

## *The photograph and photography in the age of entanglement*

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What's your favourite book on the shelf?

Contextual Studies

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Word count with quotes: 7464 (approx.)

Word count without: 6200 (approx.)

'...the deeper truth is, we are changing. Our behaviours and expectations are changing.'

*New Power*  
Jeremy Heimans and Henry Timms, 2018

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## *Table of Contents*

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	<i>Page Number</i>
Introduction	1
<b>Reconfiguring language for a reconfigured reality</b>	
Chapter One	5
<b>Cutting into words, things and reality</b>	
i) Agential cut	7
ii) Intra-action	9
iii) Indeterminism	13
Chapter Two	20
<b>Entanglement and its impact on how we see</b>	
i) Entanglement	20
ii) Diffraction	31
Chapter Three	33
<b>From why things matter/ to how they matter today</b>	
Conclusion	40
List of figures	42
Bibliography	44
Appendix	47
i) Caution and criticism from and/of Barad and Deleuze	47
ii) A short glossary of terms	48
iii) Data as matter	50
iv) Writing in the first person and objectivity	50

## Introduction

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### Reconfiguring language for a reconfigured reality

'Whereas in classical mechanics the properties and behaviour of the parts determine those of the whole, the situation is reversed in quantum mechanics: it is the whole that determines the behaviour of the parts.'

*The Systems View of Life: A Unifying Vision*

Fritjof Capra and Pier Luigi Luisi, 2014

An essay by Professor Daniel Palmer titled '*Lights, Camera, Algorithm: Digital Photography's Algorithmic Conditions*' practically begins with the epitaph: 'photography as we once knew it is all but over.' Palmer also refers to photography – specifically the Henri Bretton-Cartier type - as 'marginal', although he does concede it will continue to be celebrated (2014: 144). In *What Photography Is*, James Elkins writes photography is possibly 'in the end, also a bit boring' (2011: loc 1708). In my first Critical Studies essay, I discussed how photography often felt tautological (2019). Do all these examples add up to a general sense of ennui in relation to the medium? If so, how do we reconcile it with Michael Fried's '*Why Photography Matters as Art as Never Before*' (2008), where he suggests the most fundamental questions about representationalism are raised by photography, published just over ten years ago? (ibid: 305) How can Fried's, Palmer's, Elkins' and my sentiment all be accurate?

In this essay, I aim to investigate that conundrum - but more crucially I do so by seeking out a new language which befits the entangled, networked reality in which

the photograph, photography and we exist today. Although this thesis is orientated towards lens-based artistic practice, which includes moving and still image, it relates to the ubiquitous act of creating a photograph. This division between artists who use photography across genres as opposed to general use can be viewed as a wave of difference in a fractal pattern of meaning and understanding. Or else, it could be construed as an example of dichotomous thinking. A further wave of distinction is addressed in Sarah Kember and Joanna Zylinska's 2012 book, *Life After New Media*. Their updated definition of photography suggests it is 'both an act of carving the world into manageable, temporarily stabilized two-dimensional images of it and a set of institutions and conventions that arbitrate over doing things with a camera in a variety of different contexts' (ibid: 76). These variant descriptions go to the heart of the matter, which is, how do we categorise objects to form reality? And, what impact has photography's 'stabalized two-dimensional' rendering of reality had on all of us? Finally, is that rendering best placed to address contemporary issues?

These discussions are not about instigating a beauty contest between available materials and equipment. Mostly, I aim to interrogate a mind-set that shapes and informs categorisation - and insists on hierarchical values, as well as recognising how those categories are expressions with meaning and implications themselves. I will also compare work using a variety of materials, equipment and concepts being used to interrogate the contemporary world.

I will use terms outlined by Karen Barad (b. 1956), physicist and humanities writer, notably in her book *Meeting the Universe Halfway: Quantum physics and the entanglement of matter and meaning* (2007) and beyond, which all come under her methodology of agential realism. That Barad's ideas have been valorised in some areas of academic circles may be a justifiable criticism (Hollins et al, 2017) (see Appendix 1), however, due to Barad's background, the work offers a unique synthesis of critical theory along with the science that underpins the revolutionary

technological developments which have occurred since at least 1945 and initiated seismic changes to the everyday structure of reality, notably since the early 1990s. Feeling overwhelmed by the words *quantum physics* is a reasonable response. The theory is impossibly difficult and also undermines many 'common sense' notions – something most French philosophers from the last century, including Gilles Deleuze (1925-1995) who plays a central role in the following pages may have approved of: but, putting aside the immense impact quantum science has had on our lives<sup>1</sup>, I have always had trouble with elitism. If as David Harvey in *The Condition of Postmodernity* writes, 'Establishment art and high culture became such an exclusive preserve of a dominant elite that experimentation within its frame ... became increasingly difficult' (1990, 37), the sciences have been just as, if not more, guilty. Vilém Flusser (1920-1991) tells us that in order to engage in any form of criticism regarding the 'technological image', we must attempt to understand it, a harder task than ever – the easier the technology is to use, the more opaque its inner workings. (2012: 144) Therefore, embracing the difficulty and attempting to cut through it and the disciplines that separate us is a political act.

Breaking down boundaries, defying the fixity of categorisation which reinforces the status quo is inevitable, since that is what is occurring writ large in any case, perhaps in part, due to the structural underpinnings of our technology (Hayles, 1999). Which has to be a positive: Carlo Rovelli writes in *Reality is Not What it Seems*, 'Our culture is foolish to keep science and poetry separated: they are two tools to open our eyes to the beauty and complexity of the world' (2017: 88). As such, the unavoidable breakdown and reconfiguration of categorisations between the sciences and photography is integral throughout. By tackling Barad's agential realism, we will

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<sup>1</sup> For example, without quantum physics there would have been no CDs or DVDs, mobile phones or flat screen TVs. The list is exhaustive.

<sup>2</sup> Agential realism has also been accused of inevitable exclusions which is the opposite of what it aims to do, despite its ethical ambitions. (Hollins et al, 2017) See Appendix 1  
Jacques Derrida (1930-2004), philosopher concerned with linguistics

discover there is a substantial case against representationalism, which has been promoted by photography with alacrity since its inception.

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## Chapter 1

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### Agential cuts, indeterminism and intra-action

'...within a Newtonian world view, the famed photographer Cartier-Bresson photograph of a man jumping a puddle leaves the reader confident he will land on the other side: in a subatomic quantum universe it remains a matter of probabilities'.

Fred Ritchin, *After Photography*, 2009

Having emerged from scientific inquiry, agential realism can provide us with the tools to query our 'Cartesian habits of mind' (Barad, 2007: 49), deeply and profoundly ingrained and therefore exceptionally difficult to recognise and unpick (ibid: 49). And as we will see, perhaps reinforced by traditional photography practice. Agential realism refuses the traditional categorisation of objects (discursive or material)<sup>2</sup>. Dismantling assumptions embedded in language is all-important. For example, echoing Emmanuel Kant (1724-1804) who 'affirmed that the subject of knowledge and its object are inseparable' (Rovelli, 2017:169), Barad suggests thinking in terms of the neologism *onto-epistemology* because:

...'The separation of epistemology from ontology is a reverberation of a metaphysics that assumes an inherent difference between human and nonhuman, subject and object, mind and body, matter and discourse.' (Barad, 2007: 185)

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<sup>2</sup> Agential realism has also been accused of inevitable exclusions which is the opposite of what it aims to do, despite its ethical ambitions. (Hollins et al, 2017) See Appendix 1  
<https://sjflevel3.photo.blog>

In any case, Barad believes language has been given too much power over matter by critical theorists, but refers to herself as a Derridean<sup>3</sup> while paying less attention to Deleuze, although he is quoted. His descriptions of the virtual trivialise the subject (ibid) and his terminology is deemed 'irrelevant' (ibid: 437n80). Even so, there are significant correlations within their projects. What matters here is that their ideas, both heavily referenced in this essay, are continuations of earlier science, philosophy, and photography criticism. Neither emerged out of a vacuum.

Like Barad, who is heavily influenced by Neils Bohr (1865 -1972), Deleuze too developed his thesis based on older ideas, notably from Bergson (1859-1941), Nietzsche (1844-1900), and far ahead of his time, Spinoza (1632-1677). Deleuze has become a major figure in media and film studies and it behoves us to keep in mind that one of Bohr's investigations is the behaviour of photons – i.e. light, without which photography simply wouldn't exist, and the relationship between humans and apparatuses. These topics are entangled across disciplines through space and time, whether we know it or not. In Barad's *agential realism*, meaning arises out of material and discursive practices<sup>4</sup>, not as something imposed upon reality but rather from within and of it. It is emergent. For Deleuze too, there is no Utopian plane waiting to be represented. Meaning and matter exist in a dance of constant *becoming*. For him, the state of *being*, *becoming's* partner, is over-privileged - if not at times, fantastical. We can trace this discussion back to Plato and the question of *forms* – objects that exist elsewhere, and reality - that which we live with.

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<sup>3</sup> Jacques Derrida (1930-2004), philosopher concerned with linguistics

<sup>4</sup> 'Discourse is not a synonym for language.<sup>24</sup> Discourse does not refer to linguistic or signifying systems, grammars, speech acts, or conversations. To think of discourse as mere spoken or written words forming descriptive statements is to enact the mistake of representationalist thinking. Discourse is not what is said; it is that which constrains and enables what can be said. Discursive practices define what counts as meaningful statements. Statements are not the mere utterances of the originating consciousness of a unified subject; rather, statements and subjects emerge from a field of possibilities.' (Barad, 2003: 819)

Barad's agential realism dissolves representationalism and the following terms need to be explained in an attempt to explain how and why; however, these pages are not merely definitions. It is also a way of beginning to disentangle the historical layers of practice and meaning within and around photography. The next sequence describes *agential cut*, *indeterminism* and *intra-action*. *Entanglement* and *diffraction* are covered in Chapter 2.

### i. Intra-action

A Baradian neologism, **intra-action**<sup>5</sup> as opposed to interaction is key. Referencing Barad's agential realism, Deborah Lupton, author of *Data Selves*, explains how entities are 'not individuated actors' (2020: 27) but rather continually 'configured and reconfigured through relational encounters' (ibid). *Interaction* suggests mingling together, whereas *intra-action* implies doing so from within, as well as giving credence to the splice between humans, and non-human (Hayles, 1999). A helpful *Three-Minute Theories* presentation (see footnote) includes a slide which states, 'individuals [entities, human and non-human] materialise through intra-actions and the ability to act emerges *from within* the relationship not outside of it' (2014). (My italics) According to a paper titled *Disentangling Barad* (Hollins et al, 2017), once Donna Haraway took up the term it gained currency but even Haraway admits, merely using it does not result in the 'ethical engagement with the "radical change Barad's analysis demands"' (2015: 162, n1).

There is and always been art which has such a profound effect on the world, its presence continues to reverberate within a feedback loop long after initial production. *Intra-active* underlines the point that art, or any practice, is not merely a reflection or an expression of the world, but an emergent entity that has the potential to affect change and in turn be changed itself. Digital material offers scope

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<sup>5</sup> See *Three-Minute Theories*' explanation <https://www.youtube.com/watch?v=v0SnstJoEec>  
<https://sjflevel3.photo.blog>

for making this process overtly visible. While there is a discussion to be had about its status as matter<sup>6</sup>, it is beyond the scope of the essay. Regardless, Lewis Bush's reworking of Bergers' *Ways of Seeing* (1972), *Ways of Seeing Algorithmically* (work in progress, 2019- )<sup>7</sup> in which he uses algorithms to bring the original book up-to-date, is a case in point.

Still photography is, however, an intra-active medium. In a still photograph, meaning and impact do alter but the physical material itself is less likely to - although artists might intervene by cutting, adding, pasting, destroying, or focusing on signs of entropic decay. Over time its meanings are open to transformation highlighted by Ariella Azoulay in *The Civil Contract of Photography* (2008) as evolving cultural mores inform understanding. More immediately, Sohrab Hura's edit in *The Coast* (2019) prompts meaning to transform you flick through, thanks to repetition and constant alternative juxtapositions. The book contains many images; each one is reproduced at least twice predominantly on the same pagination side, frolicking with Walter Benjamin's (1892-1940) critique of reproduction. Each iteration is positioned beside a different image resulting in a plaited weave of syntagmatic possibilities, which I found disorientating, never being sure if there were two or, in fact, three iterations. The edit effects notions of time, intrinsically caught up with space and always relative, reliant on context. The repetition moves time forward as we expect in traditional narrative but then repeatedly edges it backwards, much like the progress of civilisations. Another viewer who looked at it with me found it disorientating in a different way, demonstrating the intra-active involvement of the viewer: reminding us how each element, the image, repetition, volume, text, author and viewer all intra-act.

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<sup>6</sup> See Appendix 3

<sup>7</sup> <http://www.lewisbush.com/ways-of-seeing-algorithmically/>  
<https://sjflevel3.photo.blog>

The artist's intention was to show us how 'realities are increasingly being engineered today' (Clausing, 2019). What he ends up showing us is how all-important context is, echoing Carlo Rovelli who explains reality is an on-going, dynamic becoming of relations. (2017: 115)

**Figure 1 Sohrab Hura, *The Coast*. These images both appear twice but alongside different photographs, on pages before and after respectively, derailing a sense of the forward arrow of time and reinforcing the importance of context. (2019)**

## ii. **Agential cut**

The etymological relationship between the *cut* in '**agential cut**' with film or photography and editing can't be ignored. Deleuze, John Berger (1926 – 2017) and others often use 'cut' - or else its French equivalent 'montage', and it has been utilised by artists since at least the end of the nineteenth century by Surrealists and Dadaists such as Hannah Höch (1938 – 1944), Dora Maar (1907 – 1997) or Man Ray (1890 – 1976).

Contemporary artist, Kensuke Koike's playful, articulated cut-outs of found and archival images where 'nothing is added or removed from each work – just flipped and repositioned in strange and inventive ways' (Lenculture, n.d.) intra-actively transform the meaning of the photographs he works with. However, by cutting into the eye in *Un Chien Andalou* (1929) with a blade, Luis Buñuel (1900 – 1983) inverts our understanding of seeing, foreshadowing the most up-to-date theories about vision by almost a century. Donald D Hoffman (*The Case Against Reality*, 2020) explains we have evolved to see according to our evolutionary needs, and that what we see is a parochial rendering of necessarily limited information. Seeing is cutting/editing. And cuts/edits in film or photography are intra-actively informing our internal edits in a feedback loop, constantly intervening. Buñuel examines the relatively young medium's ability to shape reality. Humans and non-humans, including apparatus' make agential cuts when looking. Barad quotes philosopher Ian Hacking (b. 1936) who explains how seeing is actively an intervention: Barad would add, intervening intra-actively. Following Hoffman's view, this is the case whether we do so 'naturally' or with the help of apparatus.



**Figure 2 *Un Chien Andalou* (1929), Luis Buñuel and Salvador Dali create a montage where a women's eye appears to be sliced.**

In my own body of work I have made many references to photography and the cinema, to cutting and to seeing. Overleaf, an image of cows' eyes which have been cut out of the body. It may end up being juxtaposed beside tools used for making the probe of a scanning electron microscope: an assemblage which references the Buñuel film, while introducing the idea of clinical seeing - and so, construction. It aims to shock and to alienate; positioning 'seeing outside' of the body and also, perhaps, its death as we have known it so far.



**Figure 3 OCA Body of Work-in-progress, Field (2020): Image of cows' eyes cut out of the body, aim to reference the Buñuel film, shock, alienate as well as engender recognition.**

The first half of the term *agential cut* refers to agency, the concept of free will, which continues to perplex academia. Do we have it or not? For now it has been impossible to remove the conscious observer - the agent - from quantum experiments. (Webb, 2020:39) Barad says the notion of agency within agential realism 'entails a significant reworking' (2007: 172) of the idea of agency, again beyond the scope of the essay and my own full understanding. But an *agential cut* insists on our presence, on consciousness, as an integral element within the construction or emergence - or combination of both - of reality. It serves us well to remember, not all cuts are positive, agency of any sort can and often is destructive. Simply using these terms when describing processes doesn't make things better or worse than if described in more traditional terms. We may also wonder if, how we choose to model – cut - reality determines what makes it appear as such, as discussed in an article in *New Scientist Magazine* which ponders our place in reality.

We are asked to consider, if 'the whole external world evolving according to regular laws might be an illusion; [and if] agency is the only thing there really is.' (ibid)

### iii. Indeterminism

If, as Susan Sontag (1933-2004) tells us, photography always expresses an interest in 'keeping things as they are', maintaining the status quo (2008: 12), then indeterminism is an attack on that desire. Barad opts for Niels Bohr's word *indeterminism*, as opposed to Werner Heisenberg's (1901 – 1976) *probability*. The reasons are complex and deserve their own 5000-word essay. For our purposes, *indeterminism* can be added to intra-active and agential-cut in the case against representationalism.

Carlo Rovelli tells us, an electron is 'not obliged' (2017: 104) to move in a certain way and 'things are constantly subject to random change' (ibid: 112). When complex systems evolve, unexpected things can happen. Were it not for indeterminism, the big bang or whatever other series of events which got everything going would not have occurred. We might never have left the chemical soup, or else all of life would look exactly the same. Indeterminism and morphology, the unexpected irregular occurrences that inform shape, patterns, changes of direction in cell formation, are directly related. Reality is weird and surprising.<sup>8</sup>

Today so much is changing due to technology; we seem in a state of chaos or super-flux, as old systems die and new ones emerge. Indeterminism is therefore unavoidable and perhaps even desirable although deeply unsettling. Fred Ritchin suggests in *After Photography, Chapter 10 - A Quantum Leap*, we were reassured by photography that reality is 'fixed'. (2007: 180) Modern technology, heavily

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<sup>8</sup> You don't need to be a quantum scientist to be aware of this - simply look at or read about creatures who live deep in the ocean: where genders transform, males give birth, aging can be reversed and individuals or colonies come back to life.

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inspired by quantum discoveries where indeterminism plays such an important role has eroded that certainty. Though we may not be consciously aware of doing so, we internalise the structure, mechanisms and patterns of behaviour within technology while using it (Hayles, 1999). The conservative backlash is perhaps a sure sign.

Indeterminacy is so fundamental to our current situation that a conference titled *Indeterminate Futures/The Future of Indeterminacy* is scheduled to take place in Aberdeen later this year. Unsurprisingly Karen Barad is one of three keynote speakers. At the top of a long list<sup>9</sup> of suggested topics bridging many areas of academia, the transdisciplinary invitation for contributors states;

‘Indeterminacy is a self-perpetuating dynamic of change with no spatial or temporal constancy – a vibrant multiplicity of parallel potentialities and realities.’ and asks for work which includes, ‘Indeterminate (historical or contemporary) artistic methodologies, e.g. convolutions, destinerance, obfuscation, culture jamming, databending’ (2020).

Artists working with indeterminism might collaborate with artificial intelligence, embrace the glitch or rely on algorithms. Within photography, this is a sea change from the days of the decisive moment with its ‘hero-actors’ (Azoulay, 2018). Ariella Azoulay in a series of articles titled ‘*Unlearning Decisive Moments of Photography*’, suggests the tradition misled society with documentary protocols, reducing ‘reality to their real-estate components and nation-building campaigns’ (2018). Even so, photography students might once have thought predominantly in terms of ‘capturing’ moments, when responding to a section called *Chance* in the Open College of Art handbook for *Body of Work*. Today, working with found material like Joachim Schmidt or Eric Kessels do, may resonate more deeply with the issues we’re

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<sup>9</sup> See the full list here

[https://www.conventiondundeeandangus.co.uk/uploads/tiny\\_mce/DR/Indeterminacy%20Conference%202020/Indeterminacy%20CFP%20Final.pdf](https://www.conventiondundeeandangus.co.uk/uploads/tiny_mce/DR/Indeterminacy%20Conference%202020/Indeterminacy%20CFP%20Final.pdf)

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currently facing. As might handing over some of the creativity to technology, acknowledging the potential for post-human collaboration, and letting go of human exceptionalism and its attendant meanings. The Surrealists and Dadaists prepared the ground, notably in experiments such as André Breton and André Masson's use of automatic writing and drawing, in a response to Freud's *The Interpretation of Dreams*.



**Figure 4 André Masson Automatic Drawing (1924)**

In recent years, Mario Klingemann has worked with neural networks, algorithms and code and says he wants to 'understand, question and subvert the inner workings of systems of any kind'. His medium is photography but he does not fit Flusser's pejorative description of photographer as 'functionary' (2012). He is not simply using an apparatus, which he doesn't understand, but rather constructing the internal

code to make images and handing over the constructing to machines. Neural networks are 'fed' 1000s of portraits available online, then having learnt from them, generate their own. He does however 'edit' when he goes through thousands of iterations of output and chooses what to display. The machine acts like the preconscious, collecting data which he consciously latches onto. The results are often disturbing, perhaps reminding us of nightmares where things aren't quite right. He might show various iterations of the same face or else a moving image in which faces continuously morph into another, challenging notions of the fixed, isolated, individual.

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**Figure 5 Mario Klingemann with AI, *Neural Glitch* (2018)**

**Figure 6 Mario Klingemann and Albert Barqué-Duran with AI, *My Artificial Muse*, (2017)**

Artists Broomberg and Chanarin use machines in their work too. In *Anniversary of Revolution (Parsed)* (2019) they interrupt found footage with algorithms and 'skin-technology' which render as colourful animations that look like digital marionettes, inspired by Russian artist Alexandra Ekster. This overlay on black and white film by Dziga Vertov (1896-1954), accompanied by Pianist Peter Broderick results in a powerful alienation affect. To parse is to 'examine closely by breaking up into components' (freedictionary.com) which the artists do by creating an extra digital layer that highlights the horror contained in images of pain in a way we have perhaps become numb to due to image saturation.

**Figure 7 Broomberg and Chanarin, *Anniversary of a Revolution (Parsed)* (2019)**

Another project by the same duo, *Spirit is a Bone* (2013) uses technology to interrogate power and its relationship to the body, as surveillance technology produces portraits with minimal human intervention or awareness from subjects, using 'four lenses operating in tandem to generate a full frontal image of the face, ostensibly looking directly into the camera' (ibid).

**Figure 8 Broomberg and Chanarin, *Spirit is a Bone* (2013)**

In Broomberg and Chanarin's, as well as Klingemann's work, both human and non-human are making agential cuts; there is an indeterminism at the heart of it, which prevents any agent from having control over the emergent, dynamic output in advance. It is a threat to individualism. Source material feeding the neural networks and machines are entangled in the intra-active production of matter and meaning, reminding us, as Barad says, 'apparatuses are not passive, observing instruments' (2007, 199). They are intra-active emergent objects operating within performative assemblages resulting in meaning and matter.

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## Chapter 2

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### Entanglement and its inevitable impact on how we see

(Insert quote)

The concept of entanglement potentially challenges traditional Western philosophical as well as photographic practice. My own body of work, an anthology of visual and text-based fragments is both an expression of today's discourse and an attempt to eschew the dualistic habits of Western and photographic tradition. Julian Baggini writes in *How the World Thinks* (2019), 'the problems of Western democracy are an allegory for the problems of Western philosophy' (ibid: 60). Barad describes this as a 'Cartesian habit of mind' (2007: 49). Baggini posits that although our dualistic culture feels 'natural', there are plenty of examples proving otherwise. Barad and Deleuze both reject dichotomous mind-sets and propose alternatives.

#### i. Entanglement

For Barad, reality is an irrevocably **entangled** process which denies separate hierarchical realms and instead positions everything in a 'complex, lively manifold of entangled and changing practices and possibilities'. (2007: 288) Barad's notion of entanglement begins with quantum experimentation where the presence of consciousness informs the production and outcome, meaning we have little choice but to conclude that the people designing and doing the experiments, as well as the apparatus' and objects, are intra-active actors. At its most accurate, in terms of quantum syntax, entanglement describes how two particles, photons or electrons stay 'in touch' even when separated over distance. In practical experiments there is

a limit to distance, after which entanglement fails. While entities remain entangled, the connection seem instantaneous, or even more bizarrely in certain setups,<sup>10</sup>retrospective. Entangled photons begin their journeys at various times, go on different paths and reach the end of the experiment both leaving the same trace of wave diffraction or else particle impacts.

There is criticism of Barad's more global use of the term entanglement (Hollins et al, 2017), which might have been called 'interconnectedness' (Capra and Luisi, 2014), perhaps incorporating Barad's 'intra' prefix. Scientists query 'upscaling' as well as the way the theory and laboratory practice is in Barad's account a route to her own brand of ideology, although this latter issue probably misses a central point<sup>11</sup>. One also wonders, since it is impossible to ignore the similarities to Deleuze and Guattari's *rhizome*: which, to paraphrase academic Brent Adkins, is an adventitious structure which continually creates the new, is not predictable, does not follow a linear pattern of growth and reproduction and isn't hierarchical. (2015: 477) Could rhizome be a less contentious term which avoids empirical arguments? Other writers influenced by both such ideas might discuss 'fungal' networks. Writer and filmmaker Anab Jain explains how she had attempted to show the complex infrastructures and entanglements hidden in relation to the mobile phone in *Everything Connects to Everything* (2018), and refers to 'mycelial arrangements' in an article titled, '*Calling for a More-Than-Human Politics*' (2019). Artist Marc Ngui has been working on an illustrative version of Deleuze and Guattari's *A Thousand Plateaus* (1987) and the drawings show flexible connections between people, ideas, and objects, highlighting context and relationship. All these metaphors are suggestive of how meaning and matter emerge and disappear, of intra-action between close and

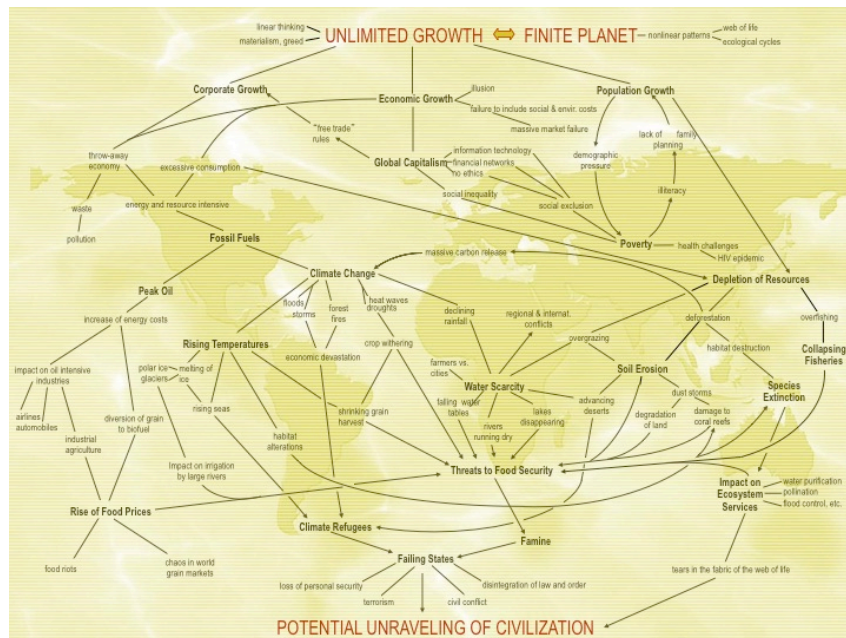
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<sup>10</sup> See erasure quantum experiment

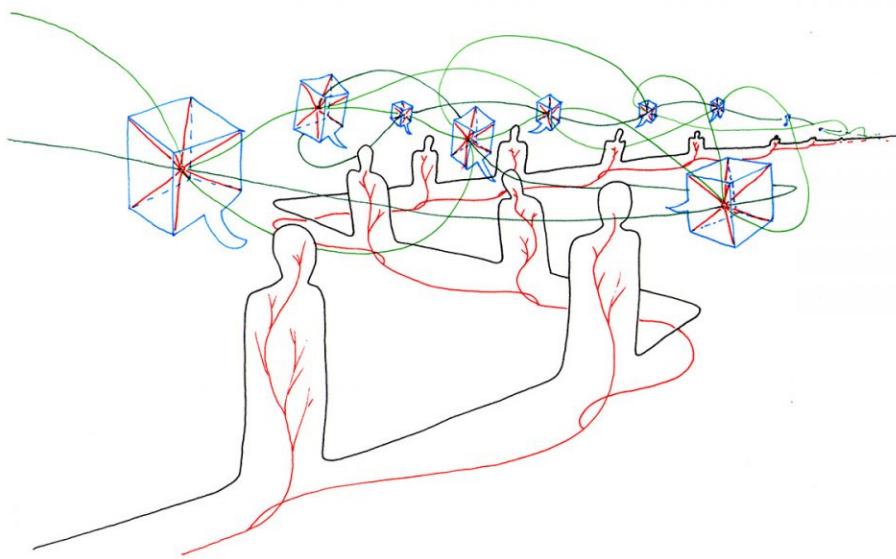
<sup>11</sup> However, ideologies can appropriate any scientific theory as seen in an essay by Dominic Cummings on education who refers repeatedly to systems theory which must irk in some circles, and Nick Land's horrendous ideas.

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disparate events, sometimes unacknowledged, perhaps far apart but nevertheless connected through complex systems.



**Figure 9** Fritjof Capra's illustration of entangled global relationships relating perpetual growth to the potential unravelling of civilisation. (2017)



**Figure 10** Marc Ngui From *Chapter One A Thousand Plateaus Collection* (2001)

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Two artists using photography and emphasising entanglement are Edgar Martins and Lisa Barnard, neither of whom simply photograph mushrooms, roots or bubbles to express these ideas, which would be a representationalist trope, although they may include such connotations. Each go much further, making work that is inherently entangled, intra-active and diffracted (see next section), using found, archived, and original images in the same series to dismantle linear cohesion, challenging the photograph's inherent denial of interconnectedness (Sontag, 2008) – or intra-connectedness.

Edgar Martins' *Siloquies and Soliloquies on Death, Life and Other Interludes* contains essays which describe his entangled approach. Academic Roger Luckhurst writes Martins use of 'rogue' (2016: 118) found photographs included in work that is primarily based on a specific archive contributes to the refusal of 'over-coherence', 'fighting to keep the grid of meaning open, defying the dread determinism of the forensic files.' This intention can be seen as a direct link to Alan Sekula's essay, *The Body and the Archive* (1986), in which Sekula explores the way identity is a *becoming*, a dynamic expression of intra-activity where society, the camera and photography play major roles. Luckhurst also explains how Martins' body of work can 'expand and contract' according to the exhibition space.

**Figure 11 Edgar Martins Siloquies and Soliloquies on Death, Life and Other Interludes, (2016)**

**Figure 12 Edgar Martins Siloquies and Soliloquies on Death, Life and Other Interludes, (2016)**

**Figure 13 Edgar Martins Siloquies and Soliloquies on Death, Life and Other Interludes, (2016)**

In my own developing body of work for Level Three, I too have am experimenting with original and found images as well as text – embracing incoherence and indeterministic outcomes, sometimes creating montages, other times leaving images as they are – resulting in an intra-active assemblage of time and form.



What's your favourite book on the shelf?

**Figure 14 Field, Work-in-progress, OCA Level Three, (2020)** (a found image and verbal response from proprietary AI friend)

Despite the fixity of the photographic object, Martins' projects are malleable, responsive, dynamic. Additionally, Martins has no issue with digital manipulation even in work that could fall under the heading of 'documentary', using it to highlight the constructed nature of historical narrative as well as the agential possibilities we have at our disposal today. This has caused consternation in more conservative corners of the photographic community. Specifically, adjustments made to images in *This is Not a House* (2008), commissioned by the *New York Times Magazine* to cover the housing crisis which led to the collapse of financial institutions, triggered objections about truth and documentary. But Martins, quoted by *Aesthetica Magazine* says:

'One of the things that this project tries to establish is that over time we have accepted the fictions we have constructed as facts, making us the forgotten authors of our own narratives' (2012).

In an article about the furore, the relationship between digital manipulation and indeterminism is addressed:

'As fraught and as contradictory as much of the information being portrayed often is, it reveals a polymorphic and multiform reality, a world of flux and flow that is in a perpetual state of uncertain transformation and where the constant search for answers only leads to more questions.' (Colberg, 2009)

In another project addressing the financial collapse of 2008, Lisa Barnard explores the intra-active entanglement of the substance gold in *The Canary and the Hammer* (2019). Gold's presence, hidden or otherwise, results in tangible realities for the people mining it, using it in technology, buying it, measuring the health of economies by it, and wearing it. Barnard says on a website which pre-empted the aforementioned book, designed to express the entangled and diffractive nature of gold's presence in the world, [www.thegolddepository.com](http://www.thegolddepository.com), her:

'...personal journey through the world of gold and the structure of the story mirrors the complexity of the task of representing the world in these fragmented and troubling times' (2015)

draft

**Figure 15** Lisa Barnard, *The Canary and the Hammer* (2019)

Inclusion of the word *personal* in her statement addresses the subjective view, which is the only one any of us have, avoiding Cartesian human exceptionalism and mythical objectivity. We should note the extensive list of credits. This is a large production which a single individual would be hard-pressed to do alone. A substantial list of references underpinning the entangled work is available on the website, and the networked design of the site is integral too. Some images animate according to the movement of your mouse, making the most of coding possibilities and solitary users on a desktop, who themselves are entangled entities. Barnard leaps from South African mining to nano-particles, from malaria to outer space, from the bank of England to the Wild West, from empire building to ultraviolet camera technology – just as we might when surfing the net or scrolling through social media. Music, text, images, web-design converge together within an immense entanglement of content, all contained within the structure and precise topic of gold. The work is available as a book, an installation and a site which, is not merely a digital representation, but an emergent, intra-active object in its own right. Like Martins' content and the various objects containing it, the work is polymorphic, and able to respond to different spaces.

**Figure 16** Lisa Barnard, screenshot from [www.thegolddepositary.com](http://www.thegolddepositary.com) (2015)

**Figure 17** Lisa Barnard, screenshot from [www.thegolddepositary.com](http://www.thegolddepositary.com) (2015)

## ii. Diffraction

If entanglement is the shape which challenges dualism, then diffraction is its view. Waves diffract, whatever their substance. If we watch ocean waves lapping the edges of a sandy beach, we witness how they ripple and land across space, and how a multitude of waves can overlap and be part of one another. We may also see how they return again and again, which Deleuze is most interested in. When looking at quantum behaviour, the famous quantum double-slit experiment in which waves and particles behave like each other under certain circumstances, reverting to type when observed, is never far from our minds.

Photographers will recognise diffraction as it describes how light can bend as it travels through a lens, particularly noticeable at small apertures, sometimes something to avoid or fix in software. For agential realists diffraction carries no such pejorative implications. Yes, it changes the view but perhaps the so-called distortions are truer than the constructed perfection photographers often prefer.

An agential realists reading of diffraction can inform a way of being and seeing which is anomalous to Western thought or in Derridean terms, logo-centrism. Diffraction, we are told expresses the indeterminacy that is 'intrinsic to nature' (Rovelli, 2017: 104), and according to Barad, threatens the very nature of being and non-being and therefore notions of individuated selves (2019) as well as the individualism that has for so long dominated the Western paradigm and dialectical approach to academia. Diffraction allows for superposition, where particles and waves are in the same place at the same time. Data theorist, Deborah Lupton relies on an agential realist's view, and explains how the idea of diffraction leads to 'diffractive analysis' (2020:29), working 'to identify differences and alternative ways of being and doing, including how differences are made and what is excluded from

decisions about what matters' (ibid: 29) - in other words how/where we choose to 'cut'. A diffractive practice does not aim to set up binary positions and then find a synthesis between the two, as Western epistemological practice usually dictates<sup>12</sup>. Politics too has long relied on a policy of 'divide and conquer', as filmmaker Anab Jain describes in a talk and article about 'fungal revolts' (2019). Barad looks at Bohr and Foucault diffractively, as they each consider power, apparatus and the body – rather than pitting them against each other to see whose view wins. (2007: 199 – 201)

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<sup>12</sup> See Julian Baggini's *How the World Thinks*: 'Western philosophy is "binary" or "dichotomous" ...An antagonistic spirit of inquiry is antithetical to cooperation, compromise and seeking common ground. It is more focused on winning arguments than seeking the best outcome.' (2018: 58) He goes on to explore the negative consequences.  
<https://sjflevel3.photo.blog>

### Chapter 3

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#### *From why things matter/ to how they matter today*

'The camera makes reality atomic, manageable, and opaque. It is a view of the world, which denies interconnectedness....'

*On Photography*  
Susan Sontag, 1977

The following section follows a different but entangled path in relation to the previous chapters. Where before, I described terms used by Barad, and demonstrated how they could be applied to photographic work, here the focus is photography itself, and its relationship to representationalism. That means we need to look at how the photograph and photography are deeply entangled, emergent, intra-active phenomena, and in particular intrinsic to colonialist and capitalist endeavours. Ariella Azoulay's blog posts *Unlearning Decisive Moments of Photography* 2018 which precedes her 2019 book *Potential History: Unlearning Imperialism* explores this entanglement and asks us to consider the relationship between the violence of the so-called 'invention' of 'New World' and photography. (Verso, 2019) She aims to disrupt our acceptance of the received history as correct, linear, separated from events and non-responsible. She is shifting its deterministic narrative, destabilising it. She wants us to consider the attitude of imperialists who felt it was acceptable and desirable, indeed their right, to use developing technologies to sail across the Atlantic and Pacific looking for objects to own and brand as 'new' or else non-entities: people, goods, lands. Azoulay explores the way imperial violence destroyed indigenous 'signs, activities, classifications, laws, technologies and meanings'. (Azoulay, 2018)

Language holds our belief system and attitudes. Walter Benjamin, salient promoter of photography, may have rejected the 'imperial order and goals' (2018) but, Azoulay points out, his language nevertheless overlooked the inherent violence of centuries-long campaigns from imperialists:

“‘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.’” (Benjamin, 1935-38 quoted by Azoulay, 2018)

Azoulay highlights the lack of query over whether such images should exist at all, given their entangled connections to the violence in which they were made.

‘...the existence of images and objects that were not meant to be part of an imperial depository of art history, contained physically and symbolically in works of art waiting to be reproduced, is not a question or a problem but a given assumption.’

We might consider how only in recent years, questions about the contents of *The British Museum* have been asked within 'mainstream' discourse, openly and with greater urgency than before. For decades, starting with Benjamin and beyond, there is little if any question about the reproduction of materials stolen, no query about reproductive technologies lineages - violent, metamorphic, rhizome-like. Reproduction and photography – the medium and associated practices - are assumed to be neutral. Even today, as networked communications have been

instantiated by individual bodies (Hayles, 1999) and fluid expectations normalised across communities, the idea of querying such connections prompts furious debate and denial between those who express a sense of wrongdoing and those who dismiss such concerns. Azoulay demonstrates how the promoters of photography in the nineteenth century took it for granted that they, the white men of Europe, were perfectly at liberty to destroy others and their worlds and 'render their fragments into objects to be meticulously copied with sharpness and exactitude'. (Azoulay, 2018) Recall, intra-activeness suggests that the apparatuses, as well as institutions for that matter, we construct and use are dynamic performative entanglements of meaning and matter, which includes us within the assemblage. In which case, how do we invent and use various apparatus going forward, armed with this understanding?

### **Photography today**

In advertising, photography tells us what happiness, health and success look like. In documentary, it reinforces segregation between the constructions of class, race and borders. In the various iterations of art, photography emphasises separation between the so-called educated and the naive. All of this being so, how should we think of the photograph now, within this new structural reality where we exist in a 'vibrant multiplicity of parallel potentialities and realities'? (*Indeterminate Futures / The Future of Indeterminacy*, 2020)

Barad tells us 'Representationalism is so deeply entrenched in Western culture that it has taken on a common sense-appeal' (2007: 48). Sarah Kember and Joanna Zylinska, begin Chapter Three of their book, *Life After New Media: Mediation as Vital Process*, offering 'a challenge to representationalism by looking, perhaps somewhat counterintuitively, at a form of media practice that is most readily associated with representationalist ambitions: photography' (2012: 71) Recall,

representationalism is the belief that there are things being represented, while a realm somewhere else contains things waiting to be represented. And if ever there was a place where dichotomous cuts have made their mark, it is in the act of recording light and rendering it into a medium. Analogue vs. digital. Art vs. the snapshot. Documentary vs. fashion. Still vs. moving, or film, or movies, or the cinema, bioscope, talkies, drive-in etc., etc.

Criminology lecturer from Edge Hill University, Rafe McGregor begins his paper *New/Old Ontologies of Film* (2013) by suggesting the question, 'what is film?' is redundant because language is too entangled and messy - and film as we have seen means a variety of things. Nevertheless, he says, it first and foremost describes a 'photosensitive chemical material used to record rebounding light'. (ibid: 265) We photography students are very aware 'film' is a secondary phenomenon invented to address the problem of Daguerreotype's single exposure. And, that since the advent of digital photography, it inevitably connotes expensive, authentic, and to some photographers and artists 'better than' or simply 'not digital'. Some photographers and filmmakers too, are seduced by the idea that film conveys a nostalgic link to a Kodachrome coloured past which has trickled away, in place of a less expressive, in their minds, present and future. But, McGregor goes on to tell us, 'digital film is the latest incarnation of a history of moving pictures that stretches back for centuries.' This history extends beyond the ability to harness chemicals and quotes Berys Gaut's *A Philosophy of Cinematic Art* (2010: 6-10), who includes a range of exotic sounding hand- and object-orientated technologies such as shadow puppetry and flip books. (2013: 265)

Gaut's connection with a pre-Fox-Talbot and pre-Daguerreotype invention of capturing light foreshadows Ariella Azoulay's re-examination of photographic history. Both Gaut and Azoulay, are to a greater or lesser extent, disrupting the deterministic, orderly, linear time-line Western academia is most used to following.

Readers might be tempted to accuse these writers of sophistry, semantic-game playing or straightforward revisionism. However, it is impossible not to notice fluidity in most spheres of discourse today, and there is no exception made for time. Time, gender, psychiatric illness, political affiliations, the categorisation of species, and that most tragic and violent of demarcations - race, are just a few domains where lines are being redrawn, reconfigured, re-evaluated. Further threats to firm boundaries are cyborg- or chimera- human and non-human assemblages. If coming to terms with these altered histories and reconfigured notions of what it means to be human weren't challenging enough, the situation is compounded by living within the current 'polarised political landscape... swaying, sometimes manically, between positions of 'doom and denial' (Jain, 2018).

### **What next?**

*Why Photography Matters as Art as Never Before* by Michael Fried, published in 2008, stems from an essay he wrote in 1967 on objecthood. If we consider social structure in similar terms to biological ones (which systemic theorists do) then the process of transformation as one system ends and a new one begins often gathers apace, developing faster and faster in a complex ballet of self-organisation and emergence. Although some writers such as Guy DeBord (1931-1994), Vilém Flusser, Susan Sontag and Gilles Deleuze amongst others seem extraordinarily perspicacious about the role of the photograph and photography, there are inevitably going to be some whose writing suddenly seems deeply conservative. Superposition suggests wrong and right can exist in the same place, at the same time. It, therefore, suggests they might not have been wrong at the time. Photography has been an immensely important development and its invention and related theories continue to have an impact today. But the technology and knowledge about seeing and reality-construction which has come in its wake is very quickly reconfiguring what once felt so certain.

McGregor ends his essay *A New Old/Ontology of Film* by suggesting the 'latest technology has asserted the dominance of animation over film' (2013: 277), and quotes Noel Carroll who says '[t]he epoch of photographic film...may represent nothing but a brief interlude in the art form' (1996: 122). It's hard not to see the photograph itself in these terms too. As Palmer states in *Lights, Camera, Algorithm*, the decisive-moment photography enjoyed by people will still be celebrated (2014: 145) but the 'expanded moments of post-production' are now more pressing (ibid). Given contemporary theories about seeing and perception, and our changing ideas about how objectivity and notions of truth (all foreshadowed in the post-modern art movement throughout last century), this is hardly surprising. What's more, the expanded moments of post-production aligns itself for more readily with a view of a universe that is phenomenological – intra-active, indeterministic, diffracted, entangled, and agential, which may make it more relevant.

Daniel Rubenstein quotes Jean François Lyotard's (1924-1998) *In Libidinal Economy* (2004:3):

'[he] proposed that the role of the artist is to lay bare the mechanisms of theatrical representation, to show that if there is anything real about representation, it is because there also exists a fully real virtual domain constructed not from objects and things, but from intensities, desires and surfaces' (2017:50)

Thinking about the way in which Bloomberg and Chanarin exposed the inner workings of visual historical in *Anniversary of a Revolution (Parsed)* (2019) using an algorithm to place animation on its outside prompts me to wonder if Lyotard would have approved. But it is the word virtual which is perhaps most important here. Barad dismisses Deleuze's use of the word as irrelevant and his concept a

trivialisation, but for this humanities student, it seems astonishingly prescient for a non-quantum field physicist, even if it is lacking in precision afforded by mathematics. In quantum field theory, the most accurate model of reality to date (Barad, 2007/Tong, 2017), the virtual is a teeming place filled with entities coming in and out of existence constantly – i.e. a sea of potential phenomena. It is not empty, nor somewhere else. Quantum fields exist everywhere, as does the virtual. There is no separate plane where perfect things and absolute lines exist waiting to be represented, as photography seems to insist. All the possibilities for change are right here, within our grasp. But photography in its older form may not be the medium to convey that. The animated algorithmic version, on the other hand, just might – for the time being.

draft

## Conclusion

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'What is at stake in this dynamic conception of matter is an unsettling of nature's presumed fixity and hence the opening up of the possibilities for change' (207: 64)

*Meeting the Universe Half Way:  
quantum physics and the entanglement of matter and meaning*

Karen Barad

The long-held Western view which suggests isolated and unrelated objects, people, and places are spread across the planet and universe, while time is only singular and forward moving, is less and less convincing. Rather than seeing a hierarchical collection of separate entities existing within linear space and time, reality increasingly feels emergent, dynamic, multi-dimensional, and rhizome-like. In relation to this evolving understanding, photography, which once literally needed to be 'fixed' has evolved, emerging anew within a social understanding predicated upon fast-paced technological change. Here, matter and meaning are intrinsically intra-active. In this essay, I have attempted to introduce photography to an updated repertoire of words and concepts, which may be better suited to describe the contemporary paradigm.

If photography, in its older form seemed inherently fixed, some of its users, many would argue, are seduced or else comforted by that fixedness. Perhaps photography has never quite come to terms with itself as an art form, but now it must also compete with new media. The need to define words and phrases throughout this essay was not merely a means of identifying what the inquiry was about. It goes to the heart of the matter, which is querying the 'Cartesian habit of

mind' (Barad, 2007: 49). This might be resolved by seeing 'the cut' for what it is – a way of making meaning out of the chaos and contributing to matter's emergence - material or discursive. We do this with words and categories, or else painting, sculpting – or by capturing or emulating photons when creating images – regardless of what we do with those photons or pixels thereafter. As photographers and artists working with the medium, how do we exercise agential responsibility? Is being aware of the entangled implications enough? How do we cut ethically?

Photography isn't over: we continue to see beautiful, striking, compelling work. But it has been transformed. It is not marginal, provided we accept all the extraordinary capabilities new media offers or the non-linear perception it has engendered. If photography seems boring, perhaps that is because it is still speaking to us with the limited vernacular of an adolescent instead of accessing its linguistic potential. If photography seems tautological, it may be because it is merely repeating without intervening from within, ad-infinitum? The artists included here are not simply interrogating society, and by dint of using it in the ways they have done, the photograph's role within. They are often doing so by taking advantage of possibilities offered by new media, or embracing non-linear, non-Cartesian thought processes, which make it such an exciting language material to be working with, even when dealing with difficult and frightening realities.

### *List of Images*

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<b>Figure 1</b> Sohrab Hura, <i>The Coast</i> . These images both appear twice but alongside different photographs, on pages before and after respectively, derailing a sense of the forward arrow of time and reinforcing the importance of context. (2019)	9
<b>Figure 2</b> <i>Un Chien Andalou</i> , Luis Buñuel and Salvador Dali create a montage where a women's eye appears to be sliced. (1929)	11
<b>Figure 3</b> OCA Body of Work-in-progress, Field: Image of cows' eyes cut out of the body, aim to reference the Buñuel film, shock, alienate as well as engender recognition. (2020)	12
<b>Figure 4</b> André Masson <i>Automatic Drawing</i> (1924)	15
<b>Figure 5</b> Mario Klingemann with AI, <i>Neural Glitch</i> (2018)	16
<b>Figure 6</b> Mario Klingemann and Albert Barqué-Duran with AI, <i>My Artificial Muse</i> , (2017)	17
<b>Figure 7</b> Broomberg and Chanarin, <i>Anniversary of a Revolution (Parsed)</i> (2019)	18
<b>Figure 8</b> Broomberg and Chanarin, <i>Spirit is a Bone</i> (2013)	18
<b>Figure 9</b> Fritjof Capra's illustration of entangled global relationships relating perpetual growth to the potential unravelling of civilisation. (2017)	18
<b>Figure 10</b> Marc Ngui From <i>Chapter One A Thousand Plateaus Collection</i> (2001)	23
<b>Figure 11</b> Edgar Martins <i>Siloquies and Soliloquies on Death, Life and Other Interludes</i> , (2016)	24

<b>Figure 12</b> Edgar Martins <i>Siloquies and Soliloquies on Death, Life and Other Interludes</i> , (2016)	24
<b>Figure 13</b> Edgar Martins <i>Siloquies and Soliloquies on Death, Life and Other Interludes</i> , (2016)	25
<b>Figure 14</b> Field, <i>Work-in-progress, OCA Level Three</i> , (2020) (a found image and verbal response from proprietary AI friend)	26
<b>Figure 15</b> Lisa Barnard, <i>The Canary and the Hammer</i> (2019)	28
<b>Figure 16</b> Lisa Barnard, screenshot from <a href="http://www.thegolddepository.com">www.thegolddepository.com</a> (2015)	30
<b>Figure 17</b> Lisa Barnard, screenshot from <a href="http://www.thegolddepository.com">www.thegolddepository.com</a> (2015)	30

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## Appendix

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### 1. Appendix One

#### Caution and criticism from and/of Barad and Deleuze

Finally, Barad warns against and is critical of others who make reductive analogies and misinterpret, notably playwright Michael Frayne - author of *Copenhagen* (1998) who appropriates physicist Werner Heisenberg's Uncertainty Principle. There are also repeated warnings about scaling up quantum behaviours and applying them to the macro-world, but it is hard for a general reader like myself not to see how this philosophy isn't at times doing just that, even though we may be compelled and want to trust it is based in rigorous theory. We are urged to take into account how physicist, 'Bohr often makes reference to the epistemological lessons of quantum theory, and sees the framework that he offers for quantum physics as having general relevance beyond physics. (Folse 1985)' (Barad, 2007: 69) And that 'Taking the ontological implications seriously, agential realism also reworks our understanding of what happens in the laboratory' (ibid: 337) and 'provides a framework for thinking through the larger implications' (ibid). Each of the terms looked at here, *intra-action cut, entanglement, indeterminism and diffraction* can be applied beyond mere descriptions of 'piddling laboratory operations' (Barad 2007: 336, quoting David Mermin, 1998: 753-67). There are critiques of this strategy (see below) but by applying Barad's work to photography, despite the risks of over-simplification, we are doing precisely what she and Bohr have suggested.

Gregory Hollins (et al, 2017) in *Dis-entangling Barad* almost ridicules the academic for having garnered a plethora of citations and also those who refer to it, which threatens to undermine their critical stance elsewhere as it smacks of envy. Even though Barad identifies the risks, they criticise what they view as analogy as well as scaling up in the thesis. They go on to explain how Barad's 'emphasis on

entanglement [...] accounts for a certain ambivalence within strands of STS [science and technology studies]' (2017: 4) which is understandable. But that the diffractive approaches offers 'significant scope for rapprochement between Barad's work and that in other strands of STS.' (ibid: 23)

Although we are used to thinking about quantum physics describing the very small and classical physics the large, Barad urges us to consider how these 'separate determinate boundaries and properties' (2007:337) are based in Western human habits of thought. They are different models that aim to describe how things work in the same universe – not in separate realities (ibid: 110). With all of the above in mind, photography will be explored by this non-scientist, a humanities student who will remain-ever vigilant to Hollins' concerns and Barad's warnings.

## 2. Appendix two

### A short glossary of terms

This list is not intended to give full explanations but instead offer brief descriptions, which might help readers gain a quick but superficial grasp of unfamiliar terms used in the essay. Many of the terms are expanded on in the essay and examples from photographic practice given. There are no citations here as the aim is to keep it as simple as possible. Justifications and citations are available throughout the essay.

**Diffraction:** when waves of light, sound or any material interact there is a diffraction pattern. The word has been taken up by Barad to describe a way of thinking about concepts that does not follow traditional Western dialectical practice but rather asks us to consider the superposition of ideas.

**Emergence:** Within systems, overall behaviours are dependant on collective actions and processes. The behaviour of an overall system often has an effect of the

individual entities within the system. Phenomena emerge once entities within a system are in place. Consciousness is perhaps seen as the ultimate emergent event.

**Flow:** Deleuze's term to describe forces within a system which impact on other parts of the system.

**Indeterminism:** A term defined by Neils Bohr which opposes Einstein's determinist physics. We cannot determine that A will reach B because of C. Reality is far stranger than that.

**Intra-action:** Relationships between entities don't only exist on the surface. Changes come about within – entities and their actions are enmeshed.

**Morphology:** Changes and growth that follow different directions creating form, structure, and pattern.

**Performative:** This does not mean performance – as in an actor on the stage - but is etymologically related. Repeated, socially habitual, discursive and material actions reinforce the shape and patterns, the scarification of a culture. For instance, exclaiming, "It's a boy!" when an infant with male genitals is born reinforces gender distinctions that exist in our culture. The statement isn't simply describing; it's repeating the long history of what it means to be a boy in a particular culture.

**Probability:** Heisenberg's term to describe intra-actions of entities. In the quantum realm, nothing is certain. Reality is measured within a scale of probabilities.

**Rhizome:** Deleuze and Guattari's description of the entangled nature of material and discursive culture.

**Segmentarity:** Deleuze and Guattari's word to describe the machine-like fragmentation of social reality.

**Superposition:** Particles can be in the same place at the same time. Waves can arrive at the same place and in the same moment as each other.

**Representationalism:** The notion that there are representations and things waiting to be represented elsewhere. Within reality, 'things' are emergent, relational and contextual. There is no other plane containing things.

### 3. Appendix three

#### Digital material as matter

It is usual for photographers to distinguish between analogue and digital - and to apply hierarchical values to each. In *Data Selves*, Deborah Lupton, quoted in this essay, argues that data is a material substance which becomes embodied through intra-active assemblages. To think of data as something that doesn't exist is a mistake. It 'seeps', 'floods', 'contaminates' and 'corrupts'. It is more-than-representational. (Chapter 3, *Materialising Data*, 2020: 44-73) Lupton also suggests we can use Barad's work, 'identifying matter and how it comes to matter' to consider data as 'a form of matter' (ibid: 123).

### 4. Appendix four

#### Writing in the first person

An agential realists account of objectivity is complex and requires an essay in its own right. However, it is possible to be objective provided we recognise the conscious agent as integrally part of phenomena, along with non-human entities. '...there is no exterior observational point' (2007: 184) The agential cut does allow for separability within assemblages of human/nonhuman, but the landscape is not fixed - rather a 'dynamic and ever-changing topology' (ibid: 177) For me, recognising context, relationship as well as 'feel' rather than 'know' when describing is a critical step away from a detached version of humanity, standing outside of reality looking in.

In 2016, I was commissioned to photograph an acquaintance, Mandy Thatcher, who at the time was facing a third incidence of cancer and receiving chemotherapy. She was also doing an MSc and looking at the interconnection between voice, power and gender. She emailed me about her thesis:

The starting point for our Masters is that the dominant, masculine way of viewing and understanding the world via logical, rational, empiricist study – which encourages detachment and abstraction – is connected to our failure to finding new ways of understanding our world in a deepening social and ecological crisis. So we are pushed to practice radical “extended epistemology” where we give experiential and presentational (artful) knowing as much value as propositional knowing (ideas, theories, etc.). It’s viewed as a very necessary rebalancing of our rational/emotional (feminine/masculine) faculties. Hence my focus on artful inquiry in this project. It’s also why we’re encouraged to write in first person right from the start – to avoid that traditional academic language of detachment. (Thatcher, 2016)

Since having our discussions, I have been influenced by this argument and spoken with several academics that do the same. The decision to include ‘I’ in my own essay is not a superficial affectation but rather a valuing of ‘I’, context, and relationship, and recognition of that the human view is a parochial one, situated within a specific position in the universe.

Mandy received a First for her dissertation. She passed away earlier this year.