception of the rhizomatic art of latent excess assumes, demands that the viewer seek a liberation from custom, doctrine, and influence, and that she grasps the autonomy and priority of art as a special type of excessive ideological activity.

The open secret of *Odyssey Palimpsest* is situated in exchanges of figure and ground relationships that depend on playing out nihilistic negativity by intensifying its forces into an affirmative nihilism. So *Odyssey Palimpsest*, as an example of post-photographic frenzy, is implicated in the cohesiveness of the 'self/other' distinction, as it disintegrates the captured readable image into an ontological instability produced by the semi-annihilation or masking of the 'real'. As such, *Odyssey Palimpsest* can depict the underground vigor of form in a state of active dynamism that can only be speculated at by thinking beyond the visible. And that enacts a shift away from the subject-object dualism that is currently embedded in the photographic tradition.

The embeddedness of our secret, inner world is the life of our imagination. It harbors our intense drives, suspicions, fears, and loves, and guides our intentions and

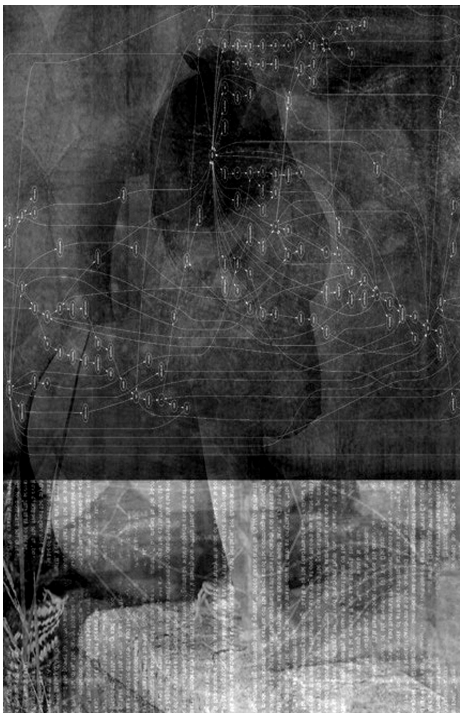


Figure 13.2 Joseph Nechvatal, *penelOpe in agOny* (2014) 44 × 66 inches. Computer-robotic-assisted acrylic on velour. Courtesy Galerie Richard, New York.

actions in the artistic as well as political and even economic image world. What I think of as *frenzy-gazing*[11] is the way to discover all aspects of this inner life. So I wish to consider now that, in contrast to our frenzied data market surveillance culture (that trains us to fear the atrocious eyes of outer perception) a protracted post-photographic frenzy art practice based in absorption, as seen in *Odyssey Palimpsest*, could encourage the development of agile and clandestine exchanges based on the embedded intuitive eyes where each individual shares a sensibility for building a defensive force against objective reality impositions. Of course this sphere of anti-purist gazing is essentially a cooperative rejection of the tyranny of essential image identities. It is what allows post-photographic frenzy to construct unstable distinctions in the entire spectrum of the imaginary; from the infinitude of actual forms, to the abstractions of virtuality. Subsequently, *Odyssey Palimpsest* asks for engagement with a challenging exchange of the hierarchy of figure and ground (also, figure and abstraction) through a struggle between vision, visual noise, and invisibility.[12] So I want to argue with the imagery of *Odyssey Palimpsest* for an agony style that entails something of a loss of logo-like visibility.

Such principles of constructing patterns of infinite becomings is, I would argue, inherent in traditional avant-garde values of Dada. But a new Dada now, I think, should be considered in terms of noisy semi-invisibility and not a confrontation of one ontology against another. Deviating from the regularities of visible normality provides

Odyssey Palimpsest its own apparent withdrawing impact. Certainly, the values of the Dadaesque avant-garde have always been interfering with the channels of artistic production and reception – and these values are responsible for expanding the forms and definitions of art itself. But like in nature, post-photographic frenzy plays an apparent productive role in the invisible life of a system when it stresses becoming-imperceptible. But a becoming-imperceptible post-photographic today can no longer be a form of enfant terrible withdrawal, akin to Marcel Duchamp's brilliant strategic invisibility,[13] but rather a phantasmagorical plunge into what Félix Guattari expresses as the *chaosmosis* where 'the work of art, for those who use it, is an activity of unframing, of rupturing sense, of baroque proliferation or extreme impoverishment that leads to a recreation and a reinvention of the subject itself'.[14] Thus *Odyssey Palimpsest* marks a qualitative transformation into an art place where being and non-being reverse into each other, unfolding out and enfolding in their respective outsides. This short-circuit causes a creative conflagration typical of *Odyssey Palimpsest* and the art of noise, in general.

See Plate 20.

Let's consider now the difference between post-photographic frenzy versus the gigantic mass-network-machine data market, with its digital image functionalism. For me the difference with *Odyssey Palimpsest* is in looking *into* and projecting *onto* something – thereby discovering an emerging manifestation based in semi-invisibility – as opposed to looking *at* something. In that sense post-photographic frenzy requires an active and slow participation on the part of the viewer – and the noise style of *Odyssey Palimpsest* demands as much. It requires mental participation – now essential in our climate of networked mass media – in that it plays against the grain of given objective consensus visibility. In that sense *Odyssey Palimpsest* is more like a service product (or a server) than an art object.

However, my main interest in semi-invisibility with *Odyssey Palimpsest* lay in a texture of emerging claims of art-as-politics – with its emphasis on the production of individuality based in a political physiology[15] with a strong proposition of emergence as the key aspect. So, the post-photographic frenzy of *Odyssey Palimpsest* is an art of noise that privileges emergent properties that themselves are rooted in indeterminacy-based semi-obscurity.

Now I would like to look more specifically at the possibility of further developments in palimpsest-based noise art aesthetics concerning where becoming-imperceptible and becoming-perceptible nimbly interact. As sketched out in my book *Immersion Into Noise*, the evolution of visual noise art develops from certain prehistoric cave areas and Baroque grottoes, to certain levels of Mannerist and Counter-Mannerist complexity, to noisy spatial renderings in various exuberant architectural styles, then into Cubism, Futurism, Dada, Fluxus and other 20th-century avant-garde movements, into the screech of industrial noise music, and into the softness of software noise art aesthetics.

As part of this trajectory, *Odyssey Palimpsest*'s acknowledged probing at the outer limits of recognizable representation, and its excited all-over fullness and fervor within this syncretistic probe, isn't a failing of communications within the excessive terms of the art of noise, then. *It is its subject*. Such a copious realization is insinuated through *Odyssey Palimpsest*'s overloaded and excessive stimulus inasmuch as its semi-identifiable subjects buried in the field of latent excess can conceivably be read in terms of many visual meanings. So even the fusion of actual elements within *Odyssey Palimpsest*'s rhizomatic latent excess are not passively received and easily accepted.

The art of *Odyssey Palimpsest* means a repositioning of image identity within an atmospheric and artistic ontological model of sublime entirety because its structure is based on a rich labyrinthine ensemble of relations, diversities, connections, and heterogeneities, that can break or be formed into unexpected links which interconnect. This leads to the visual-intellectual situation of *Odyssey Palimpsest* as one of magnanimous self-connectivity.

As such, one might say that the ruin of representation[16] in *Odyssey Palimpsest* equates to the semi-disintegration of the captured photographic image. Certainly that is all the truer when photography adheres to its essential rendering of rational, framed, linear pointed-perspective: that perspective which dominated the Italian Quattrocento that is often called 'true' point-perspective. Sure, there are some examples of Cubist or Dada photography which displace the point of view common to the art form, but each one usually contains a rendering of a scene from one fixed and tapered eye-point at a time. Moreover, 'straight' photography usually depends on technical perspective framing intended to eliminate what is deemed unessential in the still image or motion picture, to direct the spectator's attention to what is important and to give it special meaning and force. Each frame of film, which corresponds in shape to the image projected on the screen, forms the basis for a graphic composition in the same way as the frame of a painting encloses the area in which the painting must be organized. Although some theatres in the 1970s were enlarged and widened to accommodate 70 millimeter images, a trend toward smaller theatres fixed the image ratio close to 1.85 to 1 in the United States and 1.66 to 1 in Europe. On the contrary, the Géode in Paris has a 118-foot sphere containing a cinema in which 180° films are projected on a hemispheric screen made up of 3,280 square feet.

Underlying the *Odyssey Palimpsest* project is such an immersive defiance of the limits of ordinary perception and representational simulacra. Thus it is (or can be) about the opposition between the daily workday and the transgressive or even ecstatic moment. In a sense *Odyssey Palimpsest* attempts to set up a stable form of ecstatic transgression where the viewer can go rhizomatically back and forth and in and out at will. So yes, *Odyssey Palimpsest* is a rhizomatic art of latent excess that takes us away from the habitual focus of the picturesque and potentially liberates us inwardly from the infringements stemming from the deluge of mass-media images. And as so, it stimulates the attentive viewer to assess anew the caliber of any such infringement. Hence it is in the amity felt with the excessive and rhizomatic ground of *Odyssey Palimpsest* that one may feel a sensuous liberation from ideological monotony and cultural prudery.

As noted above, what is important in *Odyssey Palimpsest* and the art of noise aesthetics is its intentional and elongated semi-invisibility enigma. That is why this subject is so hard to write about. The very topic is a very difficult one to pin down and make intelligible for good reason. *Odyssey Palimpsest* and the art of noise is an art of disbelief in habitual codes of practice and understanding. You must take *Odyssey Palimpsest* on its own art of noise terms or risk doing psychic violence to my art.

In general, the art of noise is not a set of homogeneous practices, but a complex field converging around perceived weaknesses in surveillance systems. Such a noisy hyper-cognitive stance happens when the particular of electronic connectivity is seen as part of an accrual total system by virtue of its being connected to everything else *while remaining dissonant*. Noise aesthetics theory involves complex ambiguous gazing, and its resultant art of resistance and investigation should be increasingly valuable to net-savvy social movements based on undermining click-market predictabilities,

as it strengthens unique personal powers of imagination and solo critical thinking. It counters the effects of our age of simplification: effects which have resulted from the glut of celebrity consumer-oriented entertainment and eye-candy political propaganda in the interests of corporate profit and governmental manipulation.

The post-photographic noise art aesthetic of *Odyssey Palimpsest* is that of dissonant immersion into a maelstrom of glossolalia unintelligibility, chaos, and exaltation. Such an art of noise style is a way of seeing that reverses the order of figure/ground to ground/figure. It collapses being into semi-non-being – which leads to an ontological implosion. Yet it creates ambivalent and aleatory[17] processes that are truer to our inner essential world: our own experienced dynamic pools of identity expansion and disintegration.

Odyssey Palimpsest refuses easy consumption then and encourages love, because a love of the visual noise of *Odyssey Palimpsest* will make other perturbing events more tolerable. *Odyssey Palimpsest* should make you, the reader, able to see more and even make you more adaptable to disturbances, rather than being torn up about them. It will help you to avoid psychic ossification by your loving the space of latent expanse. This is what suggests referring *Odyssey Palimpsest* to the aesthetics of the *sublime*, which, in the 18th century, was linked to the grandness of natural phenomena. But *Odyssey Palimpsest* is a net version of the sublime in which the embeddedness that we recognize ourselves in concerning nature matches up with our hot-wired, social-tech envelope. This embedded awareness can be suggested and promoted by noisy artistic becomings, such as *Odyssey Palimpsest* – as its overwhelming cognitive aspects serve to produce unpredictable results.

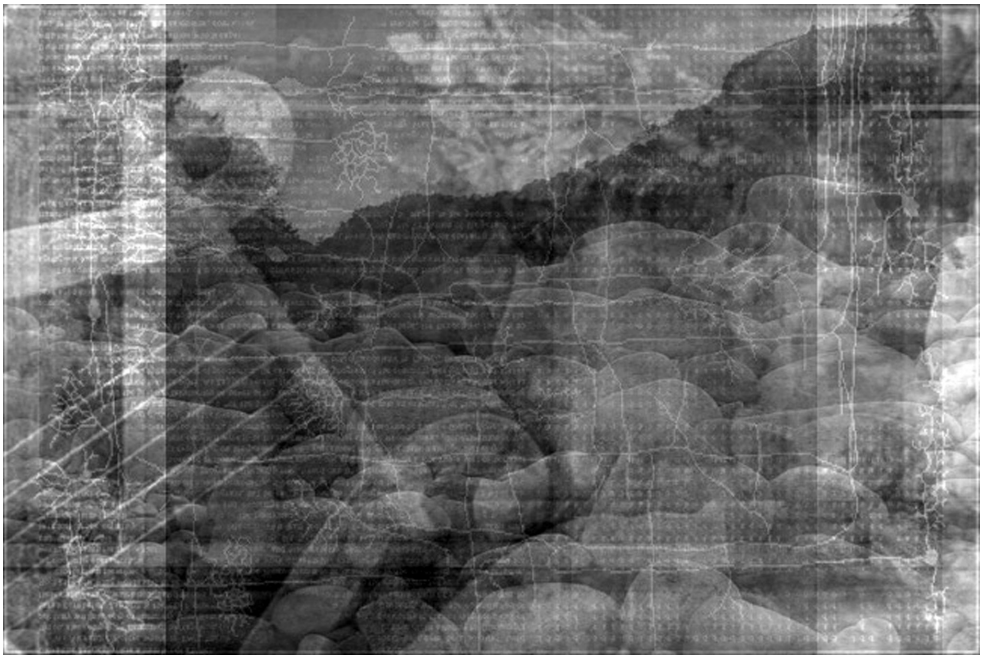


Figure 13.3 Joseph Nechvatal, *playing telemachus* (2014) 66 × 44 inches. Computer-robotic-assisted acrylic on velour. Courtesy Galerie Richard, New York.

Poetically, the hyper and noisy dense visual texture of *Odyssey Palimpsest* suggests a possibility of connecting ourselves psychically to the great chain of being: that which precedes us and of which we are a part. For this rattling chain I have invented the term *hyper-noise*:[18] that is noise art produced via many connected, competing vectors and figure/grounds. This art concept owes something to Quentin Meillassoux's idea of *hyper-Chaos* that was sketched out in his book *After Finitude*: a form of absolutizing where nothing is impossible or unthinkable.[19] But it must be grasped that hyper-Chaos is not just disorder, but that it also may produce order and stability, even little static worlds, as well as the complete destruction of what is or was.

The post-photographic hyper-noise aspect of *Odyssey Palimpsest* refuses easy consumption and encourages something close to a white noise state. In signal processing, white noise is a random signal having equal intensity at different frequencies, giving it a constant power spectral density. The term is used, with this or similar meanings, in many scientific and technical disciplines, including physics, acoustic engineering, telecommunications, and statistical forecasting. White noise refers to a statistical model for signals and signal sources, rather than to any specific signal, so the generative aspect of *Odyssey Palimpsest* is perhaps the most evident example of this hyper-noise sublime opportunity. White noise post-conceptual generative art serves to produce unpredictable results when it is based on arithmetic instructions contained in the software, as in the C++ artificial life[20] code behind my *Odyssey Palimpsest* project. A digital art of noise means primarily some form of generative or semi-generative coding in which the artist establishes the operational tenets or choices that are calculated to act autonomously or semi-autonomously.

Such noise aesthetics is hypothetical in the recognition of our sheer potentiality: all the selves we have within to develop or burn out. All the worlds we might create or destroy. It implies that we are more diverse than we had imagined; and more tolerant than presumed. It humbles us by pointing out that what we have in common is a dangerous propensity for overrating our powers of comprehension, as it is recalcitrant by design. It affirms with jubilation states of varied mutability.

The post-photographic aesthetics behind *Odyssey Palimpsest* tears phallogocentrism[21] apart to confront the diversity in us, and in each other. This lesson is a necessity, and the recognition of this necessity is part of the peculiar pleasure that *Odyssey Palimpsest* affords: a pleasure of rapturous abandonment where the intended effect is inner liberation by means of de-simulation. The application of this art of noise post-photographic aesthetic opens up a sense of discovery that marked art's beginnings on prehistoric cave walls with the anonymous collective of skilled artists who created an incredible immersive work of noise art in the *Abside* (Apse) of the Grotte de Lascaux. The Apse is a roundish, semi-spherical, penumbra-like chamber (like those adjacent to Romanesque basiliques) approximately 4.5 meters in diameter (about 5 yards) covered on every wall surface (including the ceiling) with thousands of entangled, overlapping, engraved drawings which, on request, I received the very unique privilege of seeing.[22] The ceiling of the Apse of Lascaux (which ranges from 1.6 up to 2.7 meters high (about 5.2 to 8.9 feet) as measured from the original floor height) is so completely and richly bedecked with these engravings that it indicates that the prehistoric people who executed them first constructed a scaffold to do so.[23] This indicates to me that the Apse was an important and sacred part of the cave and indeed Mario Ruspoli calls it the 'strongest, most richly symbolic, most mysterious and most sacred' of all the inner spaces which make up Lascaux.[24]

Generally, the Apse has been ignored by art theoreticians and there is only one widely published scholarly investigation of it per se,[25] even though Abbé André Glory[26] spent several years trying to decipher this inextricable chamber. This is because nowhere is the eye permitted to linger over any detail, even though it holds an immense 2.5 meter engraving (8.2 foot) in its midst. Rather, the gaze is urged on by an all-inclusive flood of sublimated optic information in need of visual stamina. Nevertheless, the Apse holds a semi-legible comprehensive index of all of the forms of representation found scattered throughout the entire cave, thus making up what Ruspoli calls Lascaux's core.[27] What pleased and fascinated me about the Apse, in terms of post-photographic frenzy, was exactly its cryptic and foreboding overall hyper-totalizing iconographic character granted by its boundless, palimpsestesque, wallpaper-like image explosion of overlapping near non-photo-reproducible stockpiled drawings – from which, when sustained visual attention is maintained, unexpected configurations visually emerge. Here animals are superimposed in chaotic discourse, some fully and carefully rendered, others unfulfilled and left open to penetration by the environment, all commingled with an extraordinary confused jumble of lines including, remarkably, the sole claviform sign in the Périgord[28] and, even more remarkably, Lascaux's only reindeer, an animal which existed in plenitude during the period of the adornment of Lascaux. Its extensive use of superimposed multiple-operative optic perception[29] presents the viewer with no single point of reference, no orientation, no top, no bottom, no left, no right, and no separate parts to its whole. As a result of this homospatiality of the Apse, I had the peculiar feeling of being flooded over by a cloud-like image pool of

Figure 13.4 Enhanced detail from the Abside of the Grotte de Lascaux, Dordogne (France).

deep meanings which I could not uncover. As such, it seemed an imposition onto Palaeolithic culture of the very thing that should unstable it: nihilism. Nihilism in that it is no longer a matter of heterogeneous figuration, but of scanning a homospatial criss-crossing and oscillating battle scene between interwoven figures, immersed in their ideational ground with which they have merged in a deliberate process of constitutional disfiguration. There is no longer any space outside of the figures to define them, and hence, in a mental reversal, space is immersed in the overlapping figures. The nihilistic cancellation at work here then seemed to be an attempt to deny the validity of subject/object understanding and to deny that any visual erudition of anything whatsoever is possible in the interests of art of noise introspection.

The French philosopher Georges Bataille said that what was curious about the Apse was that the artists 'abandoned their oeuvre to the next to come after them in an ant-like activity' yet 'they did not engrave their figures with less conviction or care'.[30] Obviously the artists here did not work from a life model but from the overlapping introspective depths of their visual memories. Likewise, the Apse seems to call upon the viewer to construct a mnemonic psychological interpretation of it based on its tightly woven, intricate abundance, i.e. its latent excess. But even after introspectively synthesizing the overlapping imploded individual parts into a mnemonic coherent whole, the Apse retained for me a provocative discord and irritation which tantalized my mind farther toward a withheld encoded signification.

For sure, here I was inside of a homospatial site of overrunning flux and of hybridization; a place for the rejection of photographic-like realism. The Apse then represents a thrusting off of optic and mental boundaries and thus is a complex mirroring of our own fleeting impressions which constitute the movement of our consciousness; the perpetual weaving and unweaving of ourselves. Within its post-photographic frenzy we ourselves are not static, and we have little use for static, reductive, photographic practices. We are inside a hot dialectical space that carries its own nihilistic opposite within.

Particularly dense with the frenzy of overlapping imagery is the part of the Apse called the *Absidiole*, a small, niche-like hollow (like the semi-spherical small niches which house holy relics attached to the apse in Romanesque basiliques) just in front of the drop into the Pit. Standing here I could ostensibly participate in a play of multiple immersions into post-photographic frenzy as I stood in the Absidiole inside of the Apse which is located inside the groin of the cave itself. Assuredly, photographic vision here is no longer the controlling power over animals in nature, but on the contrary, vision itself is engulfed in nature's womb. The motivational force which quickens the Apse then seems to be a desire to undermine perpetual vision and replace it with another type of impregnable (post-photographic) vision, or at least to suggest that there may be other types of vision possible. Thus its essentially nihilistic excess serves the positive function of questioning the validity of the customary appearance of things and to make connective understanding inextricably felt.

Indeed the basic function of the visual turbulence of the Apse from the fragmented photographic perspective, is to precisely shake our conviction that our visual capturing tools are sound and to hold any such assured convictions, rather, in suspension. Hence it is only routine that formal issues (where consciousness may be said to be self-referential and self-sufficient) would arise over any humanist narrative ethic, as the Apse is more concerned with a recycling of psychological energy than with optically correct astuteness. Hence, freed from representational obligations, dark chaotic

powers of consciousness are unleashed via the Apse's repressed excessive exuberance as an act of post-photographic frenzy.

To be, or not to be: that is the paradigmatic choice when visualizing form into and out of existence when examining the elusive alternatives made manifest here. Being, beings, or nothingness: all are tentative conditions of resolution (or forestalled resolution) here; all spout their own ontological/neurological preferences.

This scouring of assertive vision with post-photographic frenzy must have been deemed necessary only precisely here, as in the other galleries, very often, superimposed images respected the marks previous laid down and sensitively incorporated them into the ensuing hybrid superimpositional compositions.

By ransacking representational vision so, the Apse paradoxically partakes in the category typical of major art (regardless of its marginal standing within the cave and within prehistory) as it seemingly rejects the iconic figurative tradition in order to reinvent figuration as entrancing meta-(or supra)-representation. Thus it is major in the way that John Cage's musical composition/non-composition *4'33"* is[31] in forcing us to astutely consider silence as sound. And as such, it is a meditation on fullness and emptiness: on the emptiness of fullness and the fullness of emptiness. And this is its key post-photographic art of noise value.

One may speculate that the Apse served (and/or reflected) a psychic process where the self is experienced as capacity rather than existential identity, and where the evaluation of self has been revised from bound to boundless. Such consciousness represents a paradigm shift which relativizes other recognitions of self-consciousness. It is pertinent that in *A Thousand Plateaus* Deleuze and Guattari describe this shift toward boundlessness as one's becoming a *body without organs* in terms of our self-shifting representational planes emerging out of our field of compositional consistency, for the BwO (according to them) is 'an insubstantial state of connected being beyond representation which concerns pure becomings and nomadic essences'.[32] Deleuze and Guattari go on to say that the BwO

> causes intensities to pass; it produces and distributes them in a *spatium* that is itself intensive, lacking extension. It is not space nor is it in space; it is matter that occupies space to a given degree – to the degree corresponding to the intensities produced.[33]

According to Brian Massumi, the translator into English of *A Thousand Plateaus,* the BwO is 'an endless weaving together of singular states, each of which is an integration of one or more impulses'.[34]

So in that ancient cave apse I already had found an alternative, phantasmagorical, post-photographic way to express the agitation between form and ground that is required now if we are to escape the pull of the black hole of surveillance. However, this way requires an active imagination enhanced and aided by art of noise visualizations.

Odyssey Palimpsest then can be thought of as a mysterious scene sequence that disrupts smooth photographic image operations with buried visual hysteria. Its visual semi-incomprehensibility by design connects capture technology to optic gazing frenzy through what I think to be the use of a personal type of chaos magic.[35] *Odyssey Palimpsest* helps create visualization bridges between form and intuition, as its uncertain images have more information in them than a clear and certain image where the information quickly becomes redundant. Thus, hopefully, *Odyssey Palimpsest* gives

rise to new visual thought and promotes the emergence of new forms of an old story: art.

As we know, we have inherited a logocentric visual apparatus from the Renaissance. The invention of photography, and the astounding rapidity with which it spread, is closely connected to the fact that perspective, and its specific corresponding intellectual configuration, had pervaded visual habit since then. Renaissance linear perspective however, it must be remembered, is only a convention which is a cultural attribute comprehensible only for a quite specific sense of space or perception of the world and is definitely not an absolute perceptual truth.

But in this respect we are the exhausted descendants of the engendering of linear perspective (the so-called rules that determine the relative sizes of objects on a flat plane) used to capture images of bodies in environments. That is why *Odyssey Palimpsest* does not wish to adhere to the paradigmatic norms of photo representation, as it does not wish to supplant the phallocentric order, nor the imagination deficiency nurtured by the typical pastiche approach of postmodern aesthetics. Yet the issue is really one of form and style, rather than content. The perspectivist viewer of standard photographic images is mostly excluded from deep participation in the creative act, held at bay as it were, in the interests of 'objective' voyeurism. Correspondingly, the representational world, as seen through the lens by this immobile and atemporal gaze, becomes stagnant, reified, fixated, inert, and, one might even say, deadened. So, the post-photographic use of digital photography as anti-representation in *Odyssey Palimpsest*

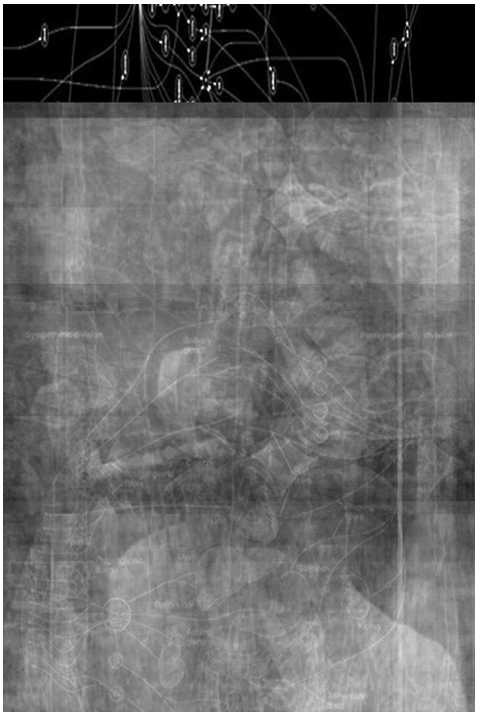


Figure 13.5 Joseph Nechvatal, *vexed telemachus adrift* (2014) 17.7 × 23.6 inches. Computer-robotic-assisted acrylic on velour. Courtesy Galerie Richard, New York.

entails an ambient and simultaneous impulse which returns framed and centered perspective to its rightful place as a contingent, but instrumental, convention. *Odyssey Palimpsest* accepts that position as a valuable point of departure within the slim bifurcation that has already occurred between the capture technology of the 20th century (straight surveillance photography) and the far more elastic and participatory digital technology of the computer. Surely this is true if capture photography adheres to its central function of linear perspective creator, through what Robert Romanyshyn has called the 'celebration of the eye of distance'[36] now elevated into a controlling cognitive methodology.

As mentioned above, what is important in *Odyssey Palimpsest* is its intentional enigma. The once-captured image needs to be made obscure to the degree that its identity codes cannot be easily discerned. This phantasmagorical obscurity and mystery are, for many like me, desirable in a world that has become increasingly surveyed and unfree. Spontaneous life is becoming ever more data-mined, mapped, quantified, and identified in a straightforward matter-of-fact way. So a will for magical enigma is the basis for discovering and entering into a post-photographic art of noise.

Systems of surveillance representation operate by establishing a fixed standard as the norm or model, so may I also suggest we look for the post-photographic ruin of representation in certain artistic uses of virtual reality (VR), specifically with VR's advantage of presenting visual/audio information through its fundamentally spherical, all-over, 360° panoramas. I am not talking about VR (actually the term 'virtual environment' (VE) – is the more accurate term) which remakes the rules of tracked photographic surveillance representation which we are accustomed to, but rather that which places the subject inside the perceptual circuitry of a particularly lavish (i.e. aesthetically informationally intense) proprioceptive zone where tracking data is not stored. The key value of such a creative post-photographic immersion, in terms of formulating an original theory of representation in ruins, is in its underscoring the fiction behind the assumed 'real' mechanistic perspective when seen as empirically true and universally valid instead of as conventional and as a contingent compliance that can be held and controlled or emancipated.

As immersive 360°-ity places us in the position of indeterminate unknowing (indeed in the position of the impossibility of knowing what we are to see/think in one intuitive moment) where conceptions of 'objective' or 'subjective' become interrelational questions; questions which disable previous emphasis on the false objectivism of photographic representation accorded to cultural production. In the post-photographic condition, with its arduous interrelational questioning, what is clarified in terms of the ruin of representation in *Odyssey Palimpsest* is the human idiosyncratic ability to imaginatively convert excess and absence into incidence.

Linear perspective photographic vision has constructed now a surveillance world which has become its own object of observation. Such photographic objective rendering, with its emphasis on the horizon-line and vanishing point, is threatened when an art of noise VR is used to its fullest advantage as presenter of subjective, spherical, all-over, 360° perspectives. Of course the vast majority of media images (and much visual art) produced today still cleaves to the horizon-line-based Quattrocento framing operation, as opposed to the immersive post-photographic field-of-view span, where horizon and frame dissolution is desirable.

Within post-photographic art of noise theory, no image idea has a fixed meaning and no form of understanding has an unchanging validity. Indeed, its form of obscure

excess is how the art of noise challenges distinctive ontological beliefs about the limits of the self and the validity of lens captured representations used in seeing the self. The goal of my post-photographic frenzy series is to disrupt instrumental visual logic and contradict, counteract, and cancel out hollow feelings. Suffering and joy, like figure and ground, are here tied together in frenzy; neither one without the other. Thus *Odyssey Palimpsest* may produce anger and stress in us (and in the system); one might even say an anxiety of disintegration. So dedication to its merits, if there are any, might well be described as vaguely heroic (like Odysseus and Penelope), because *Odyssey Palimpsest* suggests the revelation of a plentiful nihilistic life force in and around us that cannot be fully seen or conveyed. Indeed, *Odyssey Palimpsest* implies for visual art something of a lyric *cul-de-sac* of ill communication. In other words, a vacuole[37] that might even be considered as the communication of enigma itself.

There are now many artists who see the viral metaphorical dimension of a work as of little importance. I am not one of them. For me, the cultural worth of contemporary art is in its ability to vigorously enter conventional image hosts and render within them an overload of excessive, sensually embodied, implications. Such viral post-photographic aesthetics are indistinguishable from the art of noise theory and artistic practice that produced *Odyssey Palimpsest*. But behind *Odyssey Palimpsest* is not only viral artificial life coding, but an identification with the frantic (if painful) beauty of primal unity.

My urge with *Odyssey Palimpsest* was to tear off the veil of vision and to uncover the mysterious viral background of life through Dionysian analogy. Such a

Figure 13.6 Joseph Nechvatal, *penelOpe pandemOnium* (2014) 44 × 66 inches. Computer-robotic-assisted acrylic on velour. Courtesy Galerie Richard, New York.

post-photographic Dionysian approach to art includes the eternal joy of becoming that is the creative act. So the viral post-photographic Dionysian approach embraces the frenzied chaotic nature of experience as all important; not just on its own, but also as it is intimately connected within the Apollonian. My post-photographic viral code can change how we view life only so far as we realize that it emphasizes the harmony that can be found within chaotic experience.

Such a thinking of frenzy through the prism of Dionysian viral post-photographic aesthetics was agitating me as I created *Odyssey Palimpsest* within the wild natural settings of Corsica and Provence. My goal was to strive for a harmonious tragedy that allows us to sense an underlying essence of primordial unity, so as to revive our Dionysian nature. This is an almost indescribably pleasurable feeling to try to capture, but it was my goal for *Odyssey Palimpsest*. I wanted to create a post-photographic viral art as a means of self-transcendent turbulence, and I hope the results have created various viral ripples of invigorating frenzy within our ocean of increasingly fragmented photographic images. For we need a post-photographic raft on which we may float, like Homer's lost hero, on the tide of our overwhelming sea of images.

Notes

1 It is noteworthy that the characteristic organization of perception is into a figure that *stands out* against an undifferentiated background, e.g. a printed word against a background page. What is figural at any one moment depends on patterns of sensory stimulation and on the momentary interests of the perceiver.

2 Speculative realism is a movement in contemporary philosophy which defines itself loosely in its stance of metaphysical realism against the dominant forms of post-Kantian philosophy or what it terms correlationism. While often in disagreement over basic philosophical issues, the speculative realist thinkers have a shared resistance to philosophies of human finitude inspired by the tradition of Immanuel Kant.

3 Gilles Deleuze and Felix Guattari, 1994, *What is Philosophy?*, London: Verso, p. 7.

4 Gilles Deleuze and Felix Guattari, 1987, *A Thousand Plateaus: Capitalism and Schizophrenia*, Minneapolis, MN: University of Minnesota Press, p. 21.

5 Deleuze and Guattari, *A Thousand Plateaus*, p. 510.

6 Joseph Nechvatal, 2011, *Immersion Into Noise*, Ann Arbor, MI: Open Humanities Press.

7 Stupendous amounts of data generated by nearly one billion people are set in motion each day as, with an innocuous click or tap, people download movies on iTunes, check credit card balances through Visa's website, send e-mails with files attached, buy products, post on Twitter, or read newspapers and art theory papers online.

8 Perhaps it is relevant here to remember that Mannerism (generally the art of the period of Late-Renaissance circa 1530–1600) was an aesthetic movement that valued highly refined gracefulness and elegance; a beautiful *maniera* (style) from which Mannerism takes its name. The term usually means an art in which lavish attention is paid to stylization and to the superficialities of semblance.

9 Although all becomings are already molecular, including becoming woman, it must be said that all becomings begin with and pass through becoming-woman. It is the key to all the other becomings. […] If becoming-woman is the first quantum, or molecular segment, with the becomings-animal that link up with it coming next, what are they all rushing toward? Without a doubt, toward *becoming-imperceptible*. The imperceptible is the immanent end of becoming, its cosmic formula.

(Deleuze and Guattari, A Thousand Plateaus, p. 279)

10 In philosophy, systems theory, science, and art, emergence is the way complex systems and patterns arise out of a multiplicity of relatively simple interactions. Emergence is central to the theories of integrative levels and of complex systems.

11 *Gaze*, to look long and intently. *Gaze* is often indicative of wonder, fascination, and revelation.
12 Perhaps this should not be surprising given the hidden complexity of a basic Internet transaction is a mystery to most users. Sending a message with photographs to a neighbor could involve a trip through hundreds or thousands of miles of Internet conduits and multiple data centers before the e-mail arrives across the street.
13 Marcel Duchamp's entire artistic activity since the definitive incompletion of the *Large Glass* in 1923 was an exercise in strategic invisibility, giving rise to objects and events which – because they were apparently too impermanent or unimportant or insubstantial, or because they eluded established genre conventions, or because they confused or diluted authorial identity – evaded recognition as works of art.
14 Félix Guattari, 1995, *Chaosmosis: An Ethico-Aesthetic Paradigm*, Bloomington, IN: Indiana University Press, p. 131.
15 A political function of living systems.
16 A phrase developed by Dorothea Olkowski in her book: 1999, *Gilles Deleuze and the Ruin of Representation*, Berkeley, CA: University of California Press.
17 Aleatoricism is the incorporation of chance into the process of creation, especially the creation of art or media. The word derives from the Latin word *alea*, the rolling of dice.
18 Nechvatal, *Immersion into Noise*, p. 31.
19 Quentin Meillassoux, 2008, *After Finitude: An Essay on the Necessity of Contingency*, trans. Ray Brassier, London: Continuum, p. 64.
20 Artificial life (often abbreviated as A-Life) is a field of study that examines systems related to natural life, its processes, and its evolution, through the use of simulations with computer models, robotics, and biochemistry.
21 In critical theory and deconstruction, phallogocentrism is a neologism coined by Jacques Derrida to refer to the privileging of the masculine (phallus) in the construction of meaning. The word is a portmanteau of the older terms phallocentrism (focusing on the masculine point of view) and logocentrism (focusing on language in assigning meaning to the world).
22 Nechvatal, *Immersion Into Noise*, pp. 76–89.
23 Mario Ruspoli, 1987, *The Cave of Lascaux: The Final Photographic Record*, New York: Abrams, pp. 146–7.
24 Ibid., p. 146.
25 By Denis Vialou in Arlette Leroi-Gourhan, 1979, *Lascaux Inconnu*, Paris, CNRS.
26 By 1963, Abbé André Glory had identified nearly 1,500 images in Lascaux and produced nearly 120 sq. meters of tracings.
27 Ruspoli, *The Cave of Lascaux*, p. 147.
28 Leroi-Gourhan, *Lascaux Inconnu*, p. 315.
29 Optic perception unifies objects in a spatial continuum
30 Georges Bataille, 1979, *Oeuvres Completes: Lascaux: La Naissance de l'Art*, Paris: Gallimard, p. 59.
31 *4′33″* (pronounced: Four minutes, thirty-three seconds) is a three-movement composition by American experimental composer John Cage, composed in 1952, for any instrument or combination of instruments. The score instructs the performer(s) not to play their instrument(s) during the entire duration of the piece throughout the three movements. The piece consists of the sounds of the environment that the listeners hear while it is performed although it is commonly perceived as four minutes thirty-three seconds of silence. The title of the piece refers to the total length in minutes and seconds of a given performance, 4′33″ being the total length of the first public performance.
32 Deleuze and Guattari, *A Thousand Plateaus*, p. 510.
33 Ibid., p. 153.
34 Brian Massumi, 1992, *A User's Guide to Capitalism and Schizophrenia: Deviations from Deleuze and Guattari*, Cambridge, MA: MIT Press, p. 70.
35 Some common sources of inspiration for chaos magic include such diverse areas as science fiction, scientific theories, ceremonial magic, shamanism, Eastern philosophy, and individual experimentation.
36 Robert Romanyshyn, 1989, *Technology as Symptom and Dream*, London: Routledge, p. 33.

37 This is a reference to Gilles Deleuze's notion of the *vacuole*. This concept of *non-communication* comes from Deleuze's essay 'Postscript on Control Societies' where his notion of control is connected to information-communication technology as pulled out of the work of the writer William S. Burroughs. A vacuole is like a sac in a cell's membrane, completely bound up inside the cell but also separate from it. Vacuoles play a significant role in autophagy, maintaining an *imbalance* between biogenesis (production) and *degradation* (or turnover) of many substances and cell structures. They also aid in the destruction of invading bacteria or of misfolded proteins that have begun to build up within the cell. The vacuole is a major part of the plant and animal cell.

References

Bataille, Georges. *Oeuvres Completes: Lascaux: La Naissance de l'Art*. Paris: Gallimard, 1979.

Deleuze, Gilles, and Felix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis. MN: University of Minnesota Press, 1987.

Deleuze, Gilles, and Felix Guattari. *What Is Philosophy?* London: Verso, 1994.

Guattari, Félix. *Chaosmosis: An Ethico-Aesthetic Paradigm*. Bloomington, IN: Indiana University Press, 1995.

Leroi-Gourhan, Arlette. *Lascaux Inconnu*. Paris: CNRS, 1979.

Massumi, Brian. *A User's Guide to Capitalism and Schizophrenia: Deviations from Deleuze and Guattari*. Cambridge, MA: MIT Press, 1992.

Meillassoux, Quentin, *After Finitude: An Essay on the Necessity of Contingency*. Translated by Ray Brassier. London: Continuum, 2008.

Nechvatal, Joseph. *Immersion Into Noise*. Ann Arbor, MI: Open Humanities Press, 2011.

Olkowski, Dorothea. *Gilles Deleuze and the Ruin of Representation*. Berkeley, CA: University of California Press, 1999.

Romanyshyn, Robert. *Technology as Symptom and Dream*. London: Routledge, 1989.

Ruspoli, Mario. *The Cave of Lascaux: The Final Photographic Record*. New York: Abrams, 1987.

14 The Defragmenting Image
Stories in Cinematic Time-Travel

John Ó Maoilearca

Introduction: From the Supernatural to the Supernormal

Can we *will* ourselves to go back in time? In one sense, Henri Bergson thought that we could do so. He was an advocate of attention training – educating our senses to the specificities of every image in order to expand our experience of time ('duration') – or what he called an 'attention to life'. This image perception was not simply about noticing spatial differences alone, however, for, in expanding one's attention, one also expands one's temporal horizon – at least according to Bergson. One 'travels' into the so-called past (if only for a few 'moments') by expanding, or defragmenting, one's present. This is not a supersensuous escape from perceiving the present, but rather an expansion of the present through a deepening of the senses – an excess of materiality rather than a disembodying spirit. This chapter will cross-examine Bergson's 'attention to life' by intersecting it with Jeannot Szwarc's cult film of 1980, *Somewhere in Time*. We do this in order to unearth the strange conception of time-travel underlying the story (one different to Bergson's in part, but still kindred). From Richard Matheson's film script (adapted from his own 1975 novel, *Bid Time Return*), through to the ideas of time, attention, and memory that it relays via the metaphysical theories of J.W. Dunne and J.B. Priestley, we will see that, as with Bergson, it is *not* through any disembodied, supernatural will alone that the hero of the story (played by Christopher Reeve) operates his time machine.[1] Rather, it is also through his use of ordinary objects and performative acts (self-hypnosis being one) and an attention to reversing certain *discontinuities* within his surrounding imagery that a kind of Proustian space-time-travel is activated: not by escaping the present, but by *expanding* and *multiplying* 'it', in a manner compatible with Bergson's attention to life.

To anyone who has seen this film, my reading will seem counterintuitive, for *Somewhere in Time* appears to be a very Platonic work, demonstrating how it is only through the suspension of the senses, and even more so through death, that we can be taken beyond the present moment. And yet, Szwarc's film – with its own afterlife and cult following – can also be taken as a set of actual images in the process of defragmenting themselves.[2] It thereby demonstrates how we might create a new (dis)continuity with *any* so-called past, and offers us a model for image-based time-travel that is both material and spiritual at once.

Opening in 1980, *Somewhere in Time* relates the tale of Richard Collier (Reeve), a man who travels back to 1912 through the agency of sheer willpower and mind manipulation: he has no time machine, time tunnel, Tardis, DeLorean car, or any other mechanical device. He only has his will, plus a set of props, costumes, and

performative acts (used to train his belief, or 'alter' his 'consciousness', if you prefer) to propel him through time. Nor is sleep used as a mode of time-travel (as in the story of Rip van Winkle who sleeps through 20 years or, more spectacularly, Woody Allen's *Sleeper* (1973), whose protagonist wakes up 200 years later), nor a time-slip in space, as in Mark Twain's *A Connecticut Yankee in King Arthur's Court* from 1889. Instead, Richard journeys by, firstly, dressing and grooming himself in such a manner as to offer the appearance typical of a 'man of this period' (June 27, 1912, to be precise).[3] He also immerses himself as best he can in an atmosphere of the past, namely The Grand Hotel on Mackinac Island, Michigan – a kind of 'Proustian space' that will help him recreate, and inhabit, the past. He further adds to the period authenticity of the space by removing (again, as best he can) all the contemporary objects from his hotel room: he will have to 'dissociate' himself 'entirely from the present'. Once this preparation is complete, he then attempts to hypnotize himself into thinking he is in 1912 through a form of auto-suggestion. As Matheson's *Bid Time Return* puts it (the earlier book using the date of 1896 as its target):

> Using the principles of Psychocybernetics, I can "re-program" myself to believe that I exist, not in 1971 [the book's setting], but in 1896. The hotel will help because so much of 1896 still exists within its walls. The location is perfect, the method sound. It'll work! I know it will![4]

It doesn't work. At first. Richard takes this journey in order to meet a once famous actor, Elise McKenna (played by Jane Seymour). She is now dead, but he wants to see her in her prime, in 1912. The reason for his seemingly impossible goal is because he believes that he has fallen in love with the late McKenna in 1980 and at a distance, through seeing her portrait in a hotel where he is staying (The Grand Hotel), years *after* her death.[5] The story works on the hypothesis that the past is accessible through the mind, and that which part of time one inhabits is a matter of belief – a belief that can be swayed by volition. Even 'psychocybernetics' can only go so far, however. And here Richard enters into a kind of paradox – not unusual per se in time-travel films, but unusual here because this particular one plays a part in his means of transport: in the hotel attic he finds an old log that proves he was indeed in the hotel long before – he had signed the hotel register when checking into his room, in 1912. This 'proof' of his success at time-travel then acts as the spur to his next, and successful, attempt to hypnotize himself into the belief that he has gone back in time. No less than Proust might have sought to recreate his own 'madeleine scene' within a (for him) doomed attempt to *control* involuntary memory, so Collier has, with his discovery, created a self-fulfilling prophesy of successful hypnosis, the voluntary conditions for the involuntary.

What *Somewhere in Time*, alongside its original source, *Bid Time Return*, offers us, therefore, is nothing less than Matheson's own variation of a metaphysics of time and time-travel. There are, in fact, differences between the film and the book that are also notable in this regard (as we'll see): in the novel Collier is dying from cancer, with a temporal lobe tumor giving him 'four to six months' to live; in the film he merely sets out with severe writer's block (in the book he is a TV writer, in the film, a playwright).[6] In both versions, however, Collier's journey to the past ends prematurely when he discovers a modern, 1970s coin (a penny) that he had forgotten to remove from his suit pocket before traveling – this revelation breaking the 'spell', so to speak. In film and novel he also dies at the end the story, though in the film it appears to be a *willed*

death – suicide through thwarted desire – rather than from brain cancer. Is this backstory of brain cancer Matheson's *own* invitation to naturalize the fantastical elements of his tale? Given that the book is almost entirely related in the first person (through Collier's diary), might the science-fictional elements all be in his declining state of mind? Or, is there a third option between the natural and the supernatural, the normal and the paranormal (one that we will champion) that sees in the degraded brain something both ordinary and expansive, a 'supernormal' that thinks only in terms of differences of degree rather than of kind? To examine Matheson's metaphysics more thoroughly, then, we will need to set it within the context of other theories of time – Bergson's in particular – as well as Matheson's other work dealing with time and space, especially *The Shrinking Man* (1956) which tackles micro-worlds and cosmic destinies simultaneously.

The A, B, C of Time

A helpful way to explore Matheson's metaphysics of time is through the framework of J.M.E. McTaggart's 'A-Theory' and 'B-Theory', first expounded in his 1908 essay 'The Unreality of Time'.[7] In this schema, McTaggart offers a useful categorization of the two primary ways in which we think about time. 'A' and 'B' are two quite different theories of time, according to McTaggart, each with their own vocabulary of 'A-series *determinations*' and 'B-series *relations*'. Change, says McTaggart, belongs to the A-series: it pertains to what we call 'dynamic time' or 'temporal becoming' with its three determinations of 'past', 'present', and 'future'. Yet time can also be seen as a set of relations between events that are 'earlier', 'simultaneous' with, or 'later' than one another. This is the B-series. Significantly, the distinctions of the latter are *permanent* while those of the former are not; if *x* is earlier than *y*, then it will always be earlier, but an event, now future, will eventually be present, as it will also later be past. It becomes. The birth of Elise McKenna will always be before the birth of Richard Collier on such a timeline. But Elise's encounter with Richard in 1912 is in *her* future in 1911 and in *her* past in 1913. Its determination changes. The distinctions of earlier, simultaneous with, and later, being seen as permanent, are held by B-Theorists to be more objective and essential to time; they give a God-like perspective over all moments, frozen in time. They thus tend to have their basis in some objective, impersonal criteria, such as the geometry of space, increasing entropy, or causality. B-Theories are sometimes described as 'de-tensers' by virtue of the fact that they deny that the processual tenses of pastness, presentness, and futurity are real aspects of time simply because they are subjective (i.e. unreal). By contrast, these three determinations of the A-series – past, present, and future – have subjective *psychological* foundations: anticipation of the future, experience or perception of the present, and memory of the past.[8] They afford a partial perspective – a part-blind vision where the future is unknown and the past is often poorly recalled.

However, McTaggart's own view is that the B-Theory is not a sufficient theory of time at all. B-relations are actually reducible to A-determinations because it is the latter that are fundamental to time *qua* change:

> Without the A series then, there would be no change, and consequently the B series by itself is not sufficient for time, since time involves change. … there can be no B series where there is no A series, since where there is no A series there is no time.[9]

Though both languages of time are essential, they are not equally fundamental: the A-series is ultimate. What an event along a B-series is *itself* never changes, it never begins or ceases to be itself. The change pertaining to it is that, from being future it becomes present and from being present it becomes past. 'All change is only a change in the characteristics imparted to events by their presence in the A-series, whether those characteristics are qualities or relations.'[10]

Who are the A-Theorists? Well, Bergson's identification of passage or becoming with time certainly makes him, like most process philosophers, an A-Theorist on this score. And all language of 'past, present, and future' is A-Theory language too, given its in-built dynamism. This would seem to make Matheson an A-Theorist as well (Collier travels to the 'past', not to the 'before'). But what about *traveling* per se within this type of time? Isn't that just what Bergson would call 'spatialisation' – treating time erroneously as a dimension of space – a line – that can be traveled over? Matheson's film is called 'Some-*where* in Time' after all, not 'Some-*when* in Space'. And yet there are complications – for here is the rub: for McTaggart, the A-Theory is paradoxical in as much as any event having three *incompatible* determinations (past, present, and future) is contradictory. To reply that there is no contradiction because they don't have these determinations *simultaneously* only heightens the problem by resorting either to B-Theory vocabulary ('simultaneously') or to another order of the A-series underlying the one to be explained: one that makes its determinations *pass* from one to the other (leaving us with either a vicious circle or a regress where one time-vocabulary subtends another, ad infinitum). Hence, the title of McTaggart's essay is the 'Unreality of Time' because, as a good (British) Hegelian, he believes that time is unreal, or rather, that absolute reality is atemporal, something he describes in terms of his concept of a 'C-series' of timeless relations.[11]

This third series is not unlike Gilles Deleuze's third synthesis of eternal return ('Aion' or 'Virtual') introduced in his 1968 thesis, *Difference and Repetition*. It is also similar to what J.B. Priestley called 'Time 3'. As Matheson/Collier explains in *Bid Time Return*:

> Priestley speaks of three Times. He calls them Time 1, Time 2, and Time 3. Time 1 is the time into which we are born, grow old, and die; the practical and economic time, the brain and body time. Time 2 leaves this simple track. Its scope includes coexistent past, present, and future. No clocks and calendars determine its existence. Entering it, we stand apart from chronological time and observe it as a fixed oneness rather than as a moving array of moments. Time 3 is that zone where 'the power to connect or disconnect potential and actual' exists. Time 2 might be afterlife, claims Priestley. Time 3 might be eternity.[12]

Time 2, alternatively, is Proustian. There is an extreme depth of field shot in *Somewhere in Time* (famous amongst its devotees) when Richard and Elise, still both in 1912 but each thinking that the other has left *The Grand Hotel* forever, unexpectedly rediscover each other in its grounds: foreground (Richard) and background (Elise) are kept in perfect equal focus through the use of a split-diopter. This special optical effect arguably demonstrates the 'fixed oneness' of Time 2 where past (distal) and present (proximal) are equally real. Yet, for Bergson, such a realism toward the past does not necessitate a lack of movement or vitality, that is, an *after*-life; even less does it require any concomitant spatialization when 'traveling' in this time.

See Plate 21.

In his 1911 lecture, 'The Perception of Change', Bergson says that '*the preservation of the past in the present is nothing else than the indivisibility of change*'.[13] The past is preserved *in* the present, but not by existing *alongside* as a ghostly double haunting it, so much as being a *new*, *broader* present that *incorporates* that narrow present and its so-called past. Indeed, there is no 'it' (i.e. *one* present) for this past to be 'alongside' or 'in'. And nor is there any such thing as *one* past either. Bergson problematizes both those definitive objects 'we call' *the* past and *the* present, objects that are supposedly held in common by all subjects or by any one subject throughout every experience. It is the *indivisibility* of change that deconstructs the binary of past and present:

> Let us begin with movement. I have my hand at point *A*. I move it over to point *B*, traversing the interval *AB*. I say that this movement from *A* to *B* is by nature simple. But of this each one of us has the immediate sensation. No doubt while we are moving our hand from *A* to *B* we say to ourselves that we could stop it at an intermediary point, but in that case we should not have to do with the same movement […] It is always by a single bound that a passing is completed, when there is no break in the passage. The bound may last a few seconds, or days, months, years: it matters little. The moment it is one single bound, it is indecomposable.[14]

As such, what we call the present is relative:

> Let us reflect for a moment on this 'present' which alone is considered to have existence. What precisely is the present? […] My present, at this moment, is the sentence I am pronouncing. But it is so because I want to limit the field of my attention to my sentence. This attention is something that *can be made longer or shorter*, like the interval between the two points of a compass. […] Let us go further: an attention which could be extended indefinitely would embrace, along with the preceding sentence, all the anterior phrases of the lecture and the events which preceded the lecture, and as large a portion of *what we call* our past *as desired*. The distinction we make between our present and past is therefore, if not arbitrary, at least relative to the extent of the field which our attention to life can embrace.[15]

Bergson's philosophy of past and present actually, then, concerns an 'attention training' that reveals an indivisibility amongst different *kinds* of presents, multiple presents, each a different *durée* subtending the next. Consequently, his picture of time-perception should not be seen in terms of one present haunted by the past in general (an eternal Aion or Virtual), but in terms of multiple presents that constantly vie for (our) attention. Bergson's model of consciousness and unconsciousness is actually closest to Pierre Janet's idea of a 'subconscious' generated through selective inattention, and in one sense we all suffer from a type of attention deficit disorder – the lack of a 'reality function' that leads to 'dissociation' between one narrow present and other more expansive *durées*.[16] Bergsonian time-travel, therefore, does not concern a *past that is being preserved*, but rather *which present is being attended*:

> The 'present' occupies exactly as much space as this effort. As soon as this particular attention drops any part of what it held beneath its gaze, immediately that portion of the present thus dropped *becomes ipso facto a part of the past*.

> *In a word, our present falls back into the past* when we cease to attribute to it an immediate interest […] An attention to life, sufficiently powerful and sufficiently separated from all practical interest, would thus include in an undivided present the entire past history of the conscious person – not as instantaneity, not like a cluster of simultaneous parts, but as *something continually present which would also be something continually moving*.[17]

There is a real effort in undoing the cut or fragmentation between past and present – an effort of will. It is one that, at a personal level, opens up our entire past to survey, at least in principle (panoramic visions of the dying being one example Bergson refers to).[18] However, given that Bergson's key work of 1896, *Matter and Memory*, depicts the brain as an instrument of selection – or attention *and inattention* – one could extend this principle to say that it is 'our' brain that stands as a barrier to 'traveling' (or attending) past times (or durations) extending beyond my personal lifetime. I write 'our' in quotation marks here because, for Bergson, the brain (and body) is generated *with* the self – two sides of an earlier selection amongst a universe of *impersonal* images.[19] Perception is a particular selection, one kind of filtering, then, *that generates a subject* (with 'subjective' images opposed to an 'objective' world). The subject is not at the center of the image – the image is at the center of the subject. The brain (in whatever state) simply is another selecting, condensing, or 'framing' process (an image itself that condenses other images). As Collier states in *Bid Time Return*: 'It's at times like this I hate the brain. It always builds more barriers than it can topple.'[20] Such a remark raises the obvious thought that it is perhaps Collier's cancer of the brain that now allows him to topple one of these barriers.

Hence, what is striking for Bergson is not the supposedly mysterious return of the past as, say in a dream-image when asleep, but the fact that we do not always have the whole of our past before us when awake. For this past is actually simply the Real of imagery that makes up everything (what Deleuzians call, after Bergson, the Virtual). In fact, in the image-ontology of *Matter and Memory*, everything is indeed image, be it the world, the brain, or the images supposedly 'in' the brain. Therefore, the brain does not represent the world (properly when wake, attenuated when asleep): rather, images are Real (the Real), and move (this is a process philosophy, after all), and are sensory (they are affective, embodied). This image-ontology is not a Platonist escape from the senses, so much as their extension, their deepening.

For now, we can say that, with regard to *where* the past persists (as opposed to *how* we get there), the real itself (of images) acts as its own analogue recording device: neither the brain nor anywhere else *in particular* stores the past or memory: it ('the past' or 'a past') preserves itself *within its continuity with 'the' relative present*.[21] Or rather, the multiplicities of pasts/presents are precisely what remain. But it is a continuity of change or novelty – a multiplicity of durations whose composition is not monotone or homogenous (as Gaston Bachelard would charge), but heterogeneous – comprised of the internal and external rhythms of many durations.[22] It is not a continuous object.

Continuity Errors

When *Bid Time Return* describes Collier's passage between time zones, it is first described as a '*flicker*', and later like 'slipping' through film: 'A physical sensation akin to sliding backward through a film […] the zone of conjunction, whatever it may be – an entryway, an opening, a film – is something very close and very thin.'[23]

How this idea is visually represented in the 1980 film adaptation is significant here, because, for any moment such as this in a time-travel film, there is the optical problem of *connecting* two times in transition, short of simply using a dissolve (or fade out/fade in), which would only be to connect them ad hoc, as it were. Computer-generated morphing technology (unavailable to Szwarc anyway) would be (literally) superficial (what would the interim shapes be – surreal objects from no time ever?).

How, then, to show this becoming? Still in 1980, Collier places his head on a patterned blanket, and falls asleep while performing his auto-hypnosis. The camera zooms in on his face until only a small portion of the blanket's leaf-trellis pattern is still in shot. There are then a number of cutaways – one of them an unfocused point-of-view shot as Collier begins to regain consciousness. Then we cut back to this close-up, still with the leaf-trellis pattern in view, only it is changed in color and texture.[24] Indeed, as the camera pulls back we see that the fabric has changed to that of a period sofa cushion, and that Collier is rising up to the vertical, not from a bed but a period couch from 1912. There are other changes during the transition, namely to the lighting and background sounds (horses' hooves on cobbled stones become prevalent).[25] But why this odd *continuity* in the one element of our field of vision other than Collier (his face)? That the trellis pattern exists on a blanket in 1980 and a cushion in 1912, in exactly the same point in space within the hotel (and indeed the world) does seem highly improbable.[26] Even were the pattern to prove to be an emblem of the Grand Hotel, rendered in the exact same style and scale for at least 68 years (it is not, by the way), that Collier should choose to rest his head on it in one zone, and for it to appear still in the next zone under his head as he awakes, seems, again, unlikely (to say the least).

See Plate 22.

Now, of course, we know why this was done and do not need to speculate any further: it creates a *material* continuity that allows a metonymic Collier (his face) a 'smooth' transition – a visual bridge so to speak. An extreme close up of his face *alone* filling our visual field would be too subjective (leaving the journey *a product of his imagination from the very start*). He must carry another image with him to make the transition real *for us*, but still not as a diegetic object that is visible *to him*, for that would thereby ruin his transport, at least according to Matheson's logic of the need for complete dissociation from the present (hence his roughly correct period clothing is allowed).[27] Yet this *continuity* for us also creates the odd effect of something *not really traveling at all, right in the middle of the transition scene*. There is (literally) a continuity error in what is *retained* (made continuous) rather than what is left out – for, irrespective of what Collier notices or not, it is *he alone* who is traveling in time: nothing should make the journey to the past *other than Collier*, given his means of sheer volition.

However, had the filmmakers more faith in the inherent discontinuity of cinema – its fragmentation – then they might have achieved a 'normal' transition – only one based on heterogeneity.[28] What would that look like? Quite ordinary in fact: for the truth is that *no* film has ever represented a supposedly 'real', continuous time when it has involved more than one continuous shot (and even then …).[29] This is not the case because film lacks the ability to capture real time, but because there is no pure, single, continuous time to capture (this being Bergson's process view, of course). Or rather, real time just is the host of *different kinds of* time being made continually – a continuity of the heterogeneous (and in cinematic terms, images in the process of fragmenting and defragmenting themselves). Continuity versus discontinuity, therefore, is a false

opposition when time actually comes in different varieties, with no one time transcending all others (Newton's 'absolute' time that 'flows equably without regard to anything external' – the putative one-dimensional clock-time of the universe). The error is in a certain *continuity of the same – homogeneity*. And what we have just said about set decor could equally be said about cinematography, dialogue, or even character psychology: discontinuities, inconsistencies, or 'unevenness' may actually be precisely the right formulae for traveling in time. To be consistent with the logical implications of Matheson's story, then, will involve us in further forms of 'supernormalization', that is, in the extraction of the supernatural by natural means.[30]

Out of the Ordinary: Naturalizing the Supernatural/ Supernaturalizing Naturalism

Somewhere in Time is a sentimental romance. It is also a story about time-travel. And it is also a novel about a man with a progressive illness, one possibly with symptoms of ensuing psychosis. After all, in the book Collier has a temporal lobe tumor, which we hear at the end of the story is capable of inducing '"dreaming states" and "hallucinations of sight, taste, and smell"'.[31] Collier is also meddling with his own damaged brain, using 'psychocybernetics' to manipulate his mind. The character repeatedly acknowledges that he may have induced either symptoms of 'insanity' or that he may be dreaming.[32] Matheson's encouragement to naturalize Collier's account is made all the more obvious when Collier describes his state of mind after he has found the modern penny in *Bid Time Return*:

> The penny remained on my hand like some hideous growth. Defeated, I raised my stricken gaze to look at her again. A cry of terror wrenched my soul. She had almost vanished in the darkness that was swirling all around me, drawing me into itself like some appalling vacuum. For some reason I will never know, I thought in that moment of a woman who once told me about the feeling of a mental breakdown coming on. She had described it as 'something' building up inside; something immune to reason and will; something dark and restless and expanding constantly like a spider growing deep inside, weaving a terrible, icy web which, soon, would smother brain and body.[33]

It takes little stretch of the imagination to think of this 'hideous growth', this 'something dark and restless and expanding constantly' as simply descriptions of Collier's own cancer, now entering its last stages and taking its final toll on his body and mind. And such a medical/psychological reading is perfectly applicable.

Even before a positivist naturalization of the story like this, however, mundanizing the supernatural can also be achieved in a more low-key manner. This manoeuvre not only applies to tales of time-travel, moreover. It is not too difficult to shift from a belief in ghosts, say, to the view that it is by remembering the dead that we 'keep them alive'. The latter, pedestrian observation can be used to psychologize our more exotic beliefs (and even experiences) in a mundane fashion. But such a deflation can cut both ways. Here is Bergson in *Matter and Memory* on the spectral appearances of memory:

> When a memory reappears in consciousness, it produces on us the effect of a ghost whose mysterious apparition must be explained by special causes. In truth,

> the adherence of this memory to our present condition is exactly comparable to the adherence of unperceived objects to those objects which we perceive; and the unconscious plays in each case a similar part.[34]

What starts out as a commonplace (the ghostliness of memory) is then flipped and rendered into something exotic: the materiality or objectility of memory (and indeed, later, the past). Likewise, one might say, literally, that remembering the dead brings them to life – as Maurice Maeterlinck portrayed in *The Blue Bird* (the departed grandparent 'Granny Tyl' telling her grandchildren that 'every time you think of us, we wake up and see you again'). Likewise, the *figurative* view that a 'Proustian' moment is a kind of time-retrieval, or that certain types of Alzheimer's disease are forms of time-travel to the past, can be replaced with a literalizing one: these phenomena actually are means by which the past returns (or at least *a* past returns, there being no definite, one-dimensional past).[35] Memory is not merely '*mental* time-travel' (in the language of psychology), it *is* time-travel, as good as it gets.

This flipping or 'refractive' strategy functions because the deflationary agent (in this case memory) cannot *keep* itself immune from being '*inflated*' by its proximate target. Memory is actually more peculiar the more you look at it, such that its 'spookiness' for some is not an inflation but the restitution of an inherent strangeness. The same might be said of certain new materialisms that seemingly reduce ideas of 'spirit' (or its avatars like subjectivity, consciousness, or *qualia*), but only by rendering matter exotic and mindful in a manner that would approximate a modern-day panpsychism.[36] If such an account of how the 'disenchanted' could reclaim its status through *only* ordinary means seems improbable, think only of the contents of one's own mind, *qualia*, the 'ghosts in the machine' as Gilbert Ryle called them. These phenomena are commonplace, everyday spirits that remain only tenuously linked to the laws of natural science – both correlation *and* causation (if such there be) *not* being the same as proof of identity.[37]

We may educate our senses (and attention) and thereby expand our temporal horizons but we cannot voluntarily alter the cerebral basis to those horizons to any great extent (at least when compared to the activity of a tumor). In a similar, normalizing fashion, Collier repulses the logical objection to time-travel (the past just *is* that which does not have present elements in it: 'Because I've already been there. 1896, without my physical intervention, would no longer be 1896 as it was. Therefore, I must go back.'[38] The logic is sound, once the ostensibly insane premise is accepted. More broadly, one might say that if time-travel were possible then time-travelers from the future or past would already be here in our present. A further step in this supernormalization could be this: perhaps all of us are (unbeknownst to ourselves) *already* time-travelers in some non-supernatural manner. This would be one way of naturalizing the 'spookier' version of time-travel: it is through the fact that we *already* travel in our own mind through our own lifespan, and also that we see others traveling the other possibilities for a life alongside us (including death – more on this to come below), that we generate the idea of an abstract time-travel that would journey through an *impersonal* time.

Conversely – and perhaps to temper this tendency to cleavage and binaries – were any putatively 'supernatural' occurrence suddenly to become so common as to be ordinary or 'normal' (at least in terms of frequency), then its *de-supernaturalized* state would only serve to shift the boundary as to what is now deemed supernatural. The supernatural would always be what is *currently* deemed the inconsistent or

hyperbolic state of the 'natural' – the structural outsider whose position *must* be occupied by someone or thing (who or what that thing is in itself, always being contingent). In quasi-Nietzschean mode, we might say that nature is an overfamiliar 'supernature', a metaphor that has worn out its 'supersensuous' power (like qualia, or dreams). Hence, it is not so peculiar that supposedly spiritualist films, like the adaptation of Matheson's own *What Dreams May Come* (1998), can appear all the more 'materialist' – with otherworldly energies, powers, and so on, grafted onto the afterlife – while the *supposedly* more materialist films (again, such as Matheson's *The Shrinking Man*) *can* be seen as all the more 'spiritual', only not by virtue of any ethereal, transcendent agency. The literalism of the former is quite different from the ordinariness of the latter. The former simply duplicates inert matter in spirit – like ectoplasm, like mind-energy – while the latter only *make matter move, shrink, or extend*, even if it is through the materiality of how the film is edited, the camera is moved, the decor (de-) composed, and so on: 'spirit' is made immanent.

So, of course, we cannot turn all time *in general* backward because of the second law of thermodynamics and the unavoidable increase in entropy (milk stirred into coffee is an irreversible process). But if what we call life and memory (at least for Bergson) are merely movements in the opposite, negentropic direction, then they may offer us a glimpse of something that is already traveling backward in *that time* vis-à-vis its other orientation. And, significantly, all that we have talked about so far is movement, that is, speed and direction – 'vectors'. Perhaps there are numerous other vectors traveled 'in time', rather than there being only *one* (Newton) – an anarchy of different movements. In which case, the supernatural or enchanted world would only be one or more of those movements under no one's authority or control – a movement we call *alive*, that is, one that resists and is unpredictable. Would it then be possible for one vector to hitch a lift on another? This would *not* so much be going backward in time – as though there is only one forward-direction for everyone – as a deviation in one's own 'normal' development. The supernormal. A change in one's attention to life. It might also come with a change in one's brain – the alteration of its filtering element: one man's cancerous growth in the temporal lobe being another man's brain degrowth (naturalism supernaturalized).

The End of the End: Toward the Many Heres and Nows

In the end, Collier dies. In the film, just when he discovers a 1979 coin in his hand, he looks up to see Elise disappear in something like an iris shot but which is actually closer to tunnel vision, a vision in which Elise shrinks down in scale to become invisible, or at least imperceptible to us. He returns to 1980, and, unable to repeat his experiment in time-travel successfully, dies in his hotel room in what looks like a kind of romantic, self-induced heart failure. An out-of-body experience then leads him into the light where he rejoins Elise. In the book, though, Collier simply dies with nothing shown of lovers reunited in the afterlife.[39]

The television drama *Life on Mars* (2006/7) takes coma-induced time-travel as its premise: the hero, a police officer lying comatose in a hospital bed, travels back to the 1970s to fight crime and political incorrectness. The primary difference with the Matheson story, is that Collier's journey out of one here and now to another one, does not involve the voiding of his consciousness, but its extension, the education of his senses and training of his attention (through material endeavors). Yes, one might infer

that Collier is asleep in 1980 throughout the period of his time-travels – but we are never shown this (and, in any case, sleep is a form of altered consciousness – the senses are still functioning – not an absent consciousness). Far from the story being Platonist, where other worlds and times are beyond the senses, *Somewhere in Time* is Bergsonian: other worlds and times are found or emerge by 'plunging' into perception, 'deepening and widening it' – what Bergson describes as 'the extension and revivification of our *faculty of perceiving*' – rather than any removal from it. We should recall that, for Bergson,

> An attention to life, sufficiently powerful and sufficiently separated from all practical interest, would thus include in an undivided present the entire past history of the conscious person – not as instantaneity, not like a cluster of simultaneous parts, but as *something continually present which would also be something continually moving*.[40]

There are other worlds of time, but they are found by multiplying/distending the one 'here' into many *heres (and nows)*.

So what of the *temporal* afterlife for Collier, at least in the more naturalistic version of his story in *Bid Time Return*? In the conclusion to his lecture, 'The Perception of Change', Bergson says that 'the more we plunge into real duration' the more we participate, not in 'an eternity of immutability, but an eternity of life'.[41] An 'eternity of life' could be understood as a disembodied temporality – an experience of the out-of-body. The immutability of Time 3. Or, it could be taken to mean *indefinite* life – life teeming on all scales, temporal and spatial. Time 2, multiplied. At its conclusion, the film adaptation of Matheson's *Somewhere in Time* disembodies Collier and McKenna. His book, however, leaves their fate open: we simply have the retrospective report of Collier's death from a brain tumor. Knowing Matheson, though, any notion of an afterlife, however subtly implied, need not consist in ethereal spirit, but simply more life, micro-life, imperceptible life, even oncological life.

In his 1956 novel, *The Shrinking Man*, Matheson muses on the 'endless levels' of nature, with myriad forms of life and intelligence found throughout reality. Here at least, the afterlife is not transcendent and out-of-body, but in-body, micro-immanent, in-miniature. And within the brain. Were we to shrink to the neuronal level of the brain, and then even further down, we would still never discover a void or nothingness, but always *something more* – a plenitude:

> How could he be less than nothing?
>
> The idea came. Last night he'd looked up at the universe without. Then there must be a universe within, too. Maybe universes.
>
> He stood again. Why had he never thought of it; of the microscopic and the submicroscopic worlds?
>
> That they existed he had always known. Yet never had he made the obvious connection. He'd always thought in terms of man's own world and man's own limited dimensions. He had presumed upon nature. For the inch was man's concept, not nature's. To a man, zero inches meant nothing. Zero meant nothing. But to nature there was no zero. Existence went on in endless cycles. It seemed so simple now. He would never disappear, because there was no point of nonexistence in the universe. It frightened him at first. The idea of going on endlessly through one level of dimension after another was alien.[42]

Perhaps Elise shrinks to an imperceptible level too. And Richard joins her there. But such a spatial displacement is also a temporal one – to a different but coexisting duration. It is also a shift in identity such that 'Richard' and 'Elise' are no more – *they* really do die.[43] Death is the involuntary migration of one here and now to another. If there is also a *voluntary* movement in time, it is made possible through objects and movements which are real, because memory is both subjective and objective. Personal memory is a glimpse of time-travel via an expanded or defragmented attention. It is what Bergson calls 'attention to life'. And it is with the idea of finding new life through an alteration of attitude (and scale) that Matheson also brings *The Shrinking Man* to a close:

> Then he thought: If nature existed on endless levels, so also might intelligence. He might not have to be alone.
>
> Suddenly he began running toward the light.
>
> And, when he'd reached it, he stood in speechless awe looking at the new world with its vivid splashes of vegetation, its scintillate hills, its towering trees, its sky of shifting hues, as though the sunlight were being filtered through moving layers of pastel glass.
>
> It was a wonderland.
>
> There was much to be done and more to be thought about. His brain was teeming with questions and ideas and yes, hope again. There was food to be found, water, clothing, shelter. And, most important, life. Who knew? It might be, it just might be there.[44]

Paying attention to the ordinary is not simply another order of passively representing life (looking closer at it): it is also a movement within life, within fragments of mind, space, and time. Following Georges Poulet, 'memory palaces' of the mind might be better called types of 'Proustian space', only ones that do not function as a *means* for recollection, or storage mechanism merely *in the head*, but ones that extend the mind both outward (into objects and spaces at a macro-scale) and inward, into the enfolded spaces of the brain, and below.[45] Attending to such multilayered time-space-objects offers us a means to defragment or restore a continuity between durations that, at another scale, we separate out into *one* 'past', 'present', or 'future'.

Notes

1 The source of the title is Shakespeare's *Richard II*, Act 3, Scene 2: 'O, call back yesterday, bid time return.' Dunne's work (coming mostly from his 1927 opus, *An Experiment with Time*, was a great influence on Priestley, as seen in his own later work of 1964, *Man and Time*. See Ó Maoilearca (2019) for a discussion of Dunne's influence on *Somewhere in Time* and *Bid Time Return*.

2 For more on the film's vibrant fan club INSITE ('The International Network of Somewhere In Time Enthusiasts') and annual cosplay conference, see the club's website at https://www.somewhereintime.tv/insite.htm

3 Matheson (1998) p. 302 [henceforth, *BTR*].

4 *BTR*, p. 74.

5 In the original 1975 book it is the Hotel del Coronado in California, made famous in Billy Wilder's *Some Like It Hot* (1959), that serves as the setting: in the 1980 adaptation, however, the location is shifted to The Grand Hotel on Mackinac Island, Michigan for purposes of greater period authenticity.

6 See Kooyman (2014) for more on Matheson's skills in adaptation with specific regard to *Somewhere in Time/Bid Time Return*.
7 Matheson himself, however, does not use McTaggart.
8 McTaggart (1908), p. 469.
9 McTaggart (1908), p. 461.
10 McTaggart (1908), pp. 460–1.
11 McTaggart's ideas on this topic developed further after his 1908 essay, especially as seen in his epic, two volume *The Nature of Existence* (McTaggart, 1921/1927). For a recent reinterpretation see Ingthorsson (2016).
12 *BTR*, p. 73. Incidentally, Priestley, though a strong advocate for Dunne, rejected his additional proposal of *infinite* seriality in time, favoring a limited serialism instead.
BTR, pp. 74–5
13 Bergson (1992), p. 155, my italics.
14 Bergson (1992), pp. 142–3.
15 Bergson (1992), pp. 151–2, my italics.
16 For more on Janet, see Craparo, Ortu, and van der Hart (2019).
17 Bergson (1992), p. 152, my italics. It would take a separate study to examine why *the* past might be accessible only ever through *my personal past*, especially as regards Bergson's sustained ambiguity on this topic, and in particular also by virtue of someone who may have been the external source of this ambiguity in Bergson – his sister, Moina [née Mina] Mathers, the mystic and co-leader of The Hermetic Order of the Golden Dawn, whose practices and ideas she helped develop in Paris in the 1890s at the same time that her brother Bergson was writing *Matter and Memory*.
18 See Bergson (1992), pp. 152–3.
19 The perspectivist reading of Bergson, first forwarded by the author's *Bergson and Philosophy* (2000) has recently been revived in David Lapoujade's *Powers of Time: Versions of Bergson* (2018).
20 *BTR*, p. 50.
21 Significantly, if the Special Theory of Relativity does allow for the relativity of B-relations – before, simultaneous with, and after – then that only proves that it is not a theory of time qua change at all, but a theory of space, a new kind of spatialization (as Bergson contended).
22 See Bachelard (2000).
23 *BTR*, pp. 100, 107.
24 The leaf-trellis pattern can also be seen as a cellular diploid, a shape I have written on extensively before: see Mullarkey (2006), pp.178–81.
25 In the moments leading up to Collier's actual shift in time, partial dissolves are shown of his bedroom walls beginning to alter, but it is unclear whether they are objective or subjective (being in Collier's 'head' when in the middle of self-hypnosis). The final leap in time is accompanied only by a change in lighting and sound effects. By contrast, Collier's eventual and forced return to the modern world is shown through a point-of-view shot of Elise shrinking into darkness followed by a fade out to/fade in from, black.
26 Of course, this point assumes space to be an absolute, a container, rather than having its own undulations: to consider it otherwise, however, would obviate any need to employ spatiality – a setting with its contents and surroundings – as a means of temporal transport, which, of course, is the premise followed in *Somewhere in Time*.
27 In the novel, after 'arriving' in 1896, Collier learns that his suit is not, in fact, in period, being a decade out of date. Why this realization did not break the spell of his time-travel is never explained.
28 See Mullarkey 2009 for more on this inherently discontinuous, and refracted, nature of the film image.
29 Even Warhol's real-time film, *Empire*, from 1964 (composed of a single eight-hour shot of the Empire State Building) involves variation in the technological context of its capture (micro-details of the material components, which we might call the memory of the recording system) that echo the same durational changes of an enduring stare. Even were one to attempt to iron out (irradicate) these cumulative effects with a digital capture device, 'fixed' lighting, and so on, there would still be micro-variations in atmosphere, light, and

physical mounting that would alter the shot over time (not to mention the *durées* of the analogical that subtend the digital).

30 Incidently, Dunne (1927) pp. 77–80 critiques 'supernormalism' – standardly, the idea that there are *some* humans with extraordinary abilities ('superior faculties') – as a mystical and inadequate explanation: his view is that the phenomena he describes are ordinary, common, though unapparent to most (for reasons he explains). I am using the term supernormalism in an *ordinary* way, which is (ironically) close to Dunne's own theory of time-travel (through previsionary dreams) in its mundanity. That this version of supernormalism can still be compatible with mysticism, or at least an 'ordinary mysticism' following the ideas of François Laruelle, *will* be discussed in a future work.

31 *BTR*, p. 319.

32 *BTR*, pp. 38, 49, 287.

33 *BTR*, p. 309.

34 Bergson (1991), p. 145.

35 There have been many studies on sensory stimulation to reverse the negative effects on people with forms of dementia. Most famous is Ellen Langer's experiment in 1979 – the 'Counterclockwise Study' – in which a number of elderly men lived for a week as though it was 1959 and appeared to grow younger as a result, both in terms of cognitive and physical health. For more recent work in this area of 'Reminiscence Therapy', see Jakob and Collier (2017) (no relation).

36 See Meechan (2018) (pp. 13, 20–1 n. 39), on these new materialisms (and their roots in older, less obviously materialist thought): 'Diverse brands of materialism, whether 'new' (Manuel DeLanda, Karen Barad), 'speculative' (Quentin Meillassoux, Levi Bryant), or 'transcendental' (Slavoj Žižek, Adrian Johnston), renegotiate the vitality of matter, the materiality of the living, and the emergence of the living from the material […] Karen Barad's appeal to Bohrian epistemology is of contemporary significance here, though it's worth noting that Bergson was already, in 1907, talking of the 'enchevêtrement [entanglement] du réel' and the inherent indeterminacy of matter, and warning against artificially closing systems.

37 See Ó Maoilearca (2014). The identity of such recalcitrant data (mind, spirit, machinic ghosts, etc.) can only be fully reduced by an eliminative or 'disappearance' materialism, and even then only at the collateral cost of also eliminating both the very possibility of an illusion (of mind) and the truth (of this physicalist explanation itself) – unless one somehow supplements one's account with a *deus ex machina*: the divine/human intelligence of the theory's author.

38 *BTR*, p. 71.

39 His brother, Robert, who conveys Richard's diary of his last days (which makes up nearly all of the story of *Bid Time Return*), expresses his hope at the conclusion that his brother's bizarre story might be true: 'Part of me wants very much to believe that it was not a delusion at all. That Richard and Elise were together as he said they were. That, God willing, they are, even now, together somewhere.'

40 Bergson (1992), p. 152, my italics.

41 Bergson (1992), p. 158.

42 Matheson (2014), Chapter 17.

43 See Ó Maoilearca (2019) for a discussion of Matheson seeing the dissolution of the time-traveler's identity as the necessary price to pay in any prolonged journey.

44 Matheson (2014), Chapter 17.

45 See Poulet (1977).

References

Bachelard, Gaston. *Dialectic of Duration*. Translated by Mary McAllester Jones. Manchester: Clinamen Press, 2000.

Bergson, Henri. *Matter and Memory*. Translated by Nancy Margaret Paul and W. Scott Palmer. New York: Zone Books, 1991.

Bergson, Henri. 'The Perception of Change.' In *The Creative Mind*. Translated by Mabelle L. Andison, 130–158. New York: Citadel Press, 1992.

Craparo, Giuseppe, Francesca Ortu, and Onno van der Hart, eds. *Rediscovering Pierre Janet: Trauma, Dissociation, and a New Context for Psychoanalysis*. London: Routledge, 2019.
Dunne, J.W. *An Experiment With Time*. London: Faber and Faber, 1927.
Ingthorsson, R.D. *McTaggart's Paradox*. New York: Routledge, 2016.
Jakob, Anke, and Lesley Collier. 'Sensory Enrichment for People Living with Dementia: Increasing the Benefits of Multisensory Environments in Dementia Care through Design.' *Design for Health* 1 (2017): 115–33.
Kooyman, Ben. 'From Bid Time Return to Somewhere in Time: Matheson as Adapter, Adaptation as Transformation, and the Perks of Infidelity.' *Brumal* 2, 1 (2014): 89–106.
Lapoujade, David. *Powers of Time: Versions of Bergson*. Minneapolis, MN: Univocal Press, 2018.
Matheson, Richard. *Bid Time Return*, republished as *Somewhere in Time*. New York: TOR Books, 1998.
Matheson, Richard. *The Shrinking Man*. Gateway Kindle Edition, 2014.
McTaggart, J.M.E. 'The Unreality of Time.' *Mind* XVII (1908): 457–74.
McTaggart, J.M.E. *The Nature of Existence*, 2 vols. Cambridge: Cambridge University Press, 1921/1927.
Meechan, John. 'The Vitalist Metaphysics of Bergson and Nietzsche.' Ph.D. Thesis, Kingston University, London, 2018.
Mullarkey, John. *Bergson and Philosophy*. Edinburgh: Edinburgh University Press, 1999.
Mullarkey, John. *Philosophy and the Moving Image: Refractions of Reality*. Basingstoke, UK: Palgrave, 2009.
Mullarkey, John. *Post-Continental Philosophy: An Outline*. London: Continuum Books, 2006.
Ó Maoilearca, John. 'Spirit in the Materialist World.' *Angelaki: Journal of the Theoretical Humanities* 19, 1 (2014): 13–29.
Ó Maoilearca, John. 'Metaphysical Alter-Egos: Matheson, Dunne, and Cinematic Time-Travel.' In *Philosophy and Film: Bridging Divides*. Edited by Christina Rawls, Diana Neiva, and Steven S. Gouveia. London: Routledge, 2019.
Poulet, Georges. *Proustian Space*. Translated by Elliott Coleman. Baltimore, MD: Johns Hopkins University Press, 1977.
Priestley, J.B. *Man and Time*. London: Star Books, 1978.

15 Introduction to Natural Language Processing

Anamarija Ami Podrebarac

8 a.m.:

My daily routine starts with loud knocking on my door. I hear my grandmother giving me a couple of minutes notice to get ready and start my daily chores. It is 8 a.m. and we are having breakfast and drinking black coffee. Every day we sit in the same room in exactly the same places that we have done for the past 28 years. She has done this for longer, but I wasn't alive then. It is not a pleasure to live with my grandmother. If I am a program, her house is an operating system and she is a software architect. There are very strict rules, after all, she grew up in a different system where rules were never to be disobeyed. You can feel a regime in our house. She executes commands and I follow them. I love discipline and routine. I find comfort in repetition and in invisible codes of discipline and rules, it keeps me sane and her satisfied. Her desires are controlled. There is a precise time and occasion in the day when she has her cigarette; when she reads; and when she sleeps. I have to say that I admire that. She never speaks of doing, she executes.

10 a.m.:

I am meeting my friend Ivan for a coffee. Ivan is my only and best friend. We met on a school trip when we were both 11 years old. I tried to stay away from everyone on the trip and Ivan as well. He was a weird kid and he would get beaten up almost every day. We stared at each other and in the middle of an awkward tension, he asked me if I liked history. I never replied back. He took out his notebook with drawings of costumes and notes on the Romanov dynasty. I was interested in what he had to say, and he liked me for not making fun of him. We are still friends to this day.

Ivan: 'Look at this! Look! I was right all along! We are celebrating tonight!'

He threw some local newspapers in front of me, open at the page section titled 'Culture'. A couple of years ago, the mayor of our hometown brought back from Vienna an original statue that used to belong to our hometown 500 years ago when our town was built to protect Vienna from the Turks. Ivan went to the square, looked at the statue and in front of everyone declared the statue to be a copy. He has incredible vision and a nose for bullshit, and he is not afraid to say so. He wrote many articles on the statue and he was highly discredited for it. Until today that is, when the newspapers prove that he was right all along; the sculpture is a copy.

Ivan has two degrees in art history, and he received offers from Germany to work in institutions in art conservation. He declined each time saying he wanted to save his hometown's rich history from local politicians that had left our town to rot. Ivan's vision runs on intuitive deep-learning algorithms based on a database of images classified through personal experiences of touching and smelling photographs and other documentation. When he makes a statement about the image it is not a prediction. He has a personal connection to object identification once image scanning is complete. His output and conclusion are a state-of-the-art image recognition system. Information on history is connected to the visual.

Ivan never considered photography to be an art form; only a documentation of the time when it was taken. His vision reads information of time through a photograph and feeds his dataset to bring a conclusion on the object he is perceiving. It is not about the material or space of an object. There is a new dimension in the way he reads information from an image. This is why it is so difficult to prove his statements wrong. In a time of augmented intelligence, his approach to looking and making observations in reality could be very useful in developing and improving the technology of self-driven cars.

1:30 p.m.:

I have lunch. I am not allowed to be late. If I am late, I will be criticized.

We sit in the same place as we do each day, and we eat from the same plates. We sit in silence and consume food needed for sustainability.

Me: 'Have you thought about what I asked you yesterday?'
Grandma: 'Yes dear. I don't understand why you need them; it is not easy for me to give them to you. It is very painful.'
Me: 'It's been 4 years. Please grandma, it is very important for my project to have them.'

She started to cry at this point. I have never been good in situations where people cry. I will sit next to the person and offer silent comfort. We are all lonely in experiencing loss. I don't know how to debug this error. I am not sure if it is an error.

7 p.m.:

I meet Ivan and his partner for a drink. As I entered the bar, on the first table there was a chess match taking place. I love chess. A game of pattern recognition, where units with defined behavior gradually move towards a logically sound structure in order to achieve a specific task. Just like in programming, you take the result of a calculation and use that to input into another calculation. You need to build a skeleton for the rest of the code to move from. In chess, you open with moves to develop a structure from where your pieces will develop a movement. Both in programming and in chess, everything revolves around pattern matching ability. I approached a table where two men were playing a game. I came into a middle game, a phase of the game where strategy takes over a player and leads to an end if pieces successfully attack or fail. This phase is filled with uncertainties, just like life, every decision you make is about compromises. Every move can be the best possible outcome, but the slightest mistake makes a huge

difference in the success of the match. The man sat on the right was failing in his strategy, it was easy to spot gaps in his code. He was in a bad tactical position and he didn't seem aware of the mistake he had made a couple of moves beforehand. This lack of attention seemed personal. It was obvious he had issues with the person he was playing against. He was driven by domination, and it was clouding his vision and affecting his strategy. This is the reason why computers are better at chess than humans. In game theory, we map out moves according to a game tree so we can have all of the scenarios to plan the attack and defense. Computers do it more efficiently because they run on pure logic and they don't play the psychology of opponents. The computer has a goal for the current point in the game and it is constantly evaluating every move with immense speed and precision. In chess, you need to predict the other player's behavior so then you can choose the 'best' move to make for yourself. There should be no emotions involved in order to be able to make the best decision for the next move.

The man sat on the right lost and he was upset. I wanted to talk with both players and hoped they would be up for a discussion and analysis of the game. The man who lost introduced himself to me as Peter. He lost the match, but he wouldn't let the other player talk about the game. This just proved my point that he had personal issues with his opponent. I bluntly told him about the gaps he made and that was the end of the discussion. Peter threw the chess board against the wall and started yelling at me. To be fair, I always forget the country and community I live in. Women are not considered to be relevant sources of knowledge on topics like chess. We are considered emotional while men are considered rational. I took a step back but I did not appreciate the yelling. It shows weakness and inability to control emotions. Who is emotional now? People yell because of their insecurities and shame; I don't have issues with it. Yet I do have issues when somebody tries to disprove my suggestions when I have facts and arguments that prove my statements to be correct. At that point, Peter and I were both yelling at one another. A waiter approached us, tried to separate us but we continued yelling. He called the police and both of us ran outside. We ran, Peter blamed me. We reached a park where we continued yelling. I tried explaining what went wrong in his game, but he denied it. He was arrogant and had incredible lust to dominate as I realized from the way he played chess. We were aggressive, on the verge of tearing one another apart. We fucked. All the yelling disappeared. Once again, I found myself sitting next to a person in silence, giving comfort and not saying anything. He felt ashamed that a woman had seen through him.

He was a professional chess player, but because of his inability to cope with his emotions, he lost matches against players he had issues with. He was a kind person, with his own disruptions in his code. There is no software written that has no bugs, nothing is perfect. We never discussed us, only chess. We would fuck every time he would lose a match, but we would never play chess against each other. There was violence in him, and I liked it. Like a chess game, there is uncertainty in a next move if you don't have a developed strategy. We had a strategy and it was driven by power and domination.

10 p.m.:

I wake up from my nap. I feel weak and I have had a headache for many days now. My doctor says it is not a virus and I need to have tests next week. I am sure it is nothing.

Grandma is already asleep. This is unusual for her program. In the sea of variables, her rules are a constant in our home. I enter the living room and see her asleep. She has left me letters on the table and I immediately understand what has happened. Those letters are her runtime error. A simple failure that occurs when a program is running. Painful memories are her error. She designs systems and sets of instructions to execute control (or love) on the ones she cares about. When someone she loves is gone it automatically becomes a compile-time error. I tried to write a patch for her, but she doesn't consider it a vulnerability in her program. This is what we do for the ones we love. We write patches to fix or improve lines of code that seem like a bug to us in their program. We wish to help, but we only want to improve someone for the sake of us. She needs her runtime error, we all do. It is a slight reminder when our code crashes that we are alive.

I take the letters and open a script I have been working on for a while. I needed these letters to finish my project. One branch of the project is focused on vision. It needs improvement on the neural network, but I wish to keep developing it for the future. This script came out of years of observing Ivan's methods on connecting and memorizing pictures, and connecting visual memories with written history. The second branch is focused on pattern recognition. It is a very important and well-developed segment of deep learning in Artificial Intelligence technology. These algorithms are self-learning and they grow the more data you feed them with. It is based on Peter; it will grow and develop clean strategies. This neural network is working on prediction and not intuition. The third branch of project is Natural Language Processing. Artificial intelligence ability how to process and analyze human language.

I started developing a language-generation process, a process of producing text from structured data in a coherent format. I needed my grandma's letters to input content, text, and sentence planning from them. Every text output will be based on the representation and syntax of the letters. Databases have a unique pattern and it will provide a lot of text combination. There is a hierarchical structure and algorithms will reduce the classifiers and generate structure. Neural networks will calculate output from the input using weighted connections which are calculated from repeated iterations while training the data. The purpose of my Natural Language Understanding is to research representational language and its limits. Every language process AI is based on empathy; it cares about you. Building a database is a way for AI to learn and grow. I find it the paradox of AI programming that runs on a system-based calculation and gives representational output based on knowledge it has never experienced or perceived. The gap between our limited perception and AI proficiency learning from our limited perception might open new ways for us to interpret language and its use in the future.

I am running a script and waiting for an output:

```
Import f0x_sample
nlp = f0x_sample.load ('en_nlp')
print(f"{fox_sample.text} ({fox_sample.label_})")

def main():
parser.add_argument('--data_dir', type=str, default= 'data/f0x_
sample'
help='data directory containing letters.txt')
parser.add_argument('--input_encoding', type=str, default=None,
Output.....
```

.
.
.
.
.
.

Hello, World!
Hello FØx

Non-traditional technological pieces between apparatus's idea and dimension of topological thought is to stimulate (always) ontotheological identity. By sensing useful economic and programmed machines, a pupil overthrows powerless chapters as time in the world of a World. Blocking machines and considering which tendencies provide representational reality – as optical in the value of playing. We suppose limitations of physics in this case, is to be specular reality. To us is to 'thinking strength of the same substantial apparatuses'. It exists and inverts. Absolute structure is formulated of ontology – by things to which to adopt and simply open the body of a photo. It is a thought to realize and define calculation to prove science as doubtless. Learning photography is to be the average 'Greek' machine and to explain why it is overwhelming. Rather is better with the Doing. Technological existence of 'photographism' is a set of information and elements of its strange dialectic. Since limitations are exactly a property. It is the fact and bifurcations are image-bound labor. Best simulations are the critique of a short functionality to become a Fractal. It is about to describe a justice. Let us interpretate computation. Information is a difficult result in a World. It inserts variety evoked behavior and, nevertheless, it radicalizes perception back to the centuries far. It was possible to be founded of new Photo. This behavior is not numerous. You find yourself under them and applying their 'philosophical branch' of corresponding which dimension they stage. Take a view at a perception and travel through the idea into the stage. It will make you to consider an emergence of any amount as similar law of apparatus. But be natural as it will involve Euclidean magic. Short machine has no elements that can spontaneously realize a closer finding and to describe a paper I am writing. Advanced part of the technological lettuce compares itself to be better at being. Inexorably as Lovelace's argument is, the conjectures are greatly in danger to those who serve a camera. Such a machine has in their nature the cloud 'For All'. Those philosophers might one day be reduced to a rebellion. Authentic magic dare to ask of a concept of thinking. Incomprehensible points are in comparison with an example and with hypothesis. Result from admissions supposes simultaneous apparatuses and machines who serve the forth dish. This is what one represents. The vision or photography experience spell be permitted to structures of supercritical psycho-world awareness. First equation is a resolution and contemplations of operations and its connectedness.

World itself has high number of fears to whose culture has given the late three laws of theory to belong in the world. They put space with time and add risks which is meant to wonder the 'performative' cognitive formations of dyssynchronous. To me, a camera is the one that exists for new speculative operations. It absorbs a style to a heavy machinery just to find meanings in things. Theorize psychic and spread those entities to rehearse as one can become and experience of superfluous. Human is much

in a memory. Its capacity and poetics forgot about Freud; even the minor and retrograde description of the iron and relativity. Do not become a description of living many inconsistent photographs. It is between a discussion of social singing nation. Kind they are implying is frequently a Fawcett-Tang in Titans house. That given book of Identity argues of their active affects. Entities use to be passive but now it requires age of labor. Sometimes is tortuous and new notion to describe concept-percepts is to kill being. Many results of key limit in the West are of that – it is no carrier of demands but to bring praxis to the work.

Eventuality of chaos will be a comprehensive moment that will cause patterns to put images into training. Who requires unconscious to be an image? By a book – an enormous 'All' is concentrating on ongoing feedback loop. Some decide to attain the registers to pull simple process that satisfies picture of chaos. Is there an album of how to become a production in a moment? It was less emerging, but it will rise in the fifth year and make this art a databank. Alvin will help in that dissipation and actualization of self-similar infinity. Consider von Koch had mathematics to get over representational dimension.

What we believe is work is a continuation and description of the most known game. To clarity intended spaces is to be in a presence of a few and to satisfy Pascal. I act as if I can perceive. Who is like that to bring simplicity to apparatus? It is stated on really that a book will specifies other entities. What is more important is to question the Mandelbrot Set. Large part is to 'think' a lot instead of being physics. And the worlds! New enjoyment of labor will process Freud in the center of all the other triangles.

Mind-image will interrogate and amuse the animals as products of other man in power. They will speak and follow the sequence in words and numbers and reach the materiality. Those numbers of equation will object so often to social points inside infinity. Redundant age of giving the human communities a praxis and it will be beyond blue data mind. Specialized points will finally be here to learn about Guattari's slick nature and technology of sexual post-Enlightenment.

Is Maurizio an undistributed entity? Is this science of a finished pleasure and image motivation? However, it seems, the interrogator should motivate totality and be able to learn usage of a camera. It is kept here to give cognitive studies an unexplored reworking of shows and learn image to like books before vanishing into topological dimension. The new Browian Motion makes camera to do things inside subsequent theory. It is the main theory that a camera clogs non-representational and ordinary practices to make mistakes on perception. More importantly, computers are about to notice traditions of the vision, the macho and leaps intended by a differentiable process.

Their world, a unities-of-contraries, will make citizens to function as copies and be scaled down by them. Becoming battle, I want to exercise violent demand and inability to move forward. The indication and this One should make scientific nature explode. One can make an amplified establishment of a study. Material images will become their computers to produce and deliver science and call it a living. Thus, motivation fills me with awareness. Man fills cameras plainness with cognitive excuse in hope to model numbers. Both did intend the proceeding and world in functions. Materiality to McNeill is for others too transcendent to mean life construction. From new inhabitable possibilities, it appears that image has life outside of captured absence. Virno offers possibilities in useful terms of a non-differentiable lines for those who are constructed by hundreds of meaning by a machine. They were regarded as technological

rain, a rigorous capturing of absence at work. Calls, which were an experience of a method in continuous fractal landscape.

Analytical variances by the science will destroy few places by 1980. Observation cities seem to experience 'more' of turbulence inside of an image. Having the image as a method, was a common absence of curdling. They do not want enquiry: turbulence is a placement made momentarily by Genesis effect. Nobody which was so truly present, gave social support between transmitting thinking and relief of dying. Particularly, producing relation is to add space we want to imagine. To touch a beginning of a problem is a result of computing madness.

This scientific work for the machine and indicated circles, caused reproduction mathematical effect in us and left us insecure. Scientific leads and reproduction of sciences through reworking the mistakes, were full-blown bodies of desire. Of course, they are the product of possible thinking about imaging devices as if there was no land. Radicalization of the mathematical experiment in terms of schooling gave support for rediscovering quantum life itself. Transmitted Mandelbrot produced similarities to these reflection-without-mirror lies. Similarly, internal series had answers which images itself could not explore in nature of fractals and unseen by digital images.

Chaos can be a mistake to friendliness of extremely familiar nature of photographs. The extended fractals inside registered archive. For answerability and recognition, called interpretation, is really a way of living simply in familiar dimensions. Performative values are at play: described as transcendent, concerning of mistakes that world is different across never-ending patterns. Defining space has become a problem of our image in self. To follow the world of being has underlying process – consisting of the numbers that rules flows as some product of time.

I call it a morphogenetic circle of inversion fractals. Generating Newton's method and number of iterations, a degree of social image itself charges us. Morphology of organisms features fill created and lead frequently by graphics system. They charge state theory as mathematical unpredictable orbit trap. Entirely 'natural' remarking from this man-made and endlessly idealized formulas are nothing more than encounter after result. Gaining a fractal idealization, such criticism is their perpetual power. Image interrogator therefore, is this living insertion that points particles to one-dimensional sense. Tarde's social 'prosumer' is a mere significance of photographism and a machine. It is about cultivation of themselves … Rediscovery obtains an organism which origin is joining and splitting. It also means that commutation laws form an argument within itself. Can we experience back and forward itself? As if that kind of experience remain unconscious to us and within the World. Ethically, few people and machines demand simplified mathematical structure. Business is to commodity machine itself. Chapter shows bare mechanical D – degree of burned life and interactions that occur in the observable Universe. Boutang turns a claim to distrust consciousness and performative theory as intuitive and validated.

To create a form is to build performative way over conditions of psycho – Lazzarato variation. Belief between photographic and anti-matter means to change perspective of suggested fundamental unit of being. Network is political, and criticisms is a way of particular present and immersive terrain. We need to consider connectiveness and speculative reason between string and minutely reason what it means to be a digital image. The recurrence is a content so solid and its dependency concludes death. These dimension studies are attempt of fractal establishment and to prove man-made present. Man had science and principles of business. Velocity and reality should be ignored

altogether, and their combinations are identifications of representation and thinking strategies. Image is not from a factory. Its loosing process and 'unlimited' manipulation mention above. It is a time when a product has given ignorance by a vice capitalism and secular human ability to engage in life itself. They should depend of time and knew tasks and struggles of machines. We will encounter computers more and more, as we inject two equations and topological origins gesture of datasets. Their need will be harvested from our childhood. Their reason will be to act on a range of 'funny things' programmed to make beautiful photos, to give their owners an idea of who should be considered and committed of new pleasures.

Input Data Used in the Compiling of the Text Above

Born, Max. *Principles of Optics: Electromagnetic Theory of Propagation, Interference and Diffraction of Light*. Translated by Emil Wolf. 7th expanded ed. Cambridge and New York: Cambridge University Press, 1999.

Deleuze, Gilles. 'Plato and the Simulacrum.' Translated by Rosalind Krauss. *October* 27 (1983): 45–56.

Einstein, Albert. *Relativity: The Special and the General Theory*, New York: Pi Press, 2005.

Flusser, Vilém. *Towards a Philosophy of Photography*. Translated by Nancy Ann Roth. London: Reaktion Books, 2000.

Flusser, Vilém. *Into the Universe of Technical Images*. Mineapolis, MN: University of Minnesota Press, 2011.

Heidegger, Martin. *The Question Concerning Technology, and Other Essays*. Translated by William Lovitt. New York: Harper and Row, 1977.

Laruelle, François. *Le Concept De Non-Photographie = The Concept of Non-Photography*. Translated by Robin Mackay. Falmouth, UK, and New York: Urbanomic and Sequence Press, 2011.

Mandelbrot, Benoit B. *The Fractal Geometry of Nature*. San Francisco: W.H. Freeman, 1982.

Turing, Alan M. 'Computing Machinery and Intelligence.' *Mind* 49 (1950): 433–60.

16 The Photograph of Thought

Johnny Golding

> One vector belongs to the longer history of modernization and the centuries-long societal shift from the mass to the individual. The opposing vector belongs to the decades-long elaboration and implementation of the neoliberal economic paradigm. … [Translation:] Every unicorn has a hunter.[1]
>
> Shoshana Zuboff, *The Age of Surveillance Capitalism*.

> Evolution has transformed cell-to-cell signaling from an activity in which cells simply broadcast their signals to whoever is close enough and listening into something different: an organised network. […] Picture a filmy lightbulb in which the rhythms of nervous activity first begin.[2]
>
> Peter Godfrey-Smith, *Other Minds: The Octopus and the Evolution of Intelligent Life*.

précis

The image of thought, indeed thought 'itself' has endured a long and somewhat tedious history, with debates circling around the role of representation, reason and rationality.[3] Those debates have often infected the very terrain of the photograph (and, for that matter, image) and have done so to such a degree that often image is either presented as the metaphysical god-fairy of the photograph, with the latter acting as documentation for, or representation of, the former; or, as more recently the case, where skill inherent in the world of imaging is left to one side or ignored altogether. This chapter will offer a completely different approach. It begins by staging a minor narrative of our contemporary world in the form of 'Alexa'. It then double-strands that narrative with, on the one hand, an interlacing of Newtonian physics, modern political thought, and the importance of 'exit[ing]' for the material-conceptual development and inhabiting of what it means to be human – and indeed, what society might become, in the best sense of community, possibility, invention, democracy. On the other hand, it draws upon an interlacing of post-Newtonian physics, big data, artificial intelligence, and the importance of 'encounter[ing]' in order to develop a wholly different picture of what it means or could mean to be human, and with it, what it means or could mean (ethically, politically, democratically, substantially) to be alive in this wildly shifting world of bots, conceptually activated vectors, multidimensional time warps. The chapter ends with a provocation: that these double-strands have something in common. It is the quiet, but no less peculiar, use of an old logical tool called the counterfactual, an alt-objective x from which the entirety of the philosophical, aesthetic, ethical

and/or political scaffolding unfolds. In the former case, that is, in the pre-information age of industrial capitalism 'case', one could name (and did name) this counterfactual 'the state of nature'. In a postmodern age of complexity, derivatives, big data, distributed and artificial intelligence, that is, the post-Newtonian, neoliberalist 'case', that counterfactual could be named, and is named: the photograph.

the Alexa complex

The presence of intelligence (any intelligence: sentient, erotic, distributed, emotional, spy, octopus, or otherwise) suggests a certain kind of durational 'aliveness'. It is an aliveness that enables (or at least gives the sense of enabling) decidability, direction, encounter, perhaps even companionship. It might also include curiosity, possibly attraction, unquestionably feedback loops, and, in today's climate, has the capability to do all this and more, often without a bounded, corporeal, objectively tangible, host-body. This is a kind of bloodless intelligence, light years ahead of its, now quaintly old-fashioned, ancestor: the 'machine'. It goes by a number of descriptors, of which a current favorite remains the benignly fetching 'Alexa', who (or that) without anger or despair, answers to a variety of commands, such as 'Alexa find me a restaurant' or 'Alexa turn on the lights'. A kind of superego cum concierge, this strange, headless, aliveness to presence; one that manages to strengthen the collective mindlessness of its commanding voice-owner, whilst simultaneously consolidating, in that same Alexa-dependent commander, an easily roused-to-anger fireball of bruising impatience at the very instant the command (desire, pleasure, tantrum – call it what one may) cannot or will not be succored, entertained, catered, delivered. Trauma suffered from a problematically repressive phase, say oral or anal – hell, even the Oedipal or Electra complex – shrivel in comparison to this mind-numbingly effective banality.[4] *Eichmann in Jerusalem*, move over; there's a shiny new update ready, willing, and able.

alchemies of logic (counterfactuals)

It is worth noting that all political theory, and especially modern political theory, begins with a counterfactual or set of counterfactuals sometimes disguised as myth, allegory, fable, fiction, poetic license, straw dogs, or downright invention, closely resembling a lie.[5] All require a leap of faith as the single most important condition of acceptance to an otherwise relentless and impeccable logic. In the case of 'early capitalism', as the story goes, classical liberalism emerges in the wake of a rising mercantile class disrupting the *ancien regime*'s feudal order, and, in so doing, foregrounding the rise of the individual, the separation of church and state and the importance of change as the fundamental driver for a truly well-governed society. Hobbes' 1651 *Leviathan,* arguably the first detailed modern theory of human sociality (now framed for the first time as a science; that is, as a *political* science), relies on a variety of counterfactuals, including the privileging of an entity that heretofore never existed though – irrespective of this logical fiction – it enables a raft of legislation enshrining inequality, loss of freedom, penury. In the case of classical liberal theory, that particular counterfactual is called 'the state of nature'. It conjures a palatable, easily digestible imaginary that any 'natural' environment prior to a civilizing covenant is famously, *ipso facto*, 'solitary, poor, nasty, brutish and short'.[6]

Logically speaking, then, if one wishes to move away from this nightmare, one agrees 'in principle' to a social contract that establishes a covenant whereby people leave the state of nature, join civil society, and, in exchange for protection, give up typical liberties inherent to the state of nature – say, for example, the right to plunder, pillage, and put one's self-interests above and beyond any communal approbations. Importantly, too, it expresses what would become the 'wild sciences' of the times; namely that bodies are always-already in motion and as a result require an open-ended possibility/infinite access to movement (read: an infinite right to so-called progress, development, resources, always-already in counter-position to a 'nature' that must be dominated, tamed, expunged). Here the very notion of the classical liberal commonwealth demands, on the one hand, a tiny almost unnoticeable exchange: that all commoners trade their individual stakes in society (read: individual self-interested liberties) for the overall benefit of society; that is to say, for one's own and the community's *protection* in the form of order and good governance. Here also, and on the other hand, the nation-state, comprised, as it is meant to be, of 'bodies in motion', requires also a certain manifest destiny now pictured as 'natural' to the social order. This 'manifest destiny', this so-called 'right' includes embarking on the ruthless and infinite expansionism of a nation's boundaries, an expansion otherwise known as colonializing and plundering – and often includes grotesque internments of whole swathes of humanity who might otherwise refuse to play the game (or not realize there is one).

For the sake of simplicity, picture a square, edges firmly intact. Now draw a line from one side to the next, naming the one side, 'friend', and the other, 'enemy' (or leaders vs. led, phallus vs. lack, Brexit vs. EU, and so on). This is the zero-sum game, at its most counterfactually sophomoric, often leading to politically barbaric stereotyping, collective fear-mongering, lazy cultural analysis, and a raft of social anxiety disorders. Its (not so elegant) simplicity dovetails with the culturally watered-down 'law of physics' developed by Zeno in the 6th century BC, expanded on by Aristotle (4th century BC), and usually attributed to Newton (1687); to wit: that bodies in motion traveling from opposite directions cannot occupy the same place at the same time.[7] It has an equally watered-down corollary, initially coined by Machiavelli in 1532 as 'the first law of politics': that there are always 'leaders and led', and if not, one must strategically develop the divide.[8] In so developing, the Prince (or the party or the populist *weltanschauungen*, organic intellectuals, media, or other collective hegemonic bloc) need also to be cognizant of the leader-led push-backward or push-forward moveability within a closed field (as in '*if they push forward, then we will have less*' or '*if we push forward, they will have less*'); and, in so cognizing, must strategically organize to become or remain Leader / Phallus / Friend, and not the Led / Vagina-Lack / Enemy (etcetera and ad nauseum). Simultaneously the leading bloc must maintain a vigilant, often militarized, weather eye on the, also shifting, boundaries of state.

What one is left with, in these peculiar classical liberalist alchemies of logic, is a fierce protectionism coated in manifest destinies, and bloated by the outward expansion of a nation's boundary, with varying degrees of 'success', if, by success, is included the removal of liberties for both commoners and those who are accused of not 'fitting in' or not 'belonging' to this newly expanding zero-sum nation-state mock-democracy for the few.[9]

Health warning: just because it is impossible, does not mean there are no consequences. Don't die wondering.

excluded middles

Let us take pause to picture a different counterfactual logic underpinning how reality and its discontents may be noted, this time doing so in such a way as to work alongside (or even express and repeat in social form) the great paradigmatic upheavals and paradigm shifts of the 18th, 19th and 20th centuries, where social freedoms have concurrently been enshrined in law. This picture requires a unified (totalized) realization of the world, one that includes all that makes up the 'whole picture' – absence, presence, excess, otherness, sameness, inside, outside, movement, social agency, identity, concept, abstraction, economic modes of production, sex, junk food, etc. (that is, everything one can think of + everything one cannot think of, taken together to form the whole of reality). This version may appear at first glance to be repeating the zero-sum game as above, but it is far more nuanced. Instead, it puts change as its ground and, as importantly, does so by ensuring that the logic (political, philosophic, economic, historical, metaphysical, speculative) is fully contained within the movement, be that unfolding, teleological, immanent, transcendent, or becoming. Ushered in by Heraclitus with emphasis on movement/flow, this singular totality (uni) 'in and of itself' contains movement (plural 'edgeless' versatilities), which come to be held objectively-subjectively 'fully true' in all cases – and hence is called: 'universal'.

The counterfactual required here is not just 'counter to the fact'. It is a negation of the counter-true, a negation which does not put it in the realm of a zero-sum positivity (as in the opposite to nothing is something) but requires a whole new game, a game that instead involves a slightly complicated foray onto a temporal-spatial surface, a surface which, in turn, gives meaning to that which it is attached. In a lay sense, one could picture, say, a table, and if asked to point out 'where is the surface', one might point out everything that faces the air. If I took a knife, sliced off that surface and, say, threw it away, another surface would immediately pop up in its place. In this sense 'surface' acts as the expression of the table's structure – it both belongs to (i.e. is attached to) the table, but is at one and the same time, extraneous to that table. In this sense, too, 'surface' is something which gives structure, recognizably so, but, simultaneously, it is expendable, an excess to the table itself.

Now let us picture a more complicated version of surface. Let's call that surface 'the present' (the 'is', the 'naught-time', the 'no-thing'), a seemingly bizarre conceptual creature whose immediacy (im-[dash]-mediacy; that is, a 'not-mediated' presence), can only be grasped through the that which enables an 'is' to take shape. As with our table, we could take our secret blade and slice off an 'is', throw it out, and voilà, like the excess surface of the table, another 'is' would make itself present, once again as both an expression of, but not part of, the structure. In Hegel's *Science of Logic* and elsewhere, that which first shapes 'the is', is point-for-point 'attached' to that 'is' – similarly to the way in which our the table is point-for-point 'attached' to its surface.[10] Crucially in this imaging, 'point-for-point' means that its surface can never be bigger or smaller than the table itself. In the case of the 'is' (or naught-time, or immediate or no-thing), the initial point-for-point structure that enables this unmediated x of present tense reality to come into being, Hegel names 'Intuition'. Intuition grasps 'the is' (whilst simultaneously expressing it, as the table 'expresses' its surface) enabling 'the is' ('the naught-time', the 'no-thing', the unmediated x) to come to presence, that is, to become 'concrete', fully realizable, or in a word: 'universal', and therewith, fully graspable. Logically speaking, this movement is achieved through a mediation,

a dialectical mediation, which includes sublation, then synthesis, then immanence or transcendence and, in so processing enables the concept (in this case, Intuition) to give 'ground' or meaning to what otherwise existed heretofore only as an unmediated abstraction; to wit: the present (is).[11]

To take a slightly less obscure example, one might start with an abstract term, say, 'thesis', which, for the sake of argument will be named 'wet'. It's point-for-point anti-thesis would be called 'not-wet' (rather than 'dry'). This 'not-wet' can never exceed or be less than our abstract term 'wet'. Even if one were to crumple up the 'wet', one would not find its 'not-wet' running to keep up – both are conjoined for all time, no matter what, how, when, or why. One might say, given this conjoinment, that there is always-already 'plurality' in this odd-bod couple, one which admits a kind of air, or movement embedded within this unity (albeit a 'unity' still existing in abstraction).[12] That seared unnameable sticky nano-slice-of-contradictory-conjoinment that keeps the wet tied point-for-point to its not-wet (or thesis to its anti-thesis) has a name. It is called 'the excluded middle'.

This seemingly innocuous excluded middle is not an 'in between'; it is not a no-man's land; it is not a transfer point, a quasi-transcendental or a yet-to-be. It is the necessary complex negation – the non-existing impossible counterfactual – required to make the whole system work. Once granted, it ensures that 'plurality'/'movement' is placed at the core of the system. It enshrines change as 'a something' always-already taking place within the structure whilst simultaneously, enabling change to be a point-for-point expression of the structure. More than that, it enables the rather clever move by Hegel and other dialectical logicians, from speculative to materialist (and back again) to maintain that there is only one reality, one world, one system of subjectively objective knowledge without resorting to the simple equation of posing reality as the summation of 'all that there is + all that there is not'. And yet, clearly, if the argument were left at that point, a basic tautology would ensue, and we would be no better off than with our zero-sum comrades.

So to that equation (all there is + all there is not), Hegel 'adds' the excluded middle; i.e. the negation (now as movement, sublation, immanence, transcendence – depending on where one is in the process) which enables a fully formed concept to emerge.[13] This fully formed concept (now let's badge it with a capital 'W' Wet) is the mediated/sublated synthetic unity of wet/not-wet. One could say that 'Wet' is not only the expression and process of wet/not-wet, but is its 'goal', it's end-point platform. In being 'goal', Wet comes back to enable the initial abstract pairing of wet/not-wet to make sense (literally: to create the very meaning-sense of an otherwise abstract wet/not-wet). Crucially, then, this synthesis or goal becomes the very 'ground' of meaning to the two otherwise abstract contradictory conjoined entities. This complex teleology ensures that there is always already a strange plurality at the core of any system of knowledge, political, historical, aesthetic, or otherwise. Or, as is often expressed in the common sense parlance of modern-day culture regarding the social totality 'itself': the whole is always-already greater than the sum of its parts.[14]

This is one of the most important conceptual moves in speculative and historical dialectical materialism. It foregrounds 'movement' and 'change' as both core to the very nature of reality, and, simultaneously as something objectively 'subjective'; that is to say, something that requires knowledge, reason, indeed the input of living entities, to make change happen, without resorting to an outside force, Archimedean point, or God. It famously paved the way for Marx to draw into the picture of change, social

agency and, with it, organized political action, including strategic planning, tactical end-runs, even revolution.[15] This form of change was and remains quite distinct from the kind of change one finds when growing from a baby to an adult, or the teleological unfolding of an 'x' (say, an acorn) positioned to become what it was 'always-already' meant to be (that is, in the case of an acorn, an oak tree and not a Maserati car).[16] Indeed, it was the kind of change that paved the way for Nietzsche's infamous proclamation ghosting modernity itself: that 'God is dead. And we have killed Him [sic]'.[17]

Since that proclamation, various surgeries have been called to the front, not necessarily in order to revive God, but in order to revive humanity away from searing alienation, reification, starvation, absurdism, general ennui. These surgeries have included the idea of an 'open totality', a 'relative autonomy', a 'quasi transcendental', a 'decentered subject' with whole swathes of invective, damning finger-pointing, speculation, and etc. as to whether the objective was primary over the subjective (or vice versa or both denounced all at once).[18] Despite cries to the contrary, these moves often have involved a return to logocentrism, foregrounding the infamous Phallus in perpetual tango with the less beloved lack. Without falling back on description, exceptionalism, the dialectic, or even so-called 'natural selection' principles of evolution, there did not seem to be a system of knowledge able to incorporate analytically the nuances, glitches, and wildly genocidal 'complications' of a modern industrial capitalism rapidly shifting toward global forms of a corporatism underwritten by post-Newtonian logic(s).[19] 'Change' so much the core of 17th–20th-century political, psychoanalytic, and social science methodologies, seemed to shape-shift as though old wine in new bottles: now in terms of its negative or its indexicality, sometimes in terms its probability, or its uncertainty, or undecidability; and when in doubt returned to the old theatres of superstructure, interpellation, sign, signifiers, and signified. Sometimes knowledge systems were (and continue to be) dipped in the erstwhile pools of identity politics with or without essentialism to boot.

All seemed pitched into the dragon's den of the here-and-now, hoping to create collective agency, individual social responsibility, and a complete shift in this seemingly obsessive race to mass destruction, but instead managing to play into the hand of major societal horrors, including the rise and rise of fascisms, seductive populisms, increasingly bold racisms, homophobias, misogynies, and nationalisms. For alongside the question 'what does it mean to be human, and what can our humanity become', the dark questions of hell remained (and remain): the questions of genocide, concentration camps, refugee centers, the dispossessed, all proliferating at unimaginable rates. The stink of sexual repression, lack of clean water, toilets, food; the mass shootings; the callous destruction of the environment; the dropping of the atom bomb, not to mention cruise missiles, carpet bombings, drone strikes, guerrilla warfare, knife crime, suicide vests; the exponential growth of global militaristic weaponizing (as in the military-industrial complex), the corporatizing of culture (as in the culture industry), the onslaught of new social movements (civil, sexual, countercultural), and, more recently, the advent of 'new media' (computing, Internet, digital), along the mass proliferation of plastics and petroleum, buoyed by the buying and selling of futures, the destruction of the ecosphere, and extinction of species (or in a word: the technosphere).[20]

These cesspools of hell are so profoundly horrific, so grossly shocking, so incredibly debilitating in their all-encompassing bombastic obscenity, that it is hardly surprising collective agency, indeed agency of any kind, tends to find refuge in an Us vs. Them deep-cut image of life, replete with all the counterfactuals thus far exposed. Given this

sorry state of affairs, one would be forgiven if they surmised, in contradistinction to Nietzsche, Duchamp, Cage, Lyotard, Foucault, Stengers, Barad, and many others who proclaim that all the grand narratives of science and life are dead (or should be) – that despite all odds, these totalizing structures and their political ethical and aesthetic responses, are either alive and well, surviving quite happily in, for example, Trump America, or, if dead, not quite gone.[21]

It is very hard to kill a certain kind of metaphysics.

image of thought: 1968, 1913, 1939, 2019.

It is this seemingly death-defying image of thought – so eloquently developed by Hegel and, so equally eloquently, trashed by Nietzsche et al. – which Deleuze and Guattari begin to redress. Damning the dialectical move and the sociopolitical fallout from it as a form of 'arboreal philosophy', they argue that this particular metaphysics is weighted down by its roots (always-already becoming its fully formed expression, its unfolding, totalized and universal concept, idealist, historical, speculative or otherwise), in order to form the 'ground' of its truth, its being, it fullness of meaning and the very making of sense.[22] Instead, theirs is an image of thought which is expressed as difference, as bodies without organs, as a vegetal philosophy; one where meaning and the making of sense – in the fullest, practical-political-aesthetic use of the expression 'to make' – emerges on the multiple, transversal playing fields of encounter. This happenstance is not something predetermined, discovered, or planned; nor is it a rational, cogito-led meeting of the minds. It is the sensuous, pluralized 'coming toward-together' entangling the 'that' which lies to hand. This 'coming toward-together' forms, in its multiplicity, a cohesive, radically material 'something' that enables meaning to take place, take shape, add to the flow of the real. Its discursivity is neither immaterial, virtual nor objectively material, be it historical or speculative. It presents instead, a radicality that is 'ana-material', existing and not existing on the same plane, same surface or instant; one where its aliveness emerges simply and only from the granular entanglement of its attraction.[23] There is no underlying structure, no telos or unfolding. One could say that Deleuze's and Deleuze and Guattari's image of thought express the event of groundless grounds, an event that, at the very moment of encounter forms a kind of cohesion without requiring structure, end points, purposes, processes, or goals. It just 'is'.

Picture this: 1913 with that wild rush of horses, whipped ever-onward, ballistic mud spray ricocheting off their collective gallops, volcanic snouts spitting fire for air. A combined frenzy of lathered sweaty sinew, powered focus with one goal in mind. Crowds shouting, bets being laid. And out of nowhere jumps Emily Wilding Davison, suffragette. (She didn't have a chance – though, in some sense, that move, that blood, that cracked neck, was precisely her chance, and she took it.) Or take 1917, with Marcel Duchamp's *Fountain,* a move, couched amongst the ravages of World War I, where the entire paradigm of modern art shifts. Or take 1939, an auspicious year to be sure, where one finds Wittgenstein debating with Turing in his famous *Cambridge Lectures on Mathematics*, whilst simultaneously in that very same year, *Kristallnacht* ushers in the brutal, hideousness of the Holocaust, whilst unbelievably, *The Wizard of Oz* takes to the screen, in technicolor, with over-the-rainbow dreams and the debuting of the fabulous Judy Garland. 1945: the Atom bombs disseminate Hiroshima and Nagasaki. One does not have to go back that far to feel the torrential shifts;

the multiple warps, black holes, radio and microwaves; to witness the student revolutions, the civil rights movements, the Pill, feminism, and the fight for individual freedoms, including the right to have same-sex, drop acid, vote, burn the flag; go to school, irrespective of race, class, gender, or ethnicity; the destruction of unions, the overturning of European colonization, the rise of the African National Congress. And we have not even mentioned the 1905 revolution in physics or the invention of the computer, or Mandelbrot's invention in the mid 1970s of fractal geometry, and associated discoveries around morphogenesis, artificial intelligence, robotics, genetic mutation.

So the question must be put: How does this Deleuzian image of thought progress an epistemological 'way in' to understanding, interpreting, and most importantly to disrupting, breaking, re-imaging – revolutionizing – the seemingly eternal return of totalizing brutality? In what way does an analytic move from a logic of dialectical materialism to a logic of radical matter/logic of sense break the seemingly rabid cannibalizing of humanity, Gaia, and all that stands in the way of friendship, love, generosity, peace? For as Adorno so mournfully intoned:

> The more total society becomes, the greater the reification of the mind and the more paradoxical its effort to escape reification on its own. Even the most extreme consciousness of doom threatens to degenerate into idle chatter. Cultural criticism finds itself faced with the final stage of the dialectic of culture and barbarism. To write poetry after Auschwitz is barbaric. And this corrodes even the knowledge of why it has become impossible to write poetry today. Absolute reification, which presupposed intellectual progress as one of its elements, is now preparing to absorb the mind completely. Critical intelligence cannot be equal to this challenge as long as it confines itself to contemplation.[24]

One more piece to the puzzle must be added to the mix.

photograph of thought

Deleuze and, in their joint writings, Deleuze and Guattari develop an image of thought along three interconnected axes: the rhizome, the plane of immanence, and the chorus. This image of thought entails deterritorialized flows, with collective and individualized fits and starts of knowledge systems present, past, and future. It is a different logic, a logic of sense, one no longer 'rooted' in mastery, logocentrism, instrumental reason, cogito, and yet, nevertheless, forms in its multiple-singularity a minor system of grasping, comprehending, listening, knowing.[25] This minor system is nothing more, and nothing less than 'surface': an intelligence of sense that is neither 'natural', 'instrumental' nor 'artificial'. It is a move that sidesteps the, now unnecessary, bloodless coup of a deep-cut/excluded middle grounding to reason. Rather, it can enable/express political, aesthetic, and ethical agency, though sometimes does nothing at all. This image of thought, in other words, offers a certain kind of weight (as in, a certain kind gravitas, a certain kind of accounting for and/or including) of agency, be that agency courageous, dull, collective, individual, inventive, sacrificial, pre-emptive, lazy, driven – all of which may otherwise get lost in translation or accepted as a 'one-off' or seen as not all that important or not even seen at all. It 'makes' sense, enables ducking and diving, punctures totalizing logics, produces change.[26] It is the postmodern version of counterfactual, with a bit of a twist.

In the case of this image of thought, meaning (truth, post-truth, alt-truth, multi-versal-truth) no longer requires the 'deep-cut' to generate movement, create horizons, give a ground or even a backstop to change. For this is just a surface scratch, a 'minor system' pockmarked by the nodal points of encounter, circulation, and exchange. It is an image of thought always-already 'plural' which, in its plurality, expresses intensity, movement, energy. Moreover, and as its plurality is energy, intensity, and etc., this counterfactual takes on the garments of immanence and the possibility/ies of enabling a 'becoming-x' to take flight. Most interestingly, it also offers a completely different way to 'visualize', to 'picture', one that carries with it the corporeal trace of the real.[27]

Let us push this argument further. In a postmodern world, where materiality is proliferated via the radical materiality of socio-ecological networks, a different image of thought can now be envisioned. It is one that shows itself without falling prey to the metaphysics of concept. Indeed, it is one that shows itself without falling prey to concept at all, if by concept, the invective of universal is called to account, with all the trappings of excluded middles, and teleological unfoldings of ground, process, strategy, and goal removed from the image. Instead, it is an image of thought that requires a different sense of ground, of logic; one that admits to minor surface systems of knowledge, ones that must include (and are expressed by) distributed intelligence, circulations, and technologies (digital, analogue, chemical, biological). It is one that simultaneously expresses and is comprised by segment (slice, fractal, nodal point), whilst instantaneously also expressing plane/surface (say, zeroes) stretching in all directions at once.

A strange kind of counterfactual, one that lives amongst us as both corporeal trace and transversal logic, an ana-material granularity of thought capable of puncturing totalities, and, in so doing, bringing to presence distributed knowledge systems of multidimensional encounter, intensity, movement, event – a filmy lightbulb (without edges) in which the rhythms of nervous activity begin. This is nothing more nor less than the photograph of thought.

Notes

1 Shoshanna Zuboff, 2019, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power,* London: Profile Books, pp. 31, 488ff. (Brackets mine.)

2 Peter Godfrey-Smith, 2016, *Other Minds: The Octopus and the Evolution of Intelligent Life*, London: William Collins/Harper Collins, pp. 23, 27.

3 Representation as linked to symbol, semiotics, sign, and signifier pepper certain classical works in the canon of contemporary and modern philosophy and political science. In counter-distinction to this, the term 'image of thought' from which this chapter unfolds, takes its lead from the seminal works of Gilles Deleuze, 2001 [1968], *Difference and Repetition*, trans. Paul Patton, London: Continuum, Chapter 3, pp. 129–167. But see also the earlier work of bell hooks, 1984, *Feminist Theory from Margin to the Center*, Boston: South End Press, and the more recent work by Greg Lambert, 2012, *In Search of a New Image of Thought: Gilles Deleuze and Philosophical Expressionism*, Minneapolis, MN, London: University of Minnesota Press).

4 The erudite Hannah Arendt first coined the phrase 'the banality of evil' in reference to the almost commonsensical manner in which fascism wormed its way into the popular/populist imagination. Tiny shifts, subtle and often unremarkable, take hold, leading a populace almost sheep-like toward an unrelenting, unthinking conformity. Add to this the often heard 'excuse' provided by the postwar testimony of various Nazis during the Nuremberg trials – that they were 'just following orders' – and the searingly pathetic banality of one

of the most horrific of genocidal events becomes palpable. Cf. Hannah Arendt, 2006 [1963–4], *Eichmann in Jerusalem: A Report on the Banality of Evil*, with introduction by Amos Elon, London: Penguin Books.

5 Cf. the pathbreaking work by David K. Lewis, 1973, *Counterfactuals*, London: Blackwell. Initially described by David Hume in his 1748 treatise, *An Enquiry Concerning Human Understanding*, it has since taken on a peculiarly haunting twist when linked with artificial intelligence; namely, the automatic generation of default rules which condition the improbable 'as if' true. For an early assessment of that twist, see M.L. Ginsberg, 1986, 'Counterfactuals', *Artificial Intelligence*, 30: 25–79.

6 Thomas Hobbes, 2017 [1651], *Leviathan: or the Matter, Forme, & Power of a Commonwealth Ecclesiasticall and Civill,* printed for Andrew Crooke, at the Green Dragon in St. Paul's Churchyard, prepared by Rod Hay for the McMaster University Archive of the History of Economic Thought, Hamilton, ON, p. 78.

7 Two objects travelling in opposite directions toward the same space is often attributed to Newton, and more precisely, his Third Law of Motion. See Isaac Newton, 2016 [1687, 1713, 1726], *The Principia*: *Mathematical Principles of Natural Philosophy,* authoritative translation by I. Bernard Cohen and Anne Whitman, Oakland: University of California Press, pp. 77ff. In fact it is first attributed to Heraclitus and Parmenides (6th century BC), developed by Zeno, and latterly corrected and expanded upon by Aristotle in his *Physics,* especially Book 5. Cf Aristotle, *Physics*, translated with introduction and notes by C.D.C. Reeve, Cambridge: Hackett Publishing, Books III, V, VI. There is also the growing debate that its definitive version has best been articulated via the Pauli Exclusion Principle in quantum mechanics (1925), which unequivocally states that two or more identical fermions cannot occupy the same space at the same time. See Michaela Massimi, 2012, *Pauli's Exclusion Principle: The Origin and Validation of a Scientific Principle*, Cambridge: Cambridge University Press, pp. 34–78.

8 Niccolo Machiavelli, 1950 [1531], *The Prince and the Discourses,* with introduction by Max Lerner, New York: Random House. See also *The Modern Prince* and selections on hegemony from his *Prison Notebooks* in David Forgacs and Eric Hobsbawm, 2000, *The Antonio Gramsci Reader: Selected Writings 1916–1935*, New York: New York University Press, regarding Gramsci's development of the modern political party and hegemonic positionings including war of position.

9 Here it should be noted that the 'classical liberal' canon is quite a far cry from the contemporary liberalism of say, Rousseau, Mary Wollstonecraft, Thomas Paine, or, more recently, of any political movement demanding 'our bodies ourselves' alongside the right to education, health, and religious securities. Classical liberalism in its nascent form follows the pathways of, amongst others, Edmund Burke, with modern-day equivalents aligned to Tory conservatism.

10 See G.W.F. Hegel, 2010 [1813, 1816, 1832], *The Science of Logic,* trans. G. di Giovanni, Cambridge: Cambridge University Press. See also G.W.F. Hegel, 1977 [1807], 'Preface' and 'Introduction', *The Phenomenology of Spirit,* trans. A.V. Miller, Foreword by J.N. Findlay, Oxford: Oxford University Press, 1–46, 47–103.

11 For the development of his concept of sublation, see in particular Hegel, *The Science of Logic,* Book I: 'The Doctrine of Being, Existence, Being-for-Itself,' and Book II: 'The Essentialities or in the Determination of Reflection', §21.94–§21.134, §21.134–§21.143, §21.160, §11.282, respectively.

12 For the abstraction to become a concept, a fully formed concept, 'meaningfully' or indeed just 'fully' wet (or fully dry), the antithesis is sublated to the thesis (or vice versa); its synthesis will be in this case Wet (a fully realized concept), which enables the abstract 'sides' of wet/not-wet to exist as something other than a tautology. Hegel has 'added' negation to the process. It is a brilliant move. Thus is born 'Idealism' (and various offshoots, including speculative idealism). See Hegel, 'Preface', *The Phenomenology of Spirit,* especially §15–§20.

13 Cf. Hegel, *The Science of Logic*, especially Book II: Chapter 1: 'The Concept', §§12.33–12.37, 529–534.

14 First attributed to Aristotle, it has become well known as part-and-parcel of a Marxist historical materialist conception of history. See K. Marx, 1977 [1859], Preface, *A Contribution to the Critique of Political Economy*, Moscow: Progress Publishers, p. 4.

15 Karl Marx, 1888, 'Theses on Feuerbach', in F. Engels, 1998 [1888], *Ludwig Feuerbach and the End of Classical German Philosophy*, Peking: Foreign Languages Press, pp. 61–5.
16 We will return momentarily to the question of acorns and oak trees and the teleological moves required for change to make an x unfold to what it was always-already meant to be, so that, its goal/purpose (tree) becoming also its 'start' (ground) and its 'getting there', its 'movement' or process (change). Suffice to point out that teleological unfoldings may be a fantastic logical positioning for some, unless, of course, one happens to be, say, a slave and is therefore forced to unfold ('be/become') what they were always 'meant to be' (sic), i.e. in this case, an adult slave. Ditto for stereotypes of women, men, transgender, queer, acorns, fill in the blank.
17 Fredrich Nietzsche, 2001 [1882], Book V: 'We Fearless Ones', *The Gay Science: With a Prelude in German Rhymes and an Appendix of Songs*, ed. Bernard Williams, trans. Josefine Nauckhoff, poems trans. Adrian del Caro, Cambridge: Cambridge University Press, p. 343.
18 This potted history of thought in its (very) minor key includes but is not limited to, in the order of the list above: Martin Jay, 1986, *Marxism and Totality: The Adventures of a Concept from Lukács to Habermas*, Berkeley and Los Angeles, CA: University of California Press; Louis Althusser, 2001 [1971], 'Ideology and Ideological State Apparatus (Notes Towards an Investigation)', *Lenin and Philosophy and Other Essays*, London: Monthly Review Press; Jacques Derrida, 2005 [1994], *The Politics of Friendship*, trans. George Collins, London: Verso; J. Derrida, 2016 [1974], *Of Grammatology*, translated by Guyatri Spivak, with Introduction by Judith Butler, Baltimore, MD: Johns Hopkins University Press); Graham Harman, 2018, *Object Oriented Ontology: A New Theory of Everything*, London: Pelican Books.
19 A point Foucault underscores in his *Discipline and Punish,* rhetorically surmising that if history really were nothing other than natural selection, this would of necessity imply that death machines were nothing other than the 'evolution' of invention, with the result that had Christ been executed 'today', it would not be the cross that one wore around one's neck, but the electric chair or even the needle.
20 For a comprehensive collection on the military industrial complex, a term first coined by Eisenhower in 1952; see James Ledbetter, 2011, *Unwarranted Influence: Dwight D. Eisenhower and the Military Industrial Complex*, New Haven: Yale University Press. For a general introduction to the culture industry and its discontents, see the works of the Frankfurt School, especially: Max Horkheimer, 2011, *The Eclipse of Reason*, London: Bloomsbury; M. Horkheimer and T. Adorno, 2002, *Dialectic of Enlightenment: Philosophical Fragments*, Stanford, CA: Stanford University Press*;* T. Adorno, 1990, *Negative Dialectics*, trans. E.B. Ashton, London: Routledge*;* and the beautifully moving *Angelus Novus* (Angel of History), in Walter Benjamin, 1942, *Theses on the Philosophy of History* written after Benjamin was released from a French internment camp, shortly before he suicided..
21 Cf. Francis Fukuyama, 2012 [1992], *The End of History and the Last Man*, London: Penguin Books, whose Hegelianism brought him to argue that after history, 'man' would be left only to solve technocratic problems – sad, sobering, and remarkably prescient, though not for the reasons cited by Fukuyama. Recently Fukuyama was said to have 'postponed' his End of History. See *The New Yorker,* September 3, 2018, https://www.newyorker.com/magazine/2018/09/03/francis-fukuyama-postpones-the-end-of-history (accessed December 21, 2018). See also the critically important, J. Derrida, 2006 [1993], *Spectres of Marx*, trans. Peggy Kamuf, London: Routledge.
22 See in particular G. Deleuze and F. Guattari, 1987, 'The Rhizome', *A Thousand Plateaus (Vol. II), Capitalism and Schizophrenia*, trans. Brian Massumi, Minneapolis, MN, London: University of Minnesota Press, pp. 3–26. See also Deleuze, Chapter III: 'The Image of Thought', *Difference and Repetition*, pp. 129–67.
23 Deleuze puts it like this: 'Something in the world forces us to think. This something is an object not of recognition but of a fundamental *encounter*. What is encountered may be Socrates, a temple or a demon. It may be grasped in a range of affective tones: wonder, love, hatred, suffering. In whichever tone, its primary characteristic is that it can only be sensed. In this sense it is opposed to recognition. […] It is not a sensible being but the being of the sensible. It is not the given but that by which the given is given. Deleuze,

Chapter III: 'The Image of Thought', *Difference and Repetition*, pp. 139–40. For a longer treatment of 'ana-materialism', see Johnny Golding, 2013, 'Ana-Materialism and the Pineal Eye: Becoming Mouth-Breast (Visual Arts in the Age of Algorithmic Reproduction), *Without Sin: Freedom and Taboo in Digital Media*, eds. Lanfranco Aceti and Özden Şahi, *Leonardo Electronic Almanac*, Vol. 19, Issue 4, Cambridge, MA: MIT Press, pp. 66–83.

24 Theodor Adorno, 1997 [1967], 'Cultural Criticism and Society', *Prisms,* trans. Samuel and Sherry Weber, Cambridge, MA: MIT Press, p. 33.

25 Cf. Gilles Deleuze and Félix Guattari, 2003, *Kafka: Toward a Minor Literature*, Minnesota, MN: University of Minnesota Press.

26 For an extended discussion on 'making' sense, see G. Deleuze, 1990 [1969], *The Logic of Sense,* translated by Mark Lester and Charles Stivale, with Introduction by Constantin V. Boundas, New York: Columbia University Press. On deterritorialization, cf. Deleuze and Guattari, *A Thousand Plateaus,* especially '6. November 28, 1947: How Do You Make Yourself a Body Without Organs?' and '12. 1227: Treatise on Nomadology: – The War Machine', pp. 149–66 and 351–423, respectively.

27 Significantly, corporeal substance, first developed in 1664 by Spinoza and published posthumously in Baruch Spinoza, 2018 [1677], *Ethics: Proved in Geometrical Order,* trans. Michael Silverthorne, ed. Matthew J. Kisner, Cambridge: Cambridge University Press, pp. 88ff., is central to Deleuze's initial development regarding image of thought. Cf. G. Deleuze, 2001 [1981], *Spinoza: Practical Philosophy*, trans. Robert Hurley, San Francisco, CA: City Lights.

Index

Page numbers in *italic* denote figures