Interfaces of Resistance
in the Image-Machine of Control

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SUMMARY

My creative practice addresses two research questions: how does ubiquitous computation affect the visual operations of the contemporary control society and what does this mean for the use of visual media in contesting such control? Through photographic and video work in digital formats, I explore the movements and arrests of informatic flows that constitute the operation of control, and the potential for resistance that may be felt in the turbulence of the interface, as a dynamic threshold where such flows meet.

In this turn to the interface, I theorise the impacts of computationality on the loss of the image as a stable site of representational resistance, with the unsettling of perspectival representation in the topology of informational space and the ambiguity of a digital visuality whose software hides as it shows. When brought together with recent work on the de-materialisation wrought by informational Capital, the digital image comes to be seen as an instantiation of anxiety about the abstracted nature of power that increasingly operates as control. It is less to the digital image itself, but rather to the circulations and patternings of data expressed as light on the screen, that we must attend if we are to confront the digital visuality of control.

The 'image-machine of control' is the infrastructure that modulates these data circulations and patternings through inciting the making, sharing and watching of images. Drawing on affect theory, I emphasise the role that affects of insecurity, at the level of the dividuated subject and the abstracted socius, play in inciting an interactivity with the screen on which the State and Corporation alike rely for their accumulation and circulation of data. The digital-visual interface, being the encounter with the screen, becomes a site-moment to explore its dynamic boundary condition, whose turbulence of data flows may open up 'lines of flight' from the striated grid of control. These lines of flight help us see beyond the workings of the faciality system, and the subject-object relations of the gaze. Specificity of positioning in scopic regimes of control still matters, but posthumanist theorising suggests that such positioning be understood as vector and not point, whose movements we need to stay in touch with.

Using digital photography to open up the everyday practice of image-making to its potential to disrupt the informatic flows of control, my first photographic work, *medium specific*, makes use of photomontage to look at the topology of

informational space through its 'folds', as a first experiment in disrupting the tempo of the image-machine's visual incitements through a 'pleating' of its data. I use haptic photography in the pieces *figure ground*, *surface gaze* and *touch light* to stay in touch with the smooth space of the interface as a time-space of contingency, potentially resistant to the gridded striations of control.

My exploration of the contingency of the interface continues with two video works, *look screen* and *moving still*, which address its vibrational ontology. I put the concept of the vibrational interface to use in confronting the rhythms of control deployed by the image-machine. Being a rhythm of not only circulation but also capture, not merely movement but also arrest, I suggest that understanding the ontology of the interface in terms of its vibrational forces is useful for disrupting, through its moving stillness, the rhythm of flow and stasis on which control depends. Both videos use visual and sonic vibrations to set up counter-rhythms and oscillations, whose trembling may release energies for change.

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1. Introduction

1.1 The remainder of control

In Tom McCarthy's (2007) novel *Remainder*, a man uses the compensation he has been awarded after he was injured by a falling object to set about creating both a place, and an experience of being in that place, that he recalls from before his injury. An event, a sudden sense of déjà vu, triggers a memory of this place, a particular building, and sensuous details of his presence and movement in it. He recalls this as having been the last time he had a feeling of being real, '[n]ot awkward, acquired, second-hand, but natural' (2007, 67). In order to recover this feeling, to live again with a directness that, as he puts it, cuts 'out the detour', he sets about recreating the conditions in which he felt this immediacy of being (2007, 198). Through artifice he hopes to recover his sense of being natural: simulation is his way back to feeling real.

What gets in his way is the remainder, the stuff that is outside of control, or rather its inside, unseen. 'My undoing: matter' says the nameless narrator (McCarthy 2007, 17). Escalating in sophistication, he takes his simulations outside into real life where he stages a simulated bank hold-up. But, *contra* Baudrillard (1983, 39), the fake turns real, not when the established order, in the latter's phrasing, 'devour[s] every attempt at simulation', but when the attempt to establish order through simulation is tripped up by its own fantasy of control. The enactment of a bank robbery becomes a bank robbery when it is bloodied by the unforeseen, that which was overlooked in planning the performance, and throughout the novel, the remainder of control is figured as a fluid which 'must have gushed, trickled or dripped onto some surface, stained it somehow' (McCarthy 2007, 198).

I read *Remainder* as an invitation to think and play with the limits of control, its outside that is folded inside, and what that might look and feel like. The vivid tactility of McCarthy's bloody remainder struck me, or better, stained my

thinking about resistance to control. At the time I came across the book, I was involved with activism on male supremacy and men's violence, understanding them as practices of control based on logics of exploitation and domination. From the escalation of US military interventions in the aftermath of the attacks of September 11, 2001, through to the politics of austerity (Edsall 2011) in the wake of the financial crash of 2008, such logics have seemed impervious to challenge, let alone change.

Ritualised attendance at large scale public demonstrations with no discernible impact only fuelled my sense of futility about efforts to confront these realities of exploitation and domination. Occupy Wall St (OWS) made visible new political spaces in an ever more managed and monitored *agora*, yet its neo-Situationist commitment to the event rather than struggle, and its horizontalist suspicion of leadership and structure, undermined its ability to hold let alone expand such spaces (Watkins 2016). In my own activist work, two completed rounds of a consciousness raising group for male activists on challenging male supremacy left me aware of how hard it is to get to what I thought of as deeper levels of change.

In one reading *Remainder* is a story about trauma, and the bizarre lengths the narrator/survivor goes to after his accident so that he may heal his damaged psyche and recover his natural self. In another, it's an allegory of contemporary life and its hyper-mediated narcissism, describing the narrator/survivor's relentless quest for a natural authenticity that can only be experienced through a series of ever more elaborate stage-managed (re)enactments, film sets with multiple takes but no camera equipment. McCarthy, however, does not seem interested in either psychology or sociology, the twin poles of what might be termed humanist thinking on social change between which I had oriented myself. He prefers topography. The nameless narrator has no past to speak of and no interest in the present outside of that which he can control. The book has little interest in psychological or sociological context or depth.

But it is fascinated by spaces and surfaces and movements in and across them, and what happens when we try to control these patterns in pursuit of not 'being separate, removed, imperfect' (McCarthy 2007, 198). With this attention to the remainder, I could begin to see beyond the impasse of futility. The concentration on surface, movement and pattern gave me other ways to think about the use of the visual in challenging operations of social control.

Hitherto, my experience with using visual media in projects of social change had been restricted to documenting struggles through photography and video, and using digital storytelling to narrate personal stories of change. These narrative and documentary modes felt, and still feel, important. But I came to sense the confinement of such modes within their logic of transformation through revelation; very little seemed to gush, trickle or drip. They were too neat. I wanted to use video and photography as an oppositional practice because social life and social control are more than ever matters of visuality, from Instagrammed living to the 'actuarial gaze' of dataveillance regimes of power (Feldman 2013; Mirzoeff 2013). But the use of visual media simply to expose these visual operations of control seemed inadequate, not least because exposure was itself their logic of operation. I became interested in a practice of visual media that was itself less sealed within an oppositional message about, or image of, social control, a practice that instead might leak and stain.

My interest in the remainder, then, is the attention it draws to the virtual in the sense that Massumi defines it, as contributing 'to a pragmatic understanding of emergence' which can 'enable triggerings of change' (1995, 105). As he (Massumi 1995, 105) says, '[i]t is the edge of virtual, where it leaks into actual, that counts. For that seeping edge is where potential, actually, is found.' This trope of fluidity is significant because the cybernetic theorising of control in unstable systems on which Deleuze (1995b) drew in his discussion of contemporary control societies was itself grounded in work on fluid dynamics and feedback mechanisms from the nineteenth century (Hookway 2014) .

If the control society, in this era of ubiquitous computation, operates through channeling and modulating data flows, as Deleuze suggests, my visual practice has been concerned with exploring its seeping edges.

1.2 Working with the remainder

Two broad research questions have structured my creative practice: how does ubiquitous computation affect the visual operations of the contemporary control society and what does this mean for the use of visual media in contesting such control? To answer these questions, I have turned to digital photography and video, visual media that Munster (2006, 164) characterises as the 'older practices of new media'. Reflecting on my own experience and dissatisfaction with the expository use of such practices in political struggle and social protest, I was interested in finding new uses for this 'older' media.

If, as Mirzoeff (2016, 13) suggests, '[v]isual culture is something we engage in as an active way to create change, not just a way to see what is happening', my creative practice has explored the use of photography and video not to see and show what is happening with social control, but to experience the flows, leaks and stains of its visual operations. In this manner, I have sought an 'active way to create change' through sensing the 'seeping edges' of computational visuality, the potential for emergence of something new at 'the edge of virtual, where it leaks into actual'.

Using the 'older practices' of photography and video is also a way to engage with the temporal lags and differentials characterising the digital mediascape of informational capitalism (Smart 2000; Castells 2009; Fuchs 2009). As Munster (2006, 164) explains, this is about the 'lag between "cutting-edge" digital art and the critically reflexive practices of technologically outmoded new media art'. As she (Munster 2006, 164) suggests 'the place where electronic art and the postcolonial impulse have met lies with forms such as digital photomedia and video […].' These are the 'digital art practices that

[can] undermine, parody and forcibly differentiate the smooth flows of global speed along a meridian of new vectors and [keep] them open to contestation' (Munster 2006, 171).

Based in arguably the metropolitan centre of global capitalism, New York City, I was interested in how such lags might be explored and experienced, not from the periphery, but from this centre. I was curious about the ways in which photography and video in and of New York could play with and contest the 'smooth flows of global speed', disrupting their tempo, inciting turbulence. This is to say that the siting of my work in New York is not specifically about the city as a space of digital visuality, taken up in the growing literature on urban screens (Cubitt 2009; McQuire et al. 2009; Nevárez 2009). Nor is my work a particular response to the 'surveillant assemblage' of the 21st century city (Haggerty and Ericson 2000) and the interest in the urban as the locus of resistance to the depredations of capitalism (Merrifield 2002; Harvey 2012).

While I do touch on both urban screens and panoptical surveillance, my visual practice has been concerned primarily with moments of immersion within the informational circuits, manifested as images, that course through the city, and what might emerge from such moments as a sense of other flows, new vectors. This is an immersion in the 'everyday' of computational visuality. It is still the case that people's everyday experience of the impact of ubiquitous computation on visual experience, as not only consumers but also producers, remains dominated by the image, both still and moving. If 'reality now widely consists of images; or rather, of things, constellations, and processes formerly evident as images', as Steyerl (2014, 35) suggests, then this 'means one cannot understand reality without understanding cinema, photography […] or other forms of moving or still image.' In this sense, my use of photography and videography is an 'everyday' practice of digital media making, a deployment of the kind of 'everyday' practices invoked by de Certeau (1984) among others (Lefebvre 1991; Benjamin 1999) as a tactics of resistance.

Highmore (2002, 151) makes clear that '[r]esistance in de Certeau is closer to the use of the term in electronics and psychoanalysis: it is what hinders and dissipates the energy flow of domination, it is what resists representation.' This speaks well to the impulse behind my use of still and moving images to disrupt and deform the informational flows of control, through exploring the creative use of the quotidian vernacular of the digital visual as an everyday mode of resistance.

But amid ubiquitous computation, and the immersive visuality this makes possible, there is no 'obvious exterior place or space of ethical and political opposition' (Kember 2012) for an 'everyday' tactics of visual resistance, such as I am invoking above, to occupy. Instead, as Kember (2012) suggests, referencing the work of Crang and Graham (2007, 814) on the urban politics of ambient algorithmic control, the task for the 'becoming-photographer in technoculture' is to 'work through the inevitable granularity and gaps within these systems, to find the new shadows and opacities that they produce.'

I see this as a kind of minoritarian visual practice, taking inspiration from Deleuze and Guattari's (1986) discussion of a minor literature, which Bleyen (2012, ix) defines as writing that 'deterritorializes the dominant use of a language, makes it stutter and stammer' by 'moving language to the borders of its representational level, towards music or silence.' I, too, have been interested in the borders of representation, and investigating ways of using digital photography and video affectively to create 'short circuits within the dominant codes of photographic representation' (Bleyen 2012, xi). In part, and with an echo of the stuttering to which Deleuze refers, my journeys to edges of representation have been made with the use of sound, a tactic that I discuss at more length in Chapter Five. But the journey begins with the circulations of data constituting the digital image and the question of what it looks like to be in the flows of the image-machine in ways that might unsettle its operations of scopic control.

1.3 Overview of thesis structure

In Chapter Two, I review the impact of computationality on the loss of the image as a stable site of representation and visual resistance. My starting point is Mirzoeff's (2016, 292-293) call for a visual activism that can make use of 'visual culture to create new self-images, new ways to see and be seen, and new ways to see the world.' I note the role that digital image-making and sharing has played in recent activism against coercive State violence in the form of police killings of black people in the US, and discuss what the digital has done to the radical potential of the image to confront both coercion and control.

This potential I discuss in terms of the ready transmissibility of the digital image and its tendency to leak from prescribed channels of communication. I also see such potential in the nature of the digital image as both data object and informational process, and its consequent amenability to amendment and annotation. But I draw on work from information theory (Terranova 2004) and critical software studies (Chun 2011; Galloway 2012) to look at the ways in which computationality undermines the representational force of the image. In the topology of informational space, the perspectival ground on which representation relies is lost, at the same time as the representational force of the image is threatened by the inherent ambiguity of a digital visuality whose software hides as it shows.

When brought together with recent work on the de-materialisation wrought by informational capitalism (Shaviro 2013; Toscano 2013; Wark 2015), whose infrastructural algorithmic operations are increasingly unrepresentable, the digital image and its visual unreliability comes to be seen as an instantiation of anxiety about the abstracted nature of power that increasingly operates as control. It is less to the digital image itself, but rather to the circulations, patternings and de/formations of data expressed as light on our screens that we must attend, I suggest, if we are to confront the digital visuality of control.

Chapter Three looks more closely at the data circulations and patternings produced by the image-machine of control. Starting from Deleuze's key concepts of dividuation and modulation that he brought to bear on explaining the operations of the control society, and noting the ever greater pertinence that such concepts have in relation to the workings of informational capitalism, I briefly review recent theorising of the digital screen as the site of control, through mechanisms of cognitive capture and the attention economy. While useful, I suggest that the recourse to notions of consciousness and subjectivity in such theorising is ill-equipped to deal with Deleuze's fundamental insights into the posthumanist operations of control at the level of micro and macro states, at once sub- and supra-individual.

I use affect theory to make visual sense of this insight, emphasising the role that affects of anxiety, in relation to the dividuated subject and the abstracted socius, play in inciting the interactivity with the screen on which the State and Corporation alike rely for their accumulation and circulation of data. The image-machine of control, I propose, is best understood in terms of the circulation-image and its affective capture, being the visual incitement to act on our screens and in this way augment and sustain the data flows of informational capitalism.

Chapter Four details my turn to the digital-visual interface, being the organic-machinic encounter with the screen, as the site-moment to explore the fluidity of these edges and follow where they might leak. Drawing on theorising of the fluid dynamics of the interface, I discuss the implications of seeing the interface as a dynamic boundary condition whose turbulence of data flows may open up what Deleuze and Guattari (1987) referred to as 'lines of flight' from the striated grid of control. In as much as they are visual, these lines of flight help us see and be beyond the workings of the faciality system, and the subject-object relations of the gaze within which so much work on visuality and power has been confined.

I make use of posthumanist theorising to caution against a claiming of visual subjectivity from the position of the margin, which may only serve to reinstate the centre by which the margin is defined. Instead, I suggest, any challenge to the faciality system must engage with the folded informational space of the image-machine and the superposition of lookings thus produced. For this I look to the digital-visual interface, not as a face-to-face encounter with the screen, but as a threshold condition of becoming, in which we may experience a visual relation that vibrates between but is irreducible to the dualisms of the faciality system. As this 'between', the interface constitutes a moment-site of encounter with the circulations and rhythms of the image-machine of control that is also an affective experience of the potential for other rhythms and different flows.

Drawing on Hookway's (2014) discussion of the fluidity of the interface as a dynamic threshold condition enables me to locate the political potential of the interface in its turbulence, as a moment-site of indeterminacy in the data flows of the circulation-image. Referencing the work of Bergson (2004), Bachelard (2000), Goodman (2012) and Whitehead (1929), I discuss the vibrational interface as a way to stay in touch with this indeterminacy and disrupt the rhythms of control deployed by the image-machine of control.

In Chapter Five, I discuss my creative work at/in the dynamic indeterminacy of the interface. I chart the background to, and evolution of, my creative practice, detailing its turn from an interest in visual abstraction, to a concern with the circulation-image of control and its rhythms of flow and arrest. I discuss my use of photographic montage in *medium specific*, which engages with the topology of informational space through its 'folds', as a first experiment in disrupting the accelerating tempo of the circulation-image of control through a 'pleating' of its data. It is in these montage-folds, I suggest, that we might pause to feel the seeping edges of control, where the potential for the emergence of resistance can leak in to the actual.

I describe my use of haptic photography in *figure ground*, *surface gaze* and *touch light* to stay in touch with the smooth space of the interface as a time-space of contingency and indeterminacy, potentially resistant to the gridded striations of control. As a sense of close looking, my haptic imagery stays open to what may be felt with the eyes; with the haptic, the digital-visual interface remains an opening within the closed circuits of the image-machine of control. I then turn to my use of still and moving images in video format, in *look screen* and *moving still*, to both pleat and examine the folds and vibrations of the interface. I use visual and sonic vibrations to set up counter-rhythms and oscillations that Goodman (2012, 82) refers to as the 'virtuality of the tremble' that, recalling Massumi (1995, 105), may help to 'enable triggerings of change' and 'induce the new'.

By way of conclusion, I briefly sum up my reflections on the 'journey' of my creative work, noting the challenges of bringing the political and aesthetic together to confront the operations of control, at a time when both seem ever more subsumed by these same operations. My work at the digital-visual interface may not have resolved the relationship between image and action, seeing and acting, in resisting control, but it does provoke different resonances between them in ways that may release energies for change. Within the image-machine is the vibrational politics of the interface, and it is to this trembling we should look if we are to resist the visual operations of control.

1.4 Creative practice overview

I present six pieces of digital visual work; four sets of photographic 'stills' and two videos, which together comprise *interfaces of resistance*. This work was produced in and around my home in New York City. All of the visual and sound work is my own, and no copyright or ethical issues arose during the course of my creative production. I made use of the library at the University of Sussex, as well as the collections of the New York Public Library, to develop the theoretical foundations for my creative practice.

In accordance with University of Sussex requirements, this body of work was submitted for examination as an index.html file on USB drive. As an intervention into the image-machine of control, as a practice of resistance, my creative practices exists as a portfolio of visual work on the Tumblr platform at https://interfaces-of-resistance.tumblr.com. Here, the two video pieces and four photosets, which together constitute the mixed media work *interfaces of resistance in the image-machine of control*, are presented. This visual work is accompanied by an opening text that frames, theoretically and politically, its intention and production. Each of the six pieces also has its own very brief framing text, including technical production details, as follows:

- *medium specific*: six images (JPEG, 1920 x 1080)
- *surface gaze*: three images (JPEG, 1920 x 1080)
- *figure ground*: three images (JPEG, 1920 x 1080)
- *touch light*: three images (JPEG, 1920 x 1080)
- *look screen*: HD video (10:26)
- *moving still*: HD video (10:01)

I began my creative practice with a desire to use visual media to explore what control cannot control, the leaks and stains of its remainder. This is the potential for resistance that remains with the digital image. From the explorations of the fold through photomontage to the use of haptic imagery to feel the 'smooth' space of the interface, to the creating of interference patterns and sonic vibrations in my video work, I have engaged with the dynamic threshold condition of the interface as the moment-site for an experience of rhythms that counter the insistent anxieties of what I term the circulation-image of control. The interface is an opportunity to keep open the process of forming and the question of what is being formed. My photographic and video work has sought to stay present with both this process and this question, working with the interface as, in Massumi's (1998, 16) words, that 'mode of reality implicated in the emergence of new potentials.' When we feel its tremble, the interface becomes an intensive site and sight of such emergence.

2. What Remains of the Image?

Any exploration of the role of the visual within contemporary modes of control and of the ways in which visual media, such as photography and video, remain useful in struggles against social control, must question the impact of ubiquitous computation on the image as a privileged site/sight of political contestation. This chapter begins to name and track the theoretical currents whose co-mingling turbulence have energised my critical thinking and creative practice on this question. I attend to the altered ontology of the technologically-produced image under computational conditions, and what this means for image-making as a tool for resisting the operations of what Osborne (2013, 118) calls 'photo-capitalism'. Bringing together theoretical work on computationality and associated accounts of cybernetics with concerns about the links between visual and political representation, as raised in studies of visual culture, I advance a posthumanist politico-aesthetics of the digital image in the era of computational capitalism.

From this posthumanist perspective, the sense of loss that shadows the digital image is key to both its functioning within scopic regimes of control and its radical potential to resist or evade such control. As light abstracted into data, the digital image, I suggest, has come to represent the increasingly abstracted, apparently immaterial, nature of the forces to which we are subject. I look at this visual abstraction in terms of the loss of the representational frame and its replacement by a circulation and patterning of data whose spatio-temporal deformations unsettle the perspectival ground on which representation relies. The impact of the computational on the visual is to render all images moving images, and it is the technics and politics of managing and stabilising their data flows that constitute the scopic operations of control. While we live in a torrent of images, it is to the dynamics of these flows, rather than the images themselves, that we must attend in any effort to counter the visuality of control.

2.1 Resisting images

Images remain convulsive. With his mobile phone, Ramsey Orta documented the arrest of Eric Garner on 17 July 2014 in Staten Island, New York, and recorded his friend's dying words, 'I can't breathe', as the police, using an illegal choke hold, asphyxiated him (Daily News, 2015). The video, very soon acquired and made public by New York City's *Daily News*, sparked outrage as it spread rapidly online, leading to street protests and helping to fuel what would become the Black Lives Matter movement (Black Lives Matter, 2016).

The explosion of image production made possible by digital technologies is fundamental to contemporary visual culture and to what Mirzoeff (2016, 13) defines as its primary concern: '[v]isual culture is something we engage in as an active way to create change, not just a way to see what is happening.' Digital democratisation of image-making, and its enabling of 'an active way to create change', has its precursor in the emergence of portable video recording technology in the 1960s, which was quickly taken up by community groups and activists in the USA and elsewhere as a tool in their social justice struggles. As Boyle (1992, 68) notes, New York City was the hub of this emergent activist video scene, including prominent early collectives such as People's Video Theater, who 'used live and taped feedback of embattled community groups as a catalyst for social change'. It was camcorder footage of the savage beating of Rodney King by officers from the LA Police Department in 1991, filmed by resident George Holliday from his nearby apartment, that fuelled the violent protests which erupted when the officers were acquitted in 1992 of all charges relating to the use of excessive force.

But the digital has exponentially increased the capacity to bear witness to state violence. When Oscar Grant III was fatally shot by police at Fruitvale BART station in Oakland, California, in the early hours of New Year's Day 2009, the killing was captured on multiple mobile phones by many of the hundreds of people returning home from New Year's Eve parties, and shared widely on

social media platforms. Less than a year after Eric Garner's death, US progressive magazine *Mother Jones* carried a story titled '13 Killings by Police Captured on Video in the Past Year', some half of which were documented by bystanders on their mobile phones (Vicens and Lee 2015).

The smartphone is now the most popular camera. As Bratton (2013) reports:

> With the comparatively instantaneous adoption of mobile devices (Turing complete machine + camera + homing tether + telephonic voice relay), we have seen an explosion in the absolute volume of images of the world, dwarfing the total sum produced before the mobile phone appeared in our hands.

The smartphone enabled one trillion photographs to be taken in 2014 (Mirzoeff 2016). Given this, as Terranova (2004, 141) notes, 'it is not surprising that the most significant feature of contemporary mediascapes is their over-saturation with image and information flows (including the acoustic image or sound).'

Cameras in phones are not only everywhere but 'everyware' (Kitchin 2011, 945, cited in Berry 2012, 392). The convulsive force of the image to confront state violence, and the forces of social control, by representing their reality is the product not only of the democratisation of image-making but the digital infrastructure of image-sharing made possible by ubiquitous computation (Featherstone 2009). The result is a world full of images such that 'the gap, if there ever was one, between photography and life itself continues to close so that, in both material and symbolic terms, photographic media can be said to shape the world that they pertain to represent' (Kember 2012).

But shape in what ways? At issue is the function of the digital image in relation to social protest and political struggle, and specifically the impact of computationality on what Mirzoeff (2016) characterises as 'visual activism'. He (Mirzoeff 2016, 293) defines such activism as 'the interaction of pixels and actions to make change'. But in what ways can and do pixels, as the making

visual of information, inform action to change this world? Digital artist Hito Steyerl (2014, 30), recalling the protests leading to the collapse of the former Soviet bloc, emphasises that '[a]round 1989, television images started walking through screens, right into reality.' Far from the induced passivity of the spectacle, as identified by Debord (1970, 1990) in his critique of televisual alienation, such screened images, for Steyerl (2014, 30), 'are rather nodes of energy and matter that migrate across different supports, shaping and affecting people, landscapes, politics and social systems [which have] acquired an uncanny ability to proliferate, transform and activate.' The conditions and possibilities of this 'uncanny ability' still require closer investigation, however.

2.2 Computational conditions of the image

With the computational, Berry (2011, 12) suggests, 'certain aspects of reality come to the fore, such as the notion of orderliness, calculability, and predictability, whilst others, like chaos, desire and uncertainty, retreat into obscurity.' Franklin (2012b, 153) notes that the computational refers to 'the broad array of social, economic, political, and cultural changes theorised through cybernetics research in the 1940s and both inspired and emblematised by the universal, binary, and discrete functionality of the computer.'

In naming the field of cybernetics research and its key concerns and questions, Wiener (1961) argued that 'numbers are the best way to capture an intrinsically unstable and unmeasurable matter' (Terranova 2004, 33). As Plant (1997, 158) reminds us, '[c]ybernetic systems, like organic lives, were conceived as instances of a struggle for order in a continually degenerating world which is always sliding towards chaos.' Computationality is the logic and practice of cutting into the flow of life in order to manage its inherent disorder. Terranova (2004, 32) makes clear that for 'cyberneticians the discrete cut implied by a digital code made up for the approximation inherent in continuous or analogous quantities (which can only capture a static average rather than the instability of the micro).'

In order to function, Berry (2011, 15) notes, 'a computer requires that everything is transformed from the continuous flow of our everyday reality into a grid of numbers that can be stored as a representation of reality which can then be manipulated using algorithms.' Images produced by the 'universal, binary, and discrete functionality of the computer', as the vast majority of technologically-produced images are now, are underpinned by this computational desire for 'orderliness, calculability, and predictability'. Such images are 'encoded digitally by uniformly subdividing the picture plane into a finite Cartesian grid of cells (know as pixels) and specifying the intensity or colour of each cell by means of an integer number drawn from some limited range' (Mitchell 1992, 5). Conformed to a rectilinear grid of cells, the images on our screens are the expression of a two-dimensional array of integers. As Legrady (1990, 267) emphasises, '[i]t is this relationship of modular units with definite values that makes it totally controllable.'

Manovich, in his influential account of *The Language of New Media*, declared numerical representation to be the first of his five principles characterising the 'general tendencies of a culture undergoing computerisation' (2001, 27). Being composed of code means that the digital image is a computational object, subject to mathematical expression and algorithmic manipulation. 'In short, media becomes programmable', Manovich concluded (2001, 27). This issue of programmability will be addressed more closely in Chapter Three, for it is central to questions about the scopic operations and limits of contemporary social control. To get to these questions, however, requires consideration of the more fundamental issue of the ontology of the image itself, for it is often held that with digital image-making technologies has come a loss of indexical fidelity to the real. Balsom (2017) notes that:

> The spectre of easy manipulation hovered over the digital image, threatening its evidentiary value. Reality was seen to be an effect of images rather than their cause; photographic truth was debunked as a discursive construction, the power of the indexical guarantee deflated.

With the digital image, it has become a commonplace to observe that the 'referent has come unstuck' (Mitchell 1992, 31). The fact that the digital image can be internally generated, without any necessary relationship to or connection with a reality outside of the computational apparatus producing the image has, for many, damaged the photograph's 'aura of superior evidential efficacy', relying as it did on 'the special bond between fugitive reality and permanent image that is formed at the instant of exposure' (Mitchell 1992, 24). For Legrady (1990, 267), digital images 'simulate rather then represent the real.'

Digital simulation, it is suggested, undermines what Osborne (2013, 124) refers to as photography's 'famous meaning-effect of "the real"', its indexical relationship with a material reality outside of itself. Drawing on Pierce's typology of signs, in which the index refers to a sign that operates through 'association by contiguity', referring to its object through a direct connection, the analog image is distinguished from its digital successor by virtue of the former's contiguity to external reality through the direct inscription of light (Emery 2011). With analog photography, there is 'the general presumption that the image must have been dependent to some extent on a real-world event' (Legrady 1990, 267). Digital simulation undermines this presumption.

But the fidelity of the analog as a representation that is 'real' has been over-stated. The reality-effect of analog photography's celebrated indexicality has always been shadowed by the artifice of photographic capture and rendering (Rexer 2009). Barthes (2010) emphasised that the photograph was not simply denotive, but 'generated through the connotative strategies of subject selection, framing, and vantage point' (Legrady 1990, 266). For Mitchell (2010, 44), 'it seems clear that both the profilmic event and the dark-room process have always been manipulable, if not with the ease and rapidity provided by programs such as Photoshop.'

Nor should the discontinuities between analog and digital image-making be overstated. Digital imaging applications 'such as Photoshop' often have analog antecedents. 'Photoshop's seemingly "born digital" (or "software-native") filters have direct physical predecessors in analog filters', Manovich (2013, 134) reminds us. '[C]ommonplace rhetoric has it that the world has entered a "digital age" whose dramatic "dawning" has made the analog obsolete', Massumi (2002, 143) writes, but insists that '[t]his is nonsense.' Mitchell (2010, 45) concludes, with reference to the newness of the digital, that 'whatever this newness is, it will not likely be well described by a binary history that separates the digital image from all that preceded it.'

In considering the impact of computationality on the ontology of the image and, relatedly, on the scopic operations of social control and the use of visual media to contest such control, the key issue for my creative practice has not been a simplistic analog/digital distinction, but working out the implications of the digital image as a data object, and thus informational process. In common with analog video and television, digital image-making technologies encode light. Tracing this continuity, Manovich (2013, 133) notes that, '[s]uccessive media technologies based on electronics (such as the telegraph, telephone, radio, television), and digital computers employ the coding of messages or "content."' This means that rather 'than operating on sounds, images, video, or texts directly, electronic and digital devices operate on the continuous electronic signals or discrete numerical data' (Manovich 2013, 133). As Manovich (2013, 133) stresses, 'this, in turn, makes possible the idea of information - a disembodied, abstract and universal dimension of any message separate from its content.'

The notion that information is 'disembodied, abstract and universal' has long been contested, as Hayles (1999) makes clear in her review of the debates at the Macy conferences about how best to define "information", debates that pitched Shannon and Weaver's (1963) abstract mathematical models against

the embodied contextual emphases of MacKay (1969) and Bateson (1972). The engineering challenges of translating information theory into communication technologies, however, favoured models of information that prioritised standardisation, universality and quantification. The view that 'information in the technical sense has nothing to do with meaning' (Hayles 1999, 32) prevailed: information was signal rather than signification.

This is evident in Manovich's formulation, and has become the orthodox understanding of digital media as informational. In the entry on "Information" in *Critical Terms for Media Studies*, Clarke states this orthodoxy without equivocation. For Clarke (2010, 157), '[i]nformation has no concreteness' because it 'is a virtual structure dependent upon distributed coding/decoding regimes within which it can function'. In Section 5.2, I discuss the ways in which my creative practice evolved to explore the signaletic properties of the digital image, and the potential for resistance to the scopic operations of control to be found in the concept of noise associated with Shannon and Weaver's conception of information as signal, not signification.

But of immediate concern here, with respect to the impact of computationality on the ontology of the image and its implications for the visual operations of social control, are the issues of abstraction and dematerialisation raised by the conception of the digital image as informational. Mitchell's iconology emphasises the extent to which the visual image, whether digital or analog, has always been ambiguously im/material. 'An image is always both there and not there, appearing in or on or as a material object yet also ghostly, spectral, and evanescent', Mitchell (2010, 39) writes. But this im/material ambiguity is heightened yet further by the conditions of ubiquitous computation that make possible the 'degree of image saturation in image culture that was unimaginable in earlier times' (Mitchell 2010, 39).

This ambiguity becomes clearer with a closer examination of the concepts of data and information, and the relationship between them. The definitional imprecision of the concepts makes this examination difficult, however (Braman 1989; Buckland 1991; Floridi 2013; Floridi 2014). As Zins (2007) reports, a moderated discussion among a panel of experts from the field of Information Science, comprising 57 participants from 16 countries, formulated some 130 differing definitions of the meaning of, and relations between, the concepts of data, information and knowledge. Given these levels of imprecision and disagreement, it should be noted that a thorough review of the extensive academic debates on these concepts and relationships is beyond the scope of this current work. But I discuss below my understanding and use of the concepts of data and information as they have shaped my creative practice, and in particular the ways in which formulations of the relationship between the two concepts have generated useful insights into the ambiguously im/ material ontology of the digital image.

A useful distinction between data and information is proffered by Gitelman and Jackson (2013, 1) in terms of scale, when they define data as 'units or morsels of information'. 'Part of what distinguishes data from the more general category, information, is their discreetness', they (Gitelman and Jackson 2013, 8) emphasise. Data are 'particulate', existing in 'little bits' which, when aggregated, become information. For the mathematical model of information espoused at the Macy conferences, the patterning of particulate data as information was what constituted information's abstraction. Hayles (1999, 18) notes that 'Shannon's theory defines information as a probability function with no dimensions, no materiality, and no necessary connection with meaning. It is a pattern, not a presence.'

When Manovich (2013, 132) argues persuasively that digital media are 'a particular subset of the larger category "information"', based on the 'conceptual relationship between "information processing" and "image

processing"', implicit in this claim is an insistence on the primacy of pattern. But if this data/information distinction suggests a view of the digital image as an informational object produced by a patterning of data-as-light, its quality of abstraction, of 'no materiality', is necessarily more ambiguous. For the information that the image 'represents' necessarily requires a material base for it to be seen as an image. Hayles (1999, 13) notes that 'it can be a shock to remember that for information to exist, it must always be instantiated in a medium.' Gitelman and Jackson (2013, 6) highlight the 'general precept that data are abstract' but also note that 'it follows from their abstraction that data ironically require material expression. The retention and manipulation of abstractions require stuff, material things.'

The ontology of the digital image, then, is fundamentally ambiguous, as immaterial information that requires a material infrastructure of data storage, distribution and display. Indeed, it is doubly ambiguous: being not only im/material but also both object and process. As Hayles (1999, 56) reminds us, '[w]hen information is made representational […] it is conceptualised as an action rather than a thing.' It is the encoding of light as data, whose antecedents are the analog electronic media technologies discussed by Manovich (2013), that accounts for the processual nature of digital visuality.

Dienst (1994, 20) makes the point clearly with reference to early developments in television, the immediate precursor of digital visual technologies, for whom the priority was signal transmission not image production:

> Unlike cinema, which from the beginning constructed object-images using nineteenth-century industrial (or even preindustrial) techniques, television began by testing its ability to circulate the most ordinary expressions and stereotypes of a solidly, even proudly, philistine corporate imagination, treated as raw data for the machine.

This attention to digital visual technologies in terms of the circulation of 'data for the machine' rather than the production of image-objects entails a re-framing of analysis of digital visuality in relation to the scopic operations of

'control societies' (Deleuze 1995b), which I turn to in the next chapter. Central to this re-framing is the ontological ambiguity of the digital image as data object and informational process, at once abstract and material, both unsettled and unsettling.

Heilmann (2009) makes use of Kirschenbaum's (2008) concepts of forensic materiality and formal materiality in ways that are helpful for drawing out the implications of this ambiguity for questions of social control and the possibilities of visual resistance. As Heilmann (2009, 18) explains, the 'forensic materiality of digital devices comprises their concrete physical setup from the casing down to the nanometer-sized circuits and micrometer-sized electromagnetic inscriptions of data on hard drives.' This physical setup is particular, existing in a specific time and place, but its purpose is standardisation. 'The resulting formal materiality is an abstraction that has cleansed data from the 'dirt' and 'noise' of physical inscriptions, elevated it to the state of 'pure' digital information' (Heilmann 2009, 18). The formal materiality of the digital image, as an 'abstraction that has cleansed data', is the product of the forensic materiality of digital infrastructures (from sensors and circuits to servers and satellites).

This dual materiality is significant because the standardisation which is its goal is paradoxically generative of mutability. Heilmann (2009, 19) explains that:

> The purpose of forensic and the property of formal materiality are absolute definitude and sameness of form—but definitude and sameness of form not only for the sake of stability [...] but also, and more importantly, for exact switching of form.

As a material abstraction, the digital image is unsettled because '[d]igital media take form as forms that are first and foremost processible' (Heilmann 2009, 15). Mitchell (1992, 51) echoes this observation, noting that 'computer files are open to modification at any time, and mutant versions proliferate rapidly and endlessly.' What Osborne (2013, 128) describes as 'the extraordinary "fine grain" manipulation that becomes possible at the level of the pixel' is usually

taken as a sign of the digital image's loss of fidelity to the real, making possible a capacity for simulation that threatens to displace reality itself (Baudrillard 1983). But rather than displacing the real, the open and endlessly processible form of the digital image enhances its ability to proliferate and confuse reality.

The digital image is rendered unstable by the fact that in 'the realm of digital processing, there is no "true" state or appearance of any object conforming to its "actual being", meaning that there 'are only momentary states in the course of a potentially endless chain of processing that may or may not be adequate to some specific demand or task' (Heilmann 2009, 20). Rubinstein and Sluis (2013, 30) note that:

> [I]t becomes misleading to talk about the photographic "frame" or the singular image as the image is everywhere all at once, accessible from any point in the network, establishing a regime of intoxication and plenitude through its rapid multiplication and profusion.

This instability, its ontological status as data object and informational process, heightens the liberatory potential of the image, not least because as flow, the digital image is fundamentally uncontainable. Terranova (2004, 2) emphasises the 'tendency of informational flows to spill over from whatever network they are circulating in and hence to escape the narrowness of the channel and to open up to a larger milieu.' Digital images, by their computational nature, seep and leak; they 'spread and interact, mix and mutate within a singular (and yet differentiated) informational plane' (Terranova 2004, 2).

The result is that such images are more difficult to contain. As Steyerl (2014, 31) makes clear, '[d]ata, sounds and images are now routinely transitioning beyond screens into a different state of matter.' The tendency of digital images, as informational flows, to leak or escape from their designated channels renders them politically volatile. The digital image is marked by a potential for chaos and uncertainty which the computational desire for 'orderliness, calculability, and predictability' identified by Berry (2011, 12) struggles to contain.

In the report (Vicens and Lee 2015) referred to previously on '13 Killings by Police Captured on Video in the Past Year', it is noteworthy that six of these killings were recorded by police video (whether by body-worn or dashboard cameras) and two by surveillance cameras (both private and state-owned), with the videos making their way into the public domain whether through leaks or Freedom of Information Act releases. Videos such as these are vectors, potential 'lines of flight' in the sense in which Deleuze and Guattari (1987, 55) understood them as 'movements of deterritorialization', as 'vectors that generate an open space and the potentials for giving consistency to the latter' (Koerner 2011, 163).

However, the restlessness of the digital image also makes it an unsettling sight. The translation of light into binary code secures the 'creative potential of digitalized data to generate an in-principle-infinite multiplicity of forms of visualizations' (Osborne 2013, 130). This multiplicity of form may feel generative of possibility, 'establishing a regime of intoxication and plenitude', but it also arouses anxiety. 'Via the multiplicity of visualizations, digitalization draws attention to the essentially de-realized character of the image', Osborne (2013, 131) notes. The image is de-realised by its processual form, 'bound to change constantly into other forms, themselves assembled from multiple sources and different sets, never to reach a final state that could be called a 'true' representation' (Heilmann 2009, 22). The anxieties this can provoke are discussed next.

2.3 Anxieties of representation

The ontology of the digital image as processual form is the consequence of its immersion in circuits of data, whose flows unsettle the perspectival ground on which the representation of a 'real' has conventionally been based. Computationality has rendered space informational in ways that destabilise representation. For Terranova (2004, 37), space becomes 'informational' when 'it presents an excess of sensory data, a radical indeterminacy in our

knowledge, and a nonlinear temporality involving a multiplicity of mutating variables and different intersecting levels of observation and interaction.' This indeterminacy and multiplicity mean that this space, as Terranova (2004, 37) suggests:

> is not so much a three-dimensional, perspectival space where subjects carry out actions and relate to each other, but a field of displacements, mutations and movements that do not support the actions of a subject, but decompose it, recompose it and carry it along.

The 'foregrounding of informational flows across the socius also implies a crisis of representation (both linguistic and political)' because 'the logic of representation presupposes a homogenous space where different subjects can recognize each other when they are different and hence also when they are identical' (Terranova 2004, 35). This homogenous space is now a 'pure patchwork' of Riemann spaces (Deleuze and Guattari 1987, 485), whose multiplicities are the result of heterogeneous data flows.

In Terranova's suggestive formulation, the 'empty space organized by a three-dimensional perspective' (2004, 35), on which the separation of, and thus visual relation between self/subject and other/object depends, is destabilised by this 'immersive, multidimensional and transformative topology' (2004, 28) of ubiquitous computation. In turn, the penetration of computation into every aspect of life is enmeshed with the imperatives of transnational capitalism, which itself has been described as 'rather more topological in that the dense network of information that overlays the territory enables the landscape to be stretched, compressed, folded, and twisted into new shapes - at least for the purposes of economic activity' (Wark 2015, 5). In the flows and folds of this datascape of contemporary capitalism, the space of representation of selves and others is de-formed, denying a topographic perspective 'from an optical standpoint outside that space' (Cartwright 2014, 301). This loss of perspectival ground is unsettling for any political project of change that would base itself on such representation.

At issue here is the broader question of the relationship between visual and political representation. Steyerl (2012, 169) recalls that '[f]or a long time my generation has been trained to think that representation was the primary site of contestation for both politics and aesthetics.' But now, it seems, 'a growing number of unmoored and floating images corresponds to a growing number of disenfranchised, invisible, or even disappeared and missing people' (Steyerl 2012, 171). The informatic 're-ordering of life' (Kember 2012) effected by ubiquitous computing and transnational capitalism is also re-ordering visual representation. Yet the insistence on visual (self-)representation as a mode of political enfranchisement persists, especially by and for those whose political visibility is suppressed.

With cameras now everywhere, the radical possibilities of image-making proliferate. Mirzoeff (2016, 251) emphasises the importance of visual activism to the political struggles in urban centres across the world from 2011 onwards against economic austerity and political disenfranchisement, for it 'is here that the young, urban, networked majority are questioning both forms of representation.' He (Mirzoeff 2016, 287) insists, 'that the implication of "they do not represent us" (in all senses of that term) is that we must find ways to represent ourselves.' Though inspired by the visual activism of these young people, Mirzoeff (2016, 251) cautions that such activism 'raises the question as to whether the new global majority can represent itself both politically and visually, or whether the visible oligarchies generated by globalization will continue.'

But what does real representation look like in the era of digital visuality and informational capitalism? It is to the topological space of data flows that we must attend if we are to understand the linked challenges of visual and political representation in relation to the digital image. The implications of this informational space of visuality for notions of subjectivity and experiences of political agency are taken up in more detail in Chapter Three.

At this stage, however, I remain with the question of the digital image as a space of representation, both visual and political. For it follows from the analysis thus far that such a space is profoundly unsettled by computational conditions and the informational dimension they reveal. Franklin (2012b, 168) is clear that 'tomorrow's radical practice – which is always sadly doomed to be a computational practice according to the definition of computation dreamed of by cyberneticians and neoliberal ideologists alike […] – will be based not on contesting or even exceeding representation but rather on escaping it.' In Terranova's (2004, 9) view, a recognition of this informational space 'allows us to move away from an exclusive focus on meaning and representation as the only political dimension of culture.'

What it might mean to escape representation in ways that can still contribute to the kinds of visual activism already discussed has been a central concern of my creative practice. Where might a visual practice seek to escape to, given the immersive informational space by which it is constituted? 'Is there any outside anymore, when networks encircle the globe?' asks Galloway (2012, 120). Without an outside, it is difficult to get critical perspective, a problem that has long been identified in relation to the totalising impulses of capitalism. For Osborne (2013, 118), 'the image-space of the photographic has expanded to global dimensions as a constituent part of what we might call photo-capitalism', which is a 'distinctively transnational and translinguistic cultural-economic form.' Photo-capitalism is the latest iteration of what Dienst (2006, 44) sees as capitalism's visual compulsion, as it 'persists in representing itself and reproducing itself everywhere, foiling any attempt to sum it up in a word or turn of phrase.' Instead, Dienst (2006, 44) suggests, it 'offers its own images as its only self-image. How, then, can capital be figured or at least brought within reach of a representation beyond its own representations?'. Contemporary globalised capitalism, in its apparent ubiquity as transnational cultural-economic form, is especially resistant to such critical perspectives, being simply too pervasive to see as a totality.

Furthermore, its computational infrastructure is resistant to representation. As Galloway (2012, 92) puts it: 'The point of unrepresentability is the point of power. And the point of power today is not in the image. The point of power today resides in networks, computers, algorithms, information, and data.' Galloway (2012, 91) notes that the unrepresentability of power means that there 'is quite literally an inability to render the network as an image differentiated from other images. There is a single image and thus there is none.'

Attempts to visually represent political conditions are further compromised by what Franklin (2011) characterises as the 'real subsumption of images made possible by computation.' This real subsumption, Franklin (2011) suggests, is linked to the fact that 'today software, unlike painting, photography or cinema in prior historical periods, is not only a dominant form of visual cultural production […] but also shapes the dominant form of work in industrial countries.' I return to these issues of screen labour and the attention economy in my discussion in Chapter Three of the image-machine of social control.

But I am concerned here with the ontological implications of the real subsumption of the image by software, which 'is rooted in symbolic logic not optical vision', as Galloway (2012, 63) notes. The digital image is ontologically ambiguous, a visual experience based on a non-visual operating logic; 'the computer consummates the retreat from the realm of the imaginary to the purely symbolic realm of writing', notes Galloway (2012, 17), referencing the work of Kittler (2009). The digital image is a fetish, a representation that masks or misrepresents its real conditions of existence (Marx 1977; Osborne 2005). 'As the screen serves up the image of the photograph, the operations that deliver them to the screen are increasingly unseen and unknowable', Rubinstein and Sluis (2013, 34) make clear.

The pervasive image-making made possible by ubiquitous computation appears to make the world ever more visualisable, ever more transparent. But, as Chun (2004, 27) explains, 'for computers to become transparency machines, the fact that they compute – that they generate text and images rather than merely represent or reproduce what exists elsewhere – must be forgotten.' Our computational condition is marked by a visual anxiety about the fraught relationship between seeing and knowing. 'Algorithmic interfaces - even as they flaunt their own highly precise, virtuosic levels of detail - prove that something is happening behind and beyond the visible', Galloway (2012, 86) makes clear.

There was a time when the image-making technologies of industrial capitalism could be turned against it, to make visible and strange its operations (Giles 2007) or, in the case of Benjamin's (2002) celebrated optical unconscious, to explode the apparent confinements of the capitalist present, exposing the 'possibility of creating an openness to the future' (Caygill 1998, 94, cited in Hansen 2012, 158). The digital image, however, hides the operations of power even as it may purport to reveal them. As Chun (2011, 2) asks, '[w]ho really know what lurks behind our smiling interfaces, behind the objects we click and manipulate?'.

2.4 Anxieties of abstraction

But it is not only that digital images and screens misrepresent their visual promise by (re)producing an imaginary relationship to real conditions. The reality to be captured by the image has been penetrated by informatisation to such a degree that reality itself appears increasingly de-materialised. There is, as Beller (2006, 243) notes, a 'tendency toward increasing abstraction under capitalism', a tendency which the digital image appears to express and accelerate. The anxiety born of the digital-visual conjuncture can be grasped, then, as an affect of computational capitalism itself.

The 'third nature' (Wark 2015) of informational capitalism appears to be that of an ontological insecurity linked to the abstraction, the de-materialisation, of what is still referred to as the 'real economy'. In Shaviro's (2013) view, '[f]inance operates according to a transgressive cultural logic of manic innovation, and ever-ramifying metalevels of self-referential abstraction', to the point where its operations appear to 'float in a hyperspace of pure contingency, free of indexical relation to any "underlying" whatsoever.' The economic crash of 2008 highlighted the extent to which the financialised global economy is now black-boxed. As Toscano (2013) suggests, the 'opacity of transactions happening fathoms beneath our perceptual threshold and far beyond our mathematical comprehension makes most "representations" of this bleeding-edge of finance capital so many ciphers of our ignorance.'

The abstractions of computational capitalism constitute a crisis of visuality, its algorithmically accelerated trading of ever more opaque financial instruments increasingly beyond the scope not merely of human oversight and regulation, but human cognition as well. Toscano (2013) emphasises that the 'inscrutable, abstract subsumption of life by finance seems to have become a matter of everyday experience, the anxious perception of causalities and constraints beyond our understanding and response.' But not beyond our affective experience. For as Shaviro (2013) emphasises:

> At the same time that it floats off into digital abstraction, however, neoliberalism also operates directly on our bodies. Data are extracted from everything we feel, think, and do. These data are appropriated and consolidated, and then packaged and sold back to us.

The feeling that our material realities are no longer simply the product of human agency, however elite and remote, but are in effect moulded by the apparently immaterial data flows that constitute the circuits of financialised capitalism induces an affect of insecurity.

It is this ethereal quality of power under conditions of ubiquitous computation that artist Trevor Paglen has captured so well in his evanescent depictions of

the US military's drone warfare programme, killing machines rendered as smudges and smears against a wash of aerial blue. As a review (Squibb 2013) of a Paglen show at Metro Pictures in New York City in 2013 asked, 'if state violence now takes place via a process of radical abstraction, to what extent can it be contained or defeated by historical forms of representation?'. Paglen's aesthetics of abstraction are about the politics of abstraction produced by computationality and its operations within both algorithmic capitalism and the surveillant assemblage (Haggerty and Ericson 2000) that characterises state formations in the centres of global capitalism.

The material forces most determinative of life in the global North appear immaterial. It is this ambiguous abstraction that the digital image has come to anxiously represent, as Osborne (2013, 128-129) makes clear:

> [I]t is anxiety about the real generated by these peculiar social forms (within which the most real appears unreal, and the apparently or empirically real has little determinative significance) that is displaced onto and invested in the problem of the referential significance of digitally produced images.

Can the digital image be a site and sight of liberatory practice? Rubinstein and Sluis (2013, 35) themselves ask, '[i]n other words, what is the political power of the undecidable digital image? The answer might be found in the ability of the digital image to capture the modes of production, the organization and the structure of the network.' But the forgoing analysis suggests that the digital image, in its visual ambiguities and imbrication within ever-more abstracted operations of computational capitalism, is ill-equipped to enact such capture.

Instead, Steyerl has argued that we should embrace these inadequacies of the 'poor image' and its de-materialisation. She (Steyerl 2012, 52) urges a participation in, rather than a looking at, the image, recognising that it 'doesn't represent reality. It is a fragment of the real world. It is a thing just like any other - a thing like you and me.' It is through this participation, getting involved with the digital image's 'glitches and artifacts, the traces of its rips and

transfers' (Steyerl 2012, 53), that a sense of agency may be released. Steyerl (2012, 52) claims that to 'participate in the image as thing means to participate in its potential agency - an agency that is not necessarily beneficial.'

The speculative realist echoes of an object-oriented ontology are clear here, a review of whose extensive literature is beyond the scope of this current work (Brown 2001; Barad 2003; Bryant et al. 2011; Harman 2011). That images, as things, may be agentic 'like you and me' clearly has an appeal to any project invested in the kinds of visual activism referred to at the beginning of this chapter. But as the forgoing analysis of the informatisation of the digital image suggests, its ontology is not simply thing-like but unstable and processual, a flow with a tendency to seep and leak in unintended ways. Based on the signal codification of video and television, the computational image is in some sense not about image-objects at all, but rather a circulation and patterning of information as light. As Dienst (1994, 20) argues, the televisual is that in which 'composition is always in process', for 'television proves that it is not built to produce images (like cinema), but to open and frame fields of visuality where a number of images, or any image whatsoever, can be constituted as points of visibility.'

What remains of the digital image, then, for a visual activism that would engage with power under conditions of informational capitalism is less its representational desire, compromised in so many ways by these same conditions, than its circulations, patternings and de/formations of 'fields of visuality'. As Dienst (1994, 46) notes, the 'information and telecommunication machinery now encompassing the earth […] exists first because of capital's imperative to circulate and to change form as quickly as possible.' In her later writing on 'circulationism', which she describes as the art of 'postproducing, launching, and accelerating' the image, Steyerl herself appears to embrace this perspective. With circulationism, Steyerl (2014, 37) moves away from a focus on the image-object to a concern with 'short-circuiting existing networks,

circumventing and bypassing corporate friendship and hardware monopolies', developing an 'art of recoding or rewiring the system by exposing state scopophilia, capital compliance and wholesale surveillance.'

The challenge of visual activism is that of engaging with the circulations and flows of the digital image. In its processual nature and tendency to leak from prescribed channels of communication, the digital image is a powerful medium for political action. But the computational conditions that make possible these political affordances also undermine the representational force of the image. The perspectival ground on which representation relies is lost in the topology of informational space, at the same time as the representational force of the image is threatened by the inherent ambiguity of a digital visuality whose software hides as it shows. At the same time, the informatisation wrought by algorithmic capitalism means that its operations are increasingly unrepresentable, rendering the digital image and its visual unreliability an expression of anxiety about the abstracted nature of power that operates as control. It is less to the digital image itself, but rather to the circulations, patternings and de/formations of data expressed as light on our digital screens that we must attend, I suggest, if we are to confront the digital visuality of control.

3. In the Image-Machine of Control

In this chapter, I look more closely at the visual operations of social control, as sketched by Deleuze (1995b) in his prescient *Postscript on Control Societies.* I discuss the continuing pertinence of Deleuze's key concepts of dividuation and modulation for understanding the contemporary operations of the digital-visual infrastructure of data circulations and patternings. This infrastructure I characterise as the 'image-machine of control', and I briefly review recent theorising of the digital screen as the site of control through the mechanisms of cognitive capture and the attention economy.

While useful perspectives, I suggest that their explicit or implicit recourse to notions of consciousness and subjectivity is ill-equipped to deal with Deleuze's fundamental insights into the operations of control at the level of micro and macro states, at once sub- and supra-individual. Indeed, it is through the modulating of these singularities and multiplicities that any sense of the 'individual' comes to be constituted. I draw on affect theory to make visual sense of this insight, emphasising the role that affects of insecurity, at the level of the dividuated subject and the abstracted socius, play in inciting the interactivity with the screen on which the State and Corporation alike rely for their accumulation and circulation of data.

The image-machine of control constitutes us as photographic 'agents' through its mechanisms of affective capture, inciting an interactivity with our screens and in this way augmenting and sustaining the data flows of informational capitalism. Any project of visual activism concerned with challenging the algorithmic operations of State and corporate control, I argue, must confront the circulation-image, so named because the digital image is both constituted by and productive of data flows. It is to these conditions of imagistic flow that my creative practice has turned in order to see what visual resistance in the image-machine of control might look like.

3.1 Control through dividuation

Deleuze's (1995b) insights about 'control societies' continue to energise debates about the ways in which elites, and the institutional manifestation of their power in the organs of the State and Corporation, maintain their rule. There has emerged a familiar narrative about the workings of social control, whose major themes and tropes Bratton (2013) has summarised well:

> We have a good sense of the passage from the Foucauldian disciplinary biopolitics for which bodies are captured, enveloped, individuated, nominated, and enumerated into a governable interior, into the Deleuzian "society of control" for which open fields of interfaces, switches, and gateways quantify the traces and trails of partial subjects in motion as they pace through urban landscapes, wandering without tether because there is no outside to which they might escape.

Deleuze (1995b, 174) acknowledged that such a 'passage' was identified by Foucault himself, who 'was actually one of the first to say that we're moving away from disciplinary societies, we've already left them behind. We're moving toward control societies that no longer operate by confining people but through continuous control and instant communication.'

Debates about the nature and extent of this 'passage' from discipline to control persist. Even a cursory glance at the workings of the US prison-industrial complex (INCITE!; Critical Resistance, 2001) or the refugee internment camps in Australia's Northern Territory or the privatised detention centres for asylum seekers in the UK would suggest that institutions of confinement continue to flourish. In part, this is the basis on which Kelly (2015) argues that contemporary society is but a further iteration of the disciplinary-biopolitical operations of power identified by Foucault. The biopolitics of today, Bratton (2013) suggests, is:

> one that organizes its biopolitical governance through a more immediate and affective means: the sensing and codification of risk at the level of skin […]. This epidermal biopolitics is based less on "seeing like a state" than upon what a governing apparatus can sense.

Goodman (2012, 64) appears to concur, though understanding this as part of the operation of control, when he notes that '[v]igilant control is no longer

merely panoptic, but pansensory.' To these shifts from discipline to control, and from panoptic to pansensory control, Lazzarato (2006) suggests must also be added the passage from biopolitics to noopolitics, which he characterises as the cognitive capture of the brain made possible by tele-technologies such as television and the Internet. This conception of the noopolitics of control has been developed most rigorously by Stiegler (1998, 2011), whose work, as Munster (2011, 70) notes, is 'concerned with the over-reaching of biopower into what he terms "psychopower" in which contemporary technicity systematically captures and modulates not simply bodies but also our entire spectrum of attention.'

A fuller account of debates about these shifts is beyond the scope of this present work. It is important to note, however, that the concept of noopolitics, in as much as it emphasises 'the widespread exercise, ubiquity and operation of information as a field of power relations at all levels of society' (Munster 2011, 77) and 'involves a politics of attention and memory' (Terranova 2007, 141), has served to highlight the functions of the digital screen within processes of cognitive capture. I return to this point later, when emphasising the need to address the affective dimension of control's operations on the digital screen, with which my photographic and video work has been closely concerned.

Perhaps because his thesis was concerned with 'the general breakdown of all sites of confinement' (Deleuze 1995b, 178), sites whose operations Foucault (1995) had figured through a discussion of Bentham's Panopticon, Deleuze says little about the place of the visual in control societies. Yet contemporary concerns about social control tend to focus on surveillance, whether by the State or by transnational corporations. Even prior to revelations about the mass data gathering conducted by the US National Security Agency's PRISM programme, anxieties about surveillance have flourished. The panopticon now exceeds its previous sites of confinement, as Lyon (2006) suggests in detailing the proliferating neologisms for this sense of pervasive surveillance, among

which he lists the 'synopticon', 'ban-opticon', 'nonopticon', and 'netopticon', to which further nuance has been added by Gilbert and Goffey (2015) in their discussion of gendered surveillance (the 'gynaeopticon') and Browne (2015) in her exposition of racialised surveillant assemblages.

Notwithstanding the emphasis on the multi-sensorial nature of contemporary surveillance by Bratton and Goodman among others, it is the eye of power that most alarms, with a pervasive infrastructure of data gathering made possible by digital technologies. This infrastructure is part of what Feldman (2013, 165) characterises as the 'actuarial gaze', 'a visual organization and institutionalization of threat perception and prophylaxis, which cross cuts politics, public health, public safety, policing, urban planning and media practice.' It is through this gaze, Feldman (2013, 165) suggests, that '[a]n Enlightenment inspired panoptical dream of control reproduces itself in the dialectic of the veiling and unveiling of hazards.' In this era of 'networked eyes' (Mitchell 2006), it would seem that the panopticon is more distributed than ever. In Steyerl's (2012, 24) view, 'new technologies have enabled the detached observant gaze to become ever more inclusive and all-knowing to the point of becoming massively intrusive – as militaristic as it is pornographic, as intense as extensive, both micro- and macroscopic.' '[W]e are all gazing at each other now', comments UK artist Jesse Darling (Clark and Farkas 2012).

Crucially, however, we are being seen as data. A defining characteristic of the control society is that it deals with 'us' as data, rather than as embodied subjects. As Cegłowski (2017) emphasises, it 'is a striking fact that mass surveillance has been driven almost entirely by private industry' and that the 'one thing these companies share is an insatiable appetite for data. [...] There are two interlocking motives for this data hunger: to target online advertising, and to train machine learning algorithms.' Deleuze (1995b, 180) wrote that '[w]e're no longer dealing with a duality of mass and individual. Individuals become "dividuals," and masses become samples, data, markets, or "banks."'

Surveillance has become dataveillance. Best (2010, 10) explains that a 'dividual' is a 'physically embodied human subject that is endlessly divisible and reducible to data representations via the modern technologies of control, like computer-based systems'. The 'dividual' is a unit of control. In Franklin's (2012b, 155) words, the 'dividual describes the body that is coded in terms of discrete movements […] or markers of identity', a coding which 'presents a social violence that is composed not of reactionary force but of preemptive informatics: techniques of targeting, capture, and prediction.' But, it should be noted, these techniques do also expose the data 'dividual' to reactionary force. 'We kill people based on metadata' said General Michael Hayden, former director of the NSA and the CIA, at a 2014 public debate on US government surveillance programmes (Cole 2014).

The psychic effects of 'dividuation' are significant, as it 'encourages the user to think of themselves as a set of partial objects, fragmented dividuals or loosely connected properties, collected as a time series of datapoints, and subject to intervention and control' (Berry 2012, 390). For Flusser (2005, 324, cited by Lütticken 2013, 147) 'the human being can no longer be seen as an individual but rather as the opposite, as a dense scattering of parts; he is calculable.' The result is a sense of psychic fragmentation which we look to the computer screen to heal. Dividuation, in Berry's (2011, 128) account, produces a 'minimal, decentred and fragmentary subjectivity which is unified through the cognitive support provided by computational devices which reconcile a "complete" human being.' But, as Steyerl (2012, 168) notes, when 'we register at cash tills, ATMs, and other checkpoints – as our cellphones reveal our slightest movements and our snapshots are tagged with GPS coordinates – we end up not exactly amused to death but represented to pieces.'

The 'dividual' of the control society is thus imbricated with visual concerns. That we are seen as data invites our attention to the screen, to both seek and create an image of the coherent self; this is the anxiety that helps drive the

narcissism of the selfie, whose dominance of the image-scape is such a feature of visual culture discourse (Mirzoeff 2016). As Munster (2006, 164) suggests, anxieties about dividuation have led to a 'hyperindividuation [which] places the self once more at the center of a world: claiming a stake in virtual real estate, controlling the production of virtual game worlds, customizing browsers as easily as consumer preferences', all the while 'feeding into a universalist, albeit flowing and mobilizing, informatics.'

Yet, as argued in Chapter Two, the digital screen is itself an unstable site of representation. The dividuated subject encounters its visual corollary in the discretised image. Where once self-representation was securely bounded by the celluloid frame, the fragmented dividual now faces a pixel screen and its data flows. The loss of the subject and the loss of the image mirror each other continually. This makes the digital screen a profound site and sight of anxiety, an anxiety which, I will suggest, serves as a motor of the image-machine of control.

3.2 Visual modulation in the image-machine of control

Deleuze famously contrasted the moulding of the subject in the disciplinary society with the continual modulation of the dividual in the society of control. Modulation works at the level of the bit, the pixel, the dividual, channeling and arranging such discretised units in desired directions and patterns. As Terranova (2004, 35) suggests, modulation is intimately connected to the database, which has 'helped to discriminate and exploit the smallest differences in tastes, timetables and orientations, bypassing altogether the self-evident, humanistic subject, going from masses to populations of sub-individualized units of information.' In this way, identities such as those of gender, race and sexuality are 'reduced to recombinable elements, disassociated from their subjects and recomposed on a plane of modulation - a close sampling of the micromutations of the social, moving to the rhythm of market expansions and contractions' (Terranova 2004, 35).

This conception of modulation is fundamentally posthumanist, privileging 'informational pattern over material instantiation' such that consciousness is properly understood as an 'epiphenomenon' Hayles (1999, 2). Modulation does not work at the level of the consciousness of the humanist subject, but at the sub-individual level (e.g. of sensation and excitation) and at the supra-individual level (e.g. of collective affinities, groups, networks). The concept of modulation relies on an ontology of singularities and multiplicities below and beyond the humanist subject, which is at the heart of Deleuze's philosophical project (Deleuze 1994; Rajchman 2000) and which, when used with Guattari, was central to their analysis of capitalism (Deleuze and Guattari 1983; 1987).

Deleuze's conception of modulation was influenced by Simondon's (2005) ontology of becoming, which understood materiality as fundamentally processual, in a 'condition of ongoing immanent transformation' (Hui 2015, 76). For Simondon (2005), modulation referred simply to the ongoing process of becoming, but Deleuze uses it to highlight the purposeful amplifications and aggregations of singularities into multiplicities that are meaningful to the Corporation and State alike. Modulation in the society of control involves processes of 'affective capture' (Terranova 2004, 140) that work through the operation of 'certain measures and constraints' (Hui 2015, 80). This is the basis of what Terranova (2004, 25) characterises as 'soft control', concerned with 'known probabilities within the constraints set up by the interplay of code and channel or medium.' As she (2004, 108) points out, it 'is not soft because it is less harsh (often it has nothing gentle about it) but because it is an experiment in the control of systems that respond violently and often suicidally to rigid control.' Such systems 'must be modulated with a minimum of amount of force' (Terranova 2004, 108).

Control operates in an unstable materiality of manifold singularities, seeking through modulation to form manageable multiplicities for purposes of profit and social order; it is 'a diagram of power that takes as its operational field the

productive capacities of the hyperconnected many' (Terranova 2004, 100). The significance of this understanding of modulation becomes apparent when we return to the screen as the scene of control. For while extensive theoretical work has been done on the role of the digital screen within the operations of social control, much of it defaults to notions of consciousness and implicitly humanist subjectivity.

This is clear in the theorising of the contemporary attention economy, whether from a behaviourist economics perspective (Murray et al. 2015) or inflected by Marxist analyses of real subsumption (Virno 2004; Beller 2012). The latter regard social media as the latest and most pervasive iteration of the 'social factory', in which the human subject, though apparently exercising their free will, is in fact labouring at the screen, producing surplus value for Google, Facebook and the internet's other 'factory owners'. From a very different perspective, indebted to Heidegger (2010), Stiegler (1998) has looked at the digital screen as the site of computational technologies that, in Munster's (2011, 75) account, 'capture, control and modulate the neuro-informational circuits of human behaviour, especially dominant in the spheres of marketing and education but increasingly inhabiting and imperializing thought conceived as a broad cultural activity.' But as Hansen (2012, 62) makes clear, Stiegler's noopolitics of computationality, made manifest on the digital screen, still relies on a notion of human consciousness, ignoring the ways in which 'media impact the domain of worldly sensibility prior to, and indeed as a necessary condition for, impacting our higher order experience.'

If we are to understand the digital screen as the scene of modulation, it is to the processes of 'affective capture' and the 'measures and constraints' that channel singularities into manageable multiplicities that we must pay more attention. Terranova (2004, 144) affirms this point in discussing 'the image ecology of network culture', whose politics, she (Terranova 2004, 142) argues, are 'no longer a matter of illusion or deception, but of the tactical and strategic

deployment of the power of affection of images as such.' Drawing on Baudrillard's (1983) conception of contemporary life as a condition of semiotic saturation, Terranova (2004, 152) suggests that the potency of images lies less in their cognitive impact than their affective intensity, for what 'we actually come to perceive consciously is only a fraction of what has touched us.' For the image, what 'seems to matter is the kind of affect that it packs, the movements that it receives, inhibits and/or transmits' (Terranova 2004, 142).

The political function of the image, then, within the computational infrastructures of soft control is related to its 'power of inducing perceptions and organizing the imagination, of establishing a subjective correspondence between images, percepts, affects and beliefs' (Terranova 2004, 152). But such power is inherently unstable; at the level of affect, there is always an excess of bodily sensation and excitation before and beyond consciousness (Massumi 2002). The informational 'leakiness' of the digital image, discussed in Chapter Two, is compounded by its affective excess, which Munster (2006, 140) refers to as the digital image's potential for 'informatic affect'.

Affect, I am aware, is contested ground, with differing views on its meaning and uses (Gorton 2007; Seigworth and Gregg 2010). As Ngai (2005, 26-27) makes clear, the distinction between emotion and affect is a matter of 'distinguishing first-person from third-person feeling, and, by extension, feeling that is contained by an identity from feeling that is not.' It is this notion of affect, as that which precedes and exceeds the consciousness of the humanist subject, which I find most useful in relation to this discussion of modulation, control and the screen. Terranova (2004, 152) writes that the 'whole body is filled by the vibrations produced by the impact of images on sensory organs, including eyes, ears and skin', vibrations which induce 'autonomic bodily remainders' and thus a sense of 'unrealized, or virtual, potentials', a 'field of intensity' that may yet become 'a site of emergence for another mode of politics'.

Affect is both sub-individual, at the level of bodily sensation and autonomic reaction, and supra-individual, at the level of ambient mood and collective feeling; that is, affect is concerned with singularities and (potential) multiplicities. Goodman (2012, 189) notes that 'unlike an emotional state, affective tonality possesses, abducts, or envelops a subject rather than being possessed by one.' Puar (2012, 63) is clear that 'societies of control tweak and modulate bodies as matter, not predominantly through signification or identity interpellation but rather through affective capacities and tendencies.'

The digital screen is the scene of affective encounter with the anxieties produced by informatisation: the psychic anxieties of the dividuated subject and collective anxiety in the face of the apparent dematerialisation of the 'real world'. We make and look to the images on our screens in response to this anxiety, from the selfies that seek a coherent self to the locative media that seeks a reliable position on stable ground. In this sense, the digital image operates as 'affective capture', inciting our interactivity with the screen and with the algorithms of 'measures and constraints' that channel dividuated singularities into patterns of data (as a multiplicity) that are meaningful to and manageable by the Corporation and the State.

But, notes Hansen (2004, 7-8), 'affectivity' is also 'the capacity of the body to experience itself as "more than itself" and thus to deploy its sensorimotor power to create the unpredictable, the experimental, the new.' I return to the political potential of this visual remainder and affective excess in Chapter Four, with my discussion of the vibrational ontology of the interface, and in Chapter Five, with my video works *look screen* and *moving still*, and their exploration of this vibrational potential to disrupt the operations of control.

3.3 The circulation-image of control

It is in relation to this discussion of affective capture and affective excess that I find Franklin's (2015) concept of the 'program image' useful. For the digital image, '[e]ach significant change in the image is directed not only at the construction of a specific mode of perception, but also at the motivation of some form of input - a mouse click, a keystroke, or a button press' (Franklin 2015, 164). The digital image 'is always aimed at motivating user action'; it is a 'program image, an image that at once executes and is executable' (Franklin 2015, 164).

Far from the alienated passivity induced by the televisual commodification of the image identified by Debord (1970), the digital image is a stimulant to interactivity with the image-machine. As Cegłowski (2017) makes clear, this image-machine is part of 'an apparatus for harvesting tremendous quantities of data from people, and a set of effective but opaque learning algorithms we train on this data.' The image on the digital screen is bound up with algorithms that 'learn to show people the things they are most likely to 'engage' with—click, share, view, and react to' Cegłowski (2017) notes. Echoing my earlier discussion of the digital image as operating an 'affective capture', Cegłowski (2017) stresses that such algorithms are 'very good at provoking these reactions from people.'

This concept of the 'program image' also refines Flusser's (2000, 2011) analysis of the photographic apparatus, whose black-boxed algorithms programme photography. Recognising ourselves as programmed by the image-machine is necessary, according to Flusser, if we are to glimpse a liberatory practice of making and using images. Contemporary life is an image-scape of what Flusser (2011, 10) defines as 'technical images, a computed universe in which particles are assembled into visible images.' The logic underpinning this universe of technical images is that of control. As Flusser (2011, 10) suggests, this 'emerging universe, this dimensionless, imagined universe of technical images,

is meant to render our circumstances conceivable, representable, and comprehensible'. Crucially for Flusser, the images in such a universe are in a sense already taken, programmed by the algorithmic 'apparatus' of the camera, itself programmed by the requirements of power. 'Power has moved from the owner of objects to the programmer and the operator' according to Flusser (2000, 30), meaning that 'the freedom of the photographer remains a programmed freedom' (Flusser 2000, 35).

Given this programming, the question remains as to what strategies of visual resistance, or in Flusser's terms 'visual freedom', might look like. Flusser (2000, 80) himself hailed the 'experimental photographer', able to 'outwit the camera's rigidity' by 'smuggl[ing] human intentions into its program that are not predicted by it' and 'forc[ing] the camera to create the unpredictable, the improbable, the informative.' But where Flusser saw the programming of the apparatus as determining the kinds of images that are taken, whose algorithms the 'experimental photographer' must 'outwit', the function of the 'program image' within the image-machine of control is, more fundamentally, to incite the 'user' to participate in the imagistic flow and keep the data moving.

Thus, appeals to heroic acts of visual resistance, whether by Flusser's 'experimental photographer' or the often celebrated 'hacker' (Wark 2015), should be treated with caution, for this view of resistance ignores dividuation. As Franklin (2012b, 156) notes, such a view of resistance preserves:

> a connection with the Romanticist notion of the individual or group that is undercut by the predominance of the dividual and the data bank characteristic of control societies, and that places their viability as a base for effective political critique in doubt.

Steyerl's (2014, 37) project of 'circulationism', to which I referred at the end of the previous chapter, speaks more clearly to what is involved in disrupting the operations of such 'program images'. As I suggested in Chapter Two, what remains of the image, under conditions of computationality, for a visual activism that would challenge the operations of control is less its

representational efficacy than its fluid instability. To emphasise this, and with an echo of Steyerl, the image-machine of control, I suggest, operates through 'circulation-images', in the dual sense that the digital image is both constituted by and productive of data flows.

That '[n]ow and for the foreseeable future, images are a sub-genre of machines', as Bratton (2013) suggests, may thus be understood in a very specific sense. The function of the image-machine in this circulation is to constitute 'us' as inputs with the appearance of agency. The 'machinic form of value accomplishes what the exchange of commodities cannot: it constitutes bodies as conscious (self)-representations coordinated through the technical arrangement of economic processes', suggests Dienst (1994, 48). The image-machine of control constitutes us as photographic 'agents' through its mechanisms of affective capture, in order to stimulate data input into the algorithms of measure and constraint that modulate unstable systems (composed of singularities) into manageable patterns and movements. It is to these conditions of imagistic flow that my creative practice has turned in order to see what visual resistance in the image-machine of control might look like.

4. Between Faces, Facing Between

The screening of digital images, and the informatisation they represent, generates an affect of insecurity which we look to and act on our screens to resolve through (self-)representations that are themselves inherently unstable. But every use of the screen risks refining the algorithmic interpolations of the surveillant-consumption assemblage of 21st century capitalism, further intensifying its anxious affect. The digital screen and its circulation-images are visual components of an infrastructure of control, whose patternings of light incite an interactivity with its computational surface that energises circuits of data whose flows pattern and modulate us.

Chapter Four details my turn to the digital-visual interface, being the organic-machinic encounter with the screen, to engage with the dynamics of the imagistic flow. Drawing on theorising of the fluid dynamics of the interface, I discuss the implications of seeing the interface as a dynamic boundary condition whose turbulence of data flows may open up 'lines of flight' from the striated grid of control. In as much as they are visual, these lines of flight help us see and be beyond the workings of the faciality system, and the subject-object relations of the gaze within which so much work on visuality and power has been confined.

I look to the digital-visual interface as a threshold condition of becoming, in which we may experience a visual relation that vibrates between but is irreducible to the points of self/subject and other/object. The interface constitutes a moment-site of encounter with the circulations and rhythms of the image-machine of control that is, at the same time, an affective experience of the potential for other rhythms and different flows. Theorising the interface in terms of its fluid dynamics and vibrational ontology opens up this potential to interrupt the rhythms of the circulation-image of control.

4.1 Looking for resistance in the faciality system

Modulation works through a logic of discretisation and aggregation, patterning data in order to track, predict and direct its movements toward maximal return on, and minimal risk to, capitalism. Chapter Three looked at the role of visuality within this algorithmic interpolation of the dividuated data subject, and in particular the digital screen and its images as a surface of anxiety to which we are affectively and effectively attached. If affect names the feeling of feeling, that which is felt before being named and owned by the subject, then it opens a way to grasping the visual operations of modulation that does not route through a humanist insistence on subjectivity and consciousness to which theories of cognitive capture and attention economies remain attached.

But the affective imbrication of anxiety and insecurity with the visual operations of contemporary social control is differentially distributed, and so too the interest in the political utility of (self-)representations for those rendered less visual, if not necessarily less visible, by political subjugation. Experience of contemporary social control has an intensity that feels different depending on where the patterning of data positions you. It is not enough to note simply the ontological affects of the informatisation of the image and the imaged under conditions of ubiquitous computation. The anxiety and insecurity that are the affective ambience of the circulation-image, and its modulatory operations within the image-machine of control, have always been felt more intensely by those subjected to the mastery of other people's vision.

Vision has long been associated with mastery. Haraway (1988, 581) writes:

> The eyes have been used to signify a perverse capacity - honed to perfection in the history of science tied to militarism, capitalism, colonialism, and male supremacy - to distance the knowing subject from everybody and everything in the interests of unfettered power.

This is to say that the vision of mastery and the mastery of vision have long been imbricated with hierarchies of power, multiply structured by differential relations of oppression. Any project or practice of the visual that seeks to be

liberatory must engage with these relations and hierarchies. It is beyond the scope of this current work to thoroughly review the vast literature on, and long history of activist struggles against, the misogynist, racist and homophobic gaze of power, which have been such a feature of work on cinema and photography, and visual culture more generally. Psychoanalytic (Mulvey 1975; Kristeva 1981; Doane 1982; Irigaray 1985; Pollock 1988; Silverman 1992) and, to a lesser extent, phenomenological (Dudley 1978; Stern 1979; de Lauretis 1987; Sobchack 1991) accounts of the misogyny of the gaze were particularly influential in theoretical work on cinema and photography in the 1970s and 1980s. Such accounts were later critiqued and developed by work on the racist gaze in visual media, and the visual imbrications of white and male supremacy (hooks 1992; Julien and Mercer 1996; Fleetwood 2011), together with attention to homo/trans-phobic scopic regimes (Sedgwick 1990; Phelan 1996; Halberstam 2005; Puar 2007).

From this rich and varied legacy of theoretical work, it is important to acknowledge both the persistence of, and complications with, issues around spectatorship, as the right to look, and self-representation, as the right to control one's image. Asserting control over the image, and reclaiming one's image from the gaze of the 'master', has never been more possible as a result of the democratisation of image-making made possible by digital technologies. But such claims for visual subjectivity remain fraught in the context of the image-machine of computational capitalism.

A political strategy of claiming visibility in the context of 'capital-intensified sight' (Virilio 1987) is necessarily problematic. In Steyerl's (2012, 166) words '[w]ithin a fully immersive media landscape, pictorial representation - which was seen as a prerogative and a political privilege for a long time - feels more like a threat.' For Steyerl (2012, 50), 'being a subject can be tricky. The subject is always already subjected. Though the position of the subject suggests a degree of control, its reality is rather one of being subjected to power

relations.' As Balsom (2017) notes, '[e]xposure is violent; it makes the surveilled subject vulnerable to capture by apparatuses of power.' 'The subaltern speaks, and somewhere an algorithm listens', Galloway (2012, 137) reminds us.

Being not seen or less visible may sometimes be a preferable political strategy. Fleetwood (2011, 24) emphasises that 'opacity also provides possibility for black subjects.' In Phelan's (1996, 6) summation, '[v]isibility is a trap […]; it summons surveillance and the law; it provokes voyeurism, fetishism, the colonialist/imperial appetite for possession. Yet it retains a certain political appeal.' As she (Phelan 1996, 7) continues:

> While […] under-represented communities can be empowered by an enhanced visibility, the terms of this visibility often enervate the putative power of these identities. A much more nuanced relationship to the power of visibility needs to be pursued than the Left currently engages.

This more nuanced relationship must include a clearer recognition of our posthumanist condition, and the political possibilities opened up by a de-centering of the humanist subject, implicitly or explicitly regarded as white, Western and male. The feminism of Haraway's (1991; Puar 2012) cyborgs and Afrofuturism's (Eshun 2003) challenge to white supremacy share this posthumanist acknowledgement of the exclusions and oppressions on which the humanist subject has been predicated.

Deleuze and Guattari laid important groundwork for this posthumanist politics in their discussion of the 'faciality' system, and it is with this system that claims for visual subjectivity, especially those made by marginalised 'subjects', must reckon. The faciality system is organised around 'the almightiness of the signifier as well as the autonomy of the subject' (Deleuze and Guattari 1987, 181), whose primacy Deleuze and Guattari trace to the assemblages of power constituting European colonialism and industrial capitalism. At the centre of facialisation is the humanist subject, male and white. As they (Deleuze and Guattari 1987, 292) write, '[t]he faciality function

showed us the form under which man constitutes the majority, or rather the standard upon which the majority is based: white, male, adult, "rational," etc., in short, the average European, the subject of enunciation.'

The majoritarian gaze of the faciality function, the misogynist, racist and homophobic gaze of power, is a dualism 'machine', whose central function is one 'of reproducing itself in the principal term of the opposition' just as 'the entire opposition at the same time resonates in the central point' (Deleuze and Guattari 1987, 292). This faciality function organises power relations, and the visual relations which express and are expressed by them, in a series of binaries, of self/other and subject/object, in which the second, subordinate term is organised by the first and dominant. Claims for visual subjectivity based on self-representation, that do not interrogate the functions of subjectivity and representation within relations of power, risk remaining confined by the binary regulations of this 'faciality' system.

The damaging effects of this dualism machine on the prospects of liberation for those currently subordinated by the majoritarian gaze have been highlighted by theorists and activists fighting misogyny, racism and homophobia. Chow has questioned whether the marginalised subject is still a viable site from which to act politically, much less whether the subject is a necessary precursor for politics (Chow 2006, cited by Puar 2012). As Puar (2012, 55) emphasises, '[p]art of Chow's concern is that poststructuralist efforts to attend to the specificity of Others has become a universalizing project that is always beholden to the self-referentiality of the "center"'. Claiming visual subjectivity from the position of the 'other' within the binary logic of the faciality system risks reaffirming the centrality of the majoritarian gaze by which the other is defined and positioned.

How might this dualism machine of the faciality function be contested as a mode of resistance to the image-machine of control? If the binary operation of

the image-machine positions us as the faces of either self or other, subject or object, I have turned to the interface as an unstable position between faces, that is also a facing between. In the interface we may experience a visual relation that vibrates between but is irreducible to the points of self/subject and other/object.

In my turn to the interface as this 'in-between', I seek to immerse my visual practice in the folded topology of informational capitalism, which destabilises the time-space of distance that separates here and there, now and then, subject and object. Far from relying on claims for control over acts and objects of looking, as settled subject/object poles within visual relations, any challenge to the image-machine of control must reckon with what might be thought of as a superposition of lookings. To invoke this quantum metaphor is to insist on a foundational instability and indeterminacy, a 'vibrational ontology' in Goodman's (2012, 83) suggestive phrasing: 'If we subtract human perception, everything moves. Anything static is so only at the level of perceptibility. At the molecular or quantum level, everything is in motion, is vibrating.'

4.2 Interface concerns

My visual practice, concerned with resistance to the modulatory operations of the image-machine of control, explores this vibrational ontology of lookings. To do so, it takes the interface, human-machine and eye-screen, as its site-moment for critical artistic intervention, premised on a view of the interface as a social and not merely technological condition. '[T]he machines don't explain anything, you have to analyze the collective arrangements of which the machines are just one component', emphasised Deleuze (1995a, 175).

To understand the interface in relation to the scopic assemblage of control, I have, following Deleuze, looked beyond the screen as the 'machinic' surface or frame with which to theorise and organise my practice. For while it is still true that 'we clearly live in the society of the screen' (Manovich 2001, 114), viewing

the screen as the focus of critical work on the interface constrains the political possibilities of such work. However it is viewed, as frame, surface, mirror, or window, taking the screen-as-object instantiates a viewer-as-subject, thus rendering the interface a binary relation between two established forms.

The dominant paradigm for this binary relation, Munster (2006, 21) suggests in her discussion of Human-Computer Interaction (HCI), and the ways in which both designers and artists have responded to the screens that mediate such interaction, is what she terms 'interfacial'. She notes the ways in which this interfacial paradigm for the interface invokes particular subjectivations, being the particular 'position that the human subject assumes or becomes' when face-to-face with the screen (Munster 2006, 122). But Deleuze and Guattari's critique of the faciality system, when applied to the human-computer interface, invites not merely a questioning of the particular kinds of subjectivations invoked by the screen but of a humanist subjectivity itself, reinstated by a focus on the screen.

For Deleuze and Guattari, the faciality system organises thought and action around the humanist subject, as both the subject of discourse and of consciousness. Accounts of the human-computer interface that emphasise the surface of the screen, the interplay between its surfaces and depths, and its 'face-to-face' encounter with the 'surface' of the humanist subject, are but the most recent update of this faciality system. As such, the politics of framing the interface in terms of 'bouncing back and forth between the surfaces of new technologies and those of our own skin' (Munster 2006, 138) remain unaddressed.

The political move I seek to make in my creative work at the interface is to explore it as a site-moment of opening and indeterminacy as a way to disrupt the closed, insistent data flows of the circulation-image. We may sense the interface as indeterminate when we see the digital-visual encounter not in

terms of a binary relation between self and screen, but as the time-space of that encounter itself. As Galloway makes clear (2012, 54):

> While readily evident in things like screens and surfaces, the interface is ultimately something beyond the screen. It has only a superficial relationship to the surfaces of digital devices, those skins that beg to be touched. Rather, the interface is a general technique of mediation […].

So long as we remain confined by a view of the interface as a meeting of surfaces, we instantiate the screen-surface as object to the viewer/user-surface as subject, thus rendering the interface a binary relation between two established forms.

Yet the politics of the interface are to be found not in its forms but its formings. As Hookway (2014, 14) suggests, 'a surface presents a form, while an interface performs a shaping.' Theorising the interface remains central to the task of understanding the image-machine of control, but as process not object. In Galloway's (2012, 33) words, 'an interface is not a thing, an interface is always an effect. It is always a process or translation.' Crucial to this processual view of the interface, and therein the glimpses it affords of modes of resistance to scopic control, is its rejection of the face-to-face encounters privileged by the faciality system. The point of such resistance is not to stage an alternative encounter between established forms, between the viewer/user-as-subject and the screen/surface-as-object, but to be in the interface as a forming, wherein new formations become possible. The ways in which I have used photography and video to explore the openness and indeterminacy of the interface are discussed in Sections 5.3 and 5.4 respectively.

4.3 Forming interfaces

Focusing my creative practice on the digital-visual interface necessarily involves consideration of interactivity, often taken to be a defining quality of the digital and its 'new media'. For Rush (2005, 183), '"[i]nteractive" has emerged as the most inclusive term to describe the type of art of the digital age.' For present purposes, of interest is the politics of the interface constituted

by this discourse of digital interactivity: the interface is rendered as the scene and mechanism of an individuated empowerment. Touching the 'skin' of the screen is taken to be acting in the world, and the augmentation of personal mastery afforded by the screen has been at the heart of the marketing of digital technologies and the promise of a digitally-enhanced life. The interface is seen as an experience of enhanced personal control over the digitised world.

But the digital screen is a screening off of algorithmic control. Chun (2011, 60) emphasises that 'the interface is "haunted" by processes hidden by our seemingly transparent GUIs that make us even more vulnerable online, from malicious "back doors" to mundane data gathering systems'. By exposing the 'user' to a 'system of causal pleasure' (Chun 2011, 18), based on a 'logic of governing or steering through the increasingly complex world around us' (Chun 2011, 9), we are invited to embrace 'the resurgence of the seemingly sovereign individual, the subject driven to know, driven to map, to zoom in and out, to manipulate, and to act' (Chun 2011, 8). Crucially, however, 'by interacting with these interfaces, we are also mapped: data-driven machine learning algorithms process our collective data traces in order to discover underlying patterns' (Chun 2011, 9).

The structure of the interface is fundamentally ambivalent. This ambivalence of feeling both powerfully served, and served up to power, by our screens is primarily portrayed as a visual experience of the interplay between transparency and opacity. '[A]s our interfaces become more "transparent" and visual, our machines also become more dense and obscure', Chun (2011, 176-177) stresses. This ambivalence, as Chapter Three discussed, is part of the anxious affect of the circulation-image, so central to the visual operations of control. The affective anxiety of the circulation-image is linked to its demand for interactivity. Rush (2005, 220) notes that '[o]ne cannot remain static with the interactive Web screen' as 'it will simply shut down once the Web carrier decides the user has been inactive too long. […] The only way to avoid the

forced closure is to keep clicking on more hyperlinks and risk forgetting where one started in the first place.' Lütticken (2013, 181) sees this insistence on interactivity as part of a broader entrenchment of the 'feedback principle' so central to the cybernetic thinking discussed in Chapter Three, in which 'we are continuously encouraged to offer feedback in politics and in online stores, in museums and in the workplace, making these various contexts and environments more fun, more interactive.'

As Lütticken (2013, 159) makes clear, '[b]y now, (inter)active engagement has become an essential element of our "gamified" cultural economy, raising serious doubts about the contemporary relevance of the whole intellectual tradition that sought to activate the spectator.' Activating the spectator has become central to the operation of control, in societies in which 'labor is marked by the inability to distinguish between labor and leisure, between work and occupation, between working hours and free time - between performance and life' (Lütticken 2013, 195). In this context, Lütticken (2013, 181) suggests, '[i]t is not the Situationist theory and (proposed) praxis of play that has shaped the networked society of control, but the game theory that emerged in the sphere of cybernetics.'

Working with and at the interface in ways that contest this cybernetic insistence on interactivity means recognising, as Hookway (2014, 16) proposes, that 'the interface is more than a theory of interactivity, especially if interaction is viewed as a mediated interplay between stable and self-sovereign entities (e.g., human and machine, designer and artefact, user and control system).' Rather than an encounter between forms, between humanist subject and computational software, mediated by the screen, the interface is a forming through encounters. The political possibilities of the interface lie not in its altering of a pre-existing subject's consciousness, but in reconstituting subjectivity itself. '[I]nteraction produces its elements, whether human or machine', Hookway (2014, 16) emphasises. Echoing the insistence on the

processual nature of the interface, Hookway develops a theoretically rich account of this process in terms of its fluidity, which in turn has done much to inform my creative practice.

The term "interface", Hookway reminds us, was coined by the engineer James Thomson in his influential work on fluid dynamics in the nineteenth century. He used the term to denote a dynamic boundary condition in the encounter between different fluid bodies, and 'as a boundary condition it would be inherently active', being 'the site of both continuous contestation and the resolution of competing pressures' (Hookway 2014, 59). 'From its emergence within fluid dynamics, the interface would take on a conceptual affinity with fluidity that extends to all of its subsequent contexts and instantiations', Hookway (2014, 59) notes. Chapter Three discussed these instantiations in terms of the modulatory operations of computational capitalism. As Munster (2006, 13) emphasises, the 'digital is a flow of information, technologies, cultural and social deployments, potentialities, delimitations and regulations.'

The impact of computationality on capitalism has been to accelerate its myriad flows, and the tracking, managing and channeling of such flows is central to the operations of control. The function of the circulation-image, as outlined in Chapter Three, is to incite our interactivity with the screen, generating the data flows on which the modulatory operations of control depend. In turn, as Feldman (2013, 168) suggests, the scopic regime of control also deploys the 'arresting power of optical technology to stabilize image flows, to freeze temporalities of urban and global circulation, [which] is conjoined with legal and militarized powers of arrest and apprehension.' Figuring the fluidity of the digital-visual interface as a dynamic boundary condition of machinic and organic flows affords useful ways to see and work with the interface as moment-site for critical engagement with the circuits and cuts, the movements and arrests, of the image-machine of control.

4.4 Interfaces of (potential) resistance

The interface is a boundary condition, a threshold, and as such, is a folding of interiority and exteriority, inside and outside. It is both a 'between faces' and a 'facing between'. Between faces, the interface can be said to describe an enclosure. Facing between, an interface 'would suggest a boundary or zone of encounter that actively extends into and conditions that which it separates' (Hookway 2014, 9).

The interface, as a folding of outside and inside, offers a way to work visually with the implications of the folded topology of computational capitalism, which, in my creative practice, I have explored through the photomontage of *medium specific*, discussed in Section 5.3.1. Informatisation, as Chapter Two discussed, is undermining the potential for visual resistance to capitalism when such resistance relies on a logic and aesthetic of counter-representation; in the folds of informational space, the ground of perspectival representation is lost. Yet the folds of the interface, its encompassing of interiority and exteriority, may provide glimpses of an outside inside.

As a dynamic boundary condition, the digital-visual interface is also a turbulent encounter of machinic and organic flows. The radical potential of the interface is its turbulence, its moment-site of indeterminacy. My video works, *look screen* and *moving still*, which are discussed in the next chapter, explore this turbulence in relation to the vibrational ontology of the interface. This sense of vibration is central to the experience of the interface as a dynamic threshold. As a zone or form of relation, the interface 'is a liminal or threshold condition that both delimits the space for a kind of inhabitation and opens up otherwise unavailable phenomena, conditions, situations, and territories for exploration, use, participation and exploitation' (Hookway 2014, 5). The interface as an opening up is key to its critical, radical potential, as well as its occasion for the operations of control.

The turbulence of the interface, then, reflects the far-from-equilibrium conditions of open and productive systems, toward the management of which the techniques and technologies of 'soft control' are directed. The modulatory operations of societies of control are based on an understanding, as Terranova (2004, 121) suggests, of 'all social, technical and economic structures that are characterised by a distributed and dynamic interaction of large numbers of entities with no central controller in charge.' If a defining trope of the era of control, as discussed in Chapter Three, is that of there being 'no outside', whether understood as capitalism's real subsumption of life or in relation to cybernetic systems theorising of the computable world, the interface has become a central figure for understanding and managing the far-from-equilibrium conditions and systems of algorithmic capitalism. The interface, then, is always the problem of control. As Terranova (2004, 122) makes clear, the 'problem of contemporary modes of control is to steer the spontaneous activities of such systems to plateaus that are desirable and preferable.'

Figuring the instability of systems in terms of fluidity and the exertion of control as 'steering' are fundamental to the cybernetic logic which informs the society of control, as outlined in Chapter Three. 'The society of control is in fact cybernetics in action', Lütticken (2013, 181) proposes. In coining the term 'cybernetics', from the Greek *kubernetes* or steersman, Wiener (1961) cited Maxwell's 1868 paper *On Governors*, which described the design and operation of feedback and control mechanisms in fluid dynamics, noting that 'governor' is derived from a Latin corruption of *kubernetes* (Hookway 2014, 98). At the same time, fluid dynamics has been used to figure the potential for freedom, the potential to escape control.

The turbulence of the fluid as a space of creativity was central to the philosophical work of Serres (1982) on the possibility of freedom, which he associated with indeterminacy at the atomic level - 'the *clinamen*, or swerve, of atoms in unexpected directions' (Hookway 2014, 91). For Serres, the 'swerve

is a distinctly fluid property; it is aligned with turbulence and the vortex as it is with chaos' (Hookway 2014, 98), the properties which Deleuze and Guattari (1987, 479) associated with the sea, as 'a smooth space par excellence' whose turbulence opens up 'lines of flight' (swerves) from capitalism's control. The strength of Serres' work, Deleuze and Guattari (1987, 489) note, is that 'it demonstrates this link between the *clinamen* as a generative differential element, and the formation of vortices and turbulences insofar as they occupy an engendered smooth space.'

Even in the age of the Cloud, fluidity remains a useful trope for seeing the interface as a site-moment for contesting control, for what is a cloud but condensed water. Indeed, as 'a form of mediation, a representation of immateriality and smoothness that both effects and obscures the functions of a structured, striated grid' of computational control (Franklin 2012a, 458), the Cloud, in a sense, condenses into control what the interface keeps open: the encounter between the contingency of smooth space and the constraints of the striated grid. In the Cloud, smoothness is reduced to the surface of the screen which hides the computational power of control.

As Franklin (2012a, 456) makes clear, 'cloud computing extends the artificially transparent, frictionless logic of the software interface by making permanent connectivity a primary service', a permanent connectivity which ensures 'the spread of the logic of informatic capture, command, and control over the entire world so that it conceptually conditions and transforms bodies' (Franklin 2012a, 460). It is just in this way that we might read the theorisation of the digital-visual interface as the screen from which screen labour can be extracted, for 'the interface constitutes the site where a dynamic process of forming may become visible, legible, knowable, measurable, and available for capture in the production of work' (Hookway 2014, 63).

Resisting such 'informatic capture, command, and control' requires a return to the interface as a dynamic, fluid threshold. Although the interface has become a critical site for the exertion of control, its inherent instability means that it 'is not reducible to control, even as control implicitly seeks out the interface as underdeveloped territory to be explored and colonized' (Hookway 2014, 11). The challenge for my work has been to explore the interface differently, not toward its colonisation, but with a commitment to its openings and formings that remain elusive to capture.

This contrast between form and shaping echoes Deleuze's (1992, 4) distinction between disciplinary 'molds' and the modulations that operate in the society of control, a distinction which emphasised that '[e]nclosures are molds, distinct castings, but controls are a modulation, like a self-deforming cast that will continuously change from one moment to the other.' The interface, then, as that which 'performs a shaping' is an important place to work against the operations of visual modulation. To do so, I have used haptic photography as a way to feel my way into the smooth, opened space of the interface, a practice which I discuss in more depth in Section 5.3.2 in relation to my photographic work on *figure ground*, *surface gaze* and *touch light*.

4.5 Toward a vibrational ontology of the interface

My exploration of the interface as a time-space of openings and formings that remain elusive to capture and resistant to control has been guided by an understanding of its vibrational ontology. In part, this is rooted in the theorising of the interface, discussed in the previous section, in terms of the fluid dynamics of a threshold condition, characterised by turbulence and instability, in which a generative potential for the new inheres. But the notion of the digital-visual interface as ontogenetic vibration can also be traced to Bergson's (2004) influential writings on time, duration and the creative potential of the virtual.

Hansen (2004) makes extensive use of Bergson in his suggestive theorising of the affectivity of the digital image and its liberatory potential. In terms that recall Galloway's (2012) understanding of the interface as processual, as dynamic event not static object, Hansen (2004, 10) emphasises that 'the image can no longer be restricted to the level of surface appearance, but must be extended to encompass the entire process by which information is made perceivable through embodied experience.'

Bergson (2004, 176) explains his celebrated account of duration thus:

> The essence of time is that it goes by; time already gone by is the past, and we call the present the instant in which it goes by. [...] But the real, concrete, live present - that of which I speak when I speak of my present perception - that present necessarily occupies a duration.

For Hansen, the visual-digital encounter, what I am calling the interface, is such an experience of duration, an embodied experience, felt not only perceptually but also affectively. In terms that recall my earlier discussion of affective excess, Hansen (2004, 12) notes that 'this function of the body gives rise to an affective "supplement" to the act of perceiving the image', which he describes as a 'properly haptic domain of sensation'. Hansen discusses the slow motion video installations of Bill Viola, as well as Douglas Gordon, in terms of their 'affective "supplement"', as an embodied experience of time, whose duration is the condition for the emergence of the new.

These installations bring us, Hansen (2004, 12) suggests, 'face-to-face with the temporal (affective) dynamics underlying the emergence of the present.' Such work 'can thus be said to enlarge the now precisely by putting perception into the service of affection, or in other words, by opening perception to the very principle of its own self-perpetuation, to its own radical imperceptible - affectivity' (Hansen 2004, 267). For Hansen (2004, 266), this affectivity of the expanded now, its felt duration, is the 'capacity for the body to be radically creative, that is, to be the agent of a framing of digital information that generates images independently of all preexistent technical frames.'

My work in *medium specific* (discussed in Section 5.3.1), using photomontage to explore the folds of the interface, and in this way disrupt and delay the anxious tempo of the circulation-image, making room for the emergence of the new, is clearly informed by Hansen's use of Bergsonist duration to theorise the creative potential of the digital image. But a closer look at Bergson's notion of duration suggests that this potential can only be fully realised as a politics of resistance to the image-machine of control when, to quote Massumi (1995, 105) again in terms that recall the earlier discussion of the fluid dynamics of the interface, 'the edge of virtual, where it leaks into actual' is identified. For 'that seeping edge is where potential, actually, is found', as Massumi (1995, 105) makes clear. To find this seeping edge, I suggest below, we must work in the interface, not as pure duration, but as vibration.

Duration, in Bergson's account, is the separation of time 'from its conceptual dependence on being represented in spatial terms'; it is 'pure qualitative differentiation, without quantitative measure' (Osborne 2013, 187). 'A moving continuity is given to us, in which everything changes and yet remains' Bergson (2004, 260) insists, and through this lived presentness of duration we come to sense that we live 'in that continuity of becoming which is reality itself' (Bergson 2004, 178). Reality is virtual, a continuity of becoming. As Osborne (2013, 187) explains, 'duration became the metaphysically real sphere of "virtuality", from which (spatial) actuality is incessantly produced as a world of discrete beings and relations by the creative and transformative process of life itself'. The virtual reality of duration is 'the pressing crowd of incipiencies and tendencies, […] a realm of potential' (Massumi 1995, 91). It is this virtual mode of reality that I have sought in the duration of the interface as a zone of indetermination, 'the reality of change: the event' (Massumi 1998, 16).

But what might the 'seeping edge' of the interface look and feel like, where the virtual can leak into the actual? As Osborne suggests, seeing the interface in this way requires a recognition of the dependence of continuity of becoming on

the discontinuity of being, for time as pure duration is only ever virtual, never in being. Osborne reaffirms Bachelard's emphasis on psychic continuity as being composed of living from moment to moment. '[W]hat has most duration is what is best at starting itself up all over again', insisted Bachelard (2000, 19-20, cited by Osborne 2013, 188). In doing so, Osborne (2013, 188) stresses that duration 'is a dialectical process of continuity, interruption, and beginning again - always beginning again. The fundamental concept of time is thus not continuity (as Bergson thought), but temporalization as rhythm.'

The interface, then, has rhythmic potential, but Goodman (2012, 88) complicates this further. His discussion of Bachelard's work on rhythm analysis notes that Bachelard's reliance on a dialectics 'to reanimate a continuity broken by instants seems to reduce the power of his philosophy of rhythm, relying as it does on polarization over more sophisticated conceptions of relation.' Instead, the challenge is to focus on the relation between duration and the instant, continuity and discontinuity, 'to account for the rhythmic vibration between break and flow, between particle and wave, which postquantum formulations of matter insist on' (Goodman 2012, 89).

Drawing on the atomistic process philosophy of Whitehead, which it is beyond the scope of this thesis to thoroughly discuss, Goodman (2012, 82) insists that, 'it is a concern for potential vibration and the abstract rhythmic relation of oscillation, which is key. What is prioritized here is the in-between of oscillation, the vibration of vibration, the virtuality of the tremble.' To understand the relation between duration and instant, flow and cut, we must attend to the 'vibratory nexus' which 'exceeds and precedes the distinction between subject and object, constituting a mesh of relation in which discreet entities prehend each other's vibrations' (Goodman 2012, 82).

This nexus, or 'vibrational anarchitecture', 'produces the very division between subjective and objective, time and space' (Goodman 2012, 82). Goodman's

fascinating elaboration of this ontology of vibrational force, premised on the basic understanding that at 'the molecular or quantum level, everything is in motion, is vibrating' returns us to the fluid turbulence of the organic-machinic interface of digital visuality. In Hookway's (2014, 64) formulation, the interface:

> exists only in the dynamics of a continual formation, dissolution, and reformation. Within a dynamic form, the interface is not a form so much as a tendency toward a forming, which proceeds through a seeking of difference and its counterpoise in equilibrium.

The dynamics of the interface express the 'vibratory nexus' described by Goodman, exceeding and preceding visual subject and object, an 'in-between of oscillation' whose liberatory potential may be felt in its 'virtuality of the tremble.' In exploring this trembling at the interface, we may come to see the vibrational potential to unsettle and contest the flows and arrests of the circulation-image of control.

This chapter began with the acknowledgement that the image-machine of control is always experienced more intensely by those subjected to the mastery of other people's vision. Theorising of our posthumanist condition has explored the political possibilities opened up by a decentering of the humanist subject, implicitly or explicitly white, Western and male, and I locate these possibilities in Deleuze and Guattari's critique of the faciality system, and the 'lines of flight' they chart from its binary machine of self/other distinctions. Escape from the faciality system depends on seeing the digital-visual interface not in terms of a face-to-face encounter, which risks re-instantiating that very system, but as a threshold condition of becoming. Theorising the interface in terms of its fluid dynamics and vibrational ontology opens up its potential to disrupt the rhythms of the circulation-image of control, which may, to quote Massumi (1995, 105) again, 'enable triggerings of change.' My creative practice has been concerned with getting in touch with this 'trembling' interface, and what this might do to trigger a sense of resistance to the image-machine of control. It is to discussion of such work that I now turn.

5. Trembling at the Interface

5.1 Background to creative practice

In approaching the interface as a site-moment of critical engagement with the visual operations of social control, I have drawn on my experiences of, as well as frustrations with, photographic and video work rooted in documentary form and politically declarative intent. Much of my photography prior to the creative practice to be discussed in this chapter was concerned with the documentation of street protests. This was politically intentional street photography: images of protest as protest. As such, there is a performative quality to my street protest photography, most explicitly in the images I took of protest signs. These images become another iteration of the signs, continuing the struggle visually beyond the time and the place of the protest itself.

My visual activism, then, took the form of using visual means to continue to activate the political protest, helping to sustain the energy of the struggle, in part through rapid online dissemination of images widely on social media and image-sharing sites. In the speed and scale of image-sharing made possible by digital data infrastructures, as discussed in Chapter Two, my photography became a way to extend the duration of the street protest, to afford it an afterlife. I also made deliberate use of saturated colour, as a formal technique to both vivify the image-protest and lay stress on my relationship to it as one of (visual) participation rather than documentary observation.

Occupy Wall Street (OWS), whose onset coincided with the beginning of my PhD, was paradoxically generative, generating opportunities for a practice of street protest photography while provoking a reconsideration of the links between image-making and political struggle. With its embrace of the politico-aesthetics of the Situationist détournement, which takes the image as a site of struggle and not merely its representation, OWS led me to think differently about visual activism (McKee 2016).

Occupy drew heavily and self-consciously on the Situationist commitment to 'take back from the enemy those properties that the enemy has transformed into weapons against the dispossessed' (Rancière 2013, 130). Such action, in the domain of visuality, was concerned with countering the alienation produced by representation itself. As the 2013 reissue of Debord's (2013) *Society of the Spectacle* attests, his Marxist critique of the political passivity induced by televisual production and consumption of image-commodities is resonating anew with activists today, confronting the imagistic inundation described in Chapter Two. In this view, visual activism becomes a reclaiming of political agency that the image-as-spectacle undermines. In Rancière's (2013, 130) formulation, the 'essence of détournement is the Feuerbachian and Marxist transformation of the alienated predicate into subjective possession; it is the direct re-appropriation of what has been put at a remove in representation.'

In the following section, I discuss the ways in which my visual practice too moved away from a concern with representation and towards an investigation of the liberatory potential of abstraction, and subsequently an interest in circulation. For my theorisation of the image-machine of control suggested that a visual practice committed to contesting the scopic operations of social control must focus, not on the spectacle of image saturation in whose commodity status the viewer is alienated and pacified, but on the activation of data flows which the images on our screens, as circulation-image, incite.

This interest in the rhythms of flow and stasis, movement and capture, that characterise the operations of the circulation-image, and the digital-visual interface as a site-moment of indeterminism in which to sense the potential of other rhythms beyond control, also led me to think in different ways about the use of the moving image. Prior to beginning my doctoral work, I had shot two video documentaries and created one 'digital story', a short video format which typically pairs an autobiographical voiceover with photos from the narrator's

life. All of this creative work was conducted as part of my involvement in social justice struggles, ranging from work on challenging male supremacy to my activism on ending child sexual abuse.

This video work was straightforward in its messaging and conventional in form, being narratively driven and character based. I used video to tell stories of injustice and of efforts to challenge this injustice. One of my motivations, however, for beginning the PhD in Creative and Critical Practice at the University of Sussex was my growing interest in finding different ways to use the medium of digital video to explore the issues of injustice with which I was concerned. In particular, I could see the limits of my current approach to video documentary as an exposure of injustice. As Lütticken (2013, 293) writes, '[g]estures of "revealing" the hidden truth of capitalism are not in themselves enough; what is needed is the mapping of concrete abstraction and its contradictions as being open to intervention, and as necessitating change.' The possibilities of using video, together with photography, to look at the 'concrete abstraction' of the image-machine and the liberatory potential of its digital-visual interfaces excited me. My exploration of these possibilities began with my turn to visual abstraction itself.

5.2 Overview of creative process

5.2.1 Towards abstraction

My creative practice responded to the two questions animating my PhD work: how does ubiquitous computation affect the visual operations of contemporary social control and what does this mean for the use of visual media in resisting such control? To answer these questions, my visual practice came to focus on circulation rather than representation as the locus of resistance. The digital image, as Chapter Two discussed, provides an unstable ground for counter-representations and visual subjectivities, existing as it does as a movement and patterning of light-data, and subject to continuous modulation and deformation in the topology of informational time-space.

Digital visuality, as analog video before it, is encoded light. Lazzarato's (2002) discussion of video images, in Lütticken's (2013, 122) phrasing, as 'no representations or reproductions of reality, but oscillations of light, contractions and expansions of light waves', speaks well to the ontology of the digital image as unsettled flux not stable form. It is with the management and modulation of this imagistic flux, rather than with representation itself, that visual resistance to scopic control must be concerned. As Crary (2013, 48) suggests, to do otherwise:

> is to evade the subordination of the image to a broad field of non-visual operations and requirements. Most images are now produced and circulated in the service of maximising the amount of time spent in habitual forms of individual self-management and self-regulation.

I came to theorise the infrastructure that modulates these data circulations and patternings of digital visuality in the service of both State and corporate interests as the 'image-machine of control'. This in turn provoked an interest in the potential sites and sights of resistance to be found in the 'fluid' dynamics of the interface, which names the volatile thresholds produced by visual encounters with the circulatory flows of digitally screened images. But to get there, I first had to move away from a concern with representation and instead use visual abstraction to begin to unsettle the circulation-image of control.

In this move towards abstraction I was inspired by the long history of 'photographs that refuse to disclose fully the images they contain' (Rexer 2009, 9). Rexer's (2009) review of abstraction in photography influenced my practice, with his emphasis on the visually abstract image as sensuous surface demanding the viewer's presence, rather than mirrors of, or windows on to, an elsewhere, another time. Indeed, much of my photographic work has been an inquiry into images of/as surfaces, seeking out the refractive mediums of glass and perspex through which to bend light (in my work *medium specific*) and using, often extreme, close-ups of walls and other urban surfaces in order to touch the image with the eye (as in *surface gaze*, *figure ground* and *touch light*).

This focus on the surface of/as the image was guided by Rexer's (2009, 180) insight that:

> The guarantee of a photograph is not its image, its representation, so easily conflated with its subject; it is its surface, its utter two-dimensionality, a kind of limiting condition containing the promise of whatever it is we get from a photograph, of a photographic experience.

This commitment to the presentness of the photographic experience to be proffered by visual abstraction has, in the past, been expressed by attention to the materiality of analog photography, such as Moholy-Nagy's (1947) pioneering photograms, whose images of objects were produced by directly exposing the object to light sensitive paper. Beshty (Cartwright 2014), Broomberg and Chanarin (Colberg 2013), and Tillman (Higgins 2014) among others have, in recent times, similarly used the materiality of the photographic process and visual abstraction to interrogate the limits of representation.

In all this work, the sense that the 'abstract photograph signifies not the given but the possible' (Rexer 2009, 180) was what interested me: visual abstraction as a way into seeing and feeling an 'outside' of control. This is the sense of the abstract invoked by Deleuze, as characterised by Massumi (2002, 5) thus:

> Here, abstract means: never present in position, only ever in passing. This is an abstractness pertaining to the transitional immediacy of a real relation - that of a body to its own indeterminacy (its openness to an elsewhere and otherwise than it is, in any here and now).

In my photography 'at the edge of vision', I sought this indeterminacy in terms of both the visual content of the images I made and the process by which I made them.

My photographic work was undertaken in the streets of Brooklyn and Manhattan, but this was a very different street photography to that which I had been exposed when I first moved to the city. Not only absent people, my work used acute angles of view, shallow depth of field, tight framing and cropping as well as macro lens proximity to help 'transform a pedestrian reality into something completely unknown' (Rexer 2009, 143).

My practice also sought the contingent in the pedestrian, gathering images of urban surfaces, textures, reflections and refractions as I walked the streets in a kind of photographic wandering akin to the situationist *dérive* (Plant 1992; Yoon 2013), whose wilful traversing of capitalism's enclosures of urban space-time provoked an 'openness to an elsewhere and otherwise'. Seeking an openness to that which is not already given visually, I became interested in the virtuality of photography, a virtuality understood, in Massumi's (2002, 175) phrasing, as 'like a halo of eventness fuzzifying solidity of form and thus confounding closure', an '"aura" of newness surrounding and suffusing what actually emerges.'

This virtuality of visual abstraction is nothing to do with the digital *per se*, as the analog examples of Moholy-Nagy's photograms and Tillman's contemporary luminograms make clear. Indeed, Massumi (2002, 137) emphasises that:

> Nothing is more destructive for the thinking and imaging of the virtual than equating it with the digital. [...] Digital technologies in fact have a remarkably weak connection to the virtual, by virtue of the enormous power of their systematization of the possible.

Given this, the need to make sense of the dis/continuities between the analog and the digital, whose significance for my critical analysis and creative practice I discussed in Chapter Two, became central in my turn to the virtuality of visual abstraction as a way to contest the scopic operations of control. If visual abstraction is to be in touch with reality's 'own indeterminacy', this abstraction in the digital era must confront its own 'systematisation of the possible.'

This is to say that when it comes to the digital image, a practice that seeks to explore the virtuality of visual abstraction is confronted by the actuality of data abstraction. In the computational conditions of the image-machine of control, a recourse to visual abstraction as the sense of an 'outside' must reckon with the operations of control enabled by the data abstraction that is digital visuality. Control operates through the deterritorialising effects of the infosphere's data

flows; its terrain is the very outside that would claim to lie beyond it. As Lazzarato (2006, 175) suggests, in the control society, 'that which is confined is the outside. What is confined is the virtual, the power of metamorphosis, becoming.' Massumi (2002, 88) similarly defines control in terms of this containment of the virtual:

> The power of control is decoding and deterritorialization, delivered (ready for catalysis, into a potentialization-and-containment in a new space; ready for recoding/recodification and reterritorialization). Control is modulation made a power factor (its flow factor). [...] The ultimate capture, not of the elements of expression, not even of expression, but of the movement of the event itself.

For my practice, then, the turn away from representation and towards abstraction as a way to visually express and experience the sense of an 'outside' was soon problematised by my theorising of the image-machine of control as a confinement of the virtual through its abstraction of light into data. I came to see that a liberatory visual practice must look beyond abstraction itself and consider the movements and captures of data that constitute the operations of the image-machine: from experiments with abstraction to enquiries into circulation.

These enquiries came to centre on the interface produced by the visual encounter with the digital screen, as a site-moment of contingency engendered by the 'fluid' dynamics of the image-machine's data flows. I became curious about the rhythms of circulation and arrest, flow and stasis, that constitute these dynamics, and how I might unsettle these rhythms in order to trouble the modulations performed by the circulation-image of control. The circulation-image, as I discussed in Chapter Three, works through affective capture, inciting an interactivity with the screen in response to the anxieties wrought by ubiquitous computation, whose dematerialisation of the real appears to be instantiated in digital imagery. We are constantly reminded that the images on our screens are an unstable flux not settled form, from compression artefacts to loading delays to mashable potential.

The digital image embodies and enacts 'the cultural perception that material objects are interpenetrated by information patterns' (Hayles 1999, 13-14). This complicates the turn to materiality as a strategy for exposing the limits of representation and exploring processes of mediation, as referred to earlier in the work of Tillman, Beshty and others. Pervasive digital infrastructures are im/material systems. The Internet of Things renders the physical environment an informational meshwork, 'weightless as sunshine' (Hayles 1999, 56). Cloud computing, as Franklin (2012a, 450) notes, emblematises an environment of total computation, whose defining quality 'is its nominal immateriality and amorphousness.' Yet, as he (Franklin 2012a, 458) continues, the cloud is 'a space where the material boundaries of hardware disappear while retaining the functions of capture, discretization, and valorization that suggest the opposite of amorphousness.' The computational infrastructures and logics operating the image-machine of control are an admixture of 'transcendent ethereality and complex materiality' (Franklin 2012a, 452).

Under these conditions, Virno (2008, 41) proposes that 'the fundamental problem is not to oppose the abstraction of social life in the name of a supposedly "concrete", but to derive a totally new "concrete" precisely from the reality of abstraction.' As already noted, Trevor Paglen's (Squibb 2013) ethereal images of the 'complex materiality' of drone warfare and internet surveillance infrastructures are one response to Virno's challenge. Clement Valla's (2012) exposure of the 'edge condition' of visual anomalies, when the multiple data inputs from aerial photographs and 3D modelling used by Google Earth misalign, is another.

The work of Paglen and Valla influenced my practice. Paglen's imagery, whose ambiguity of indexicality captures the evanescence of power increasingly exercised by the US military-surveillance complex, affirmed the possibility of a politico-aesthetics adequate to the im/material realities which it confronted. Valla's work spoke more directly to my concerns with the image-machine of

control. His refusal of the alluring consolations of glitch aesthetics informed my own attention to edge conditions, which I came to theorise in terms of the interface as a dynamic boundary condition. As he (Valla 2012) writes:

> At first, I thought they were glitches, or errors in the algorithm, but looking closer, I realized the situation was actually more interesting — these images are not glitches. They are the absolute logical result of the system. They are an edge condition—an anomaly within the system, a nonstandard, an outlier, even, but not an error.

The specifics of Google Earth's perceptual anomalies, generated by its use of texture mapping software, which stretch 2D photographs over the surface of 3D models, were of less direct interest to me than the distinction Valla (2012) drew between two ways of seeing: 'we see through a photograph, we look at a texture'. For the threshold between these two visual modes is the digital-visual interface, a visual encounter with the screen whose surface begs to be touched, to recall Galloway's (2012) suggestive phrasing. Visual information, that 'kind of immaterial fluid that circulates effortlessly around the globe' (Hayles 1999, 246), is instantiated as imagery on the texture of the screen, and my practice evolved as an exploration of the liberatory potential of this interface, as a boundary condition of im/materiality.

5.2.2 Thresholds between stillness and movement

The digital-visual interface is im/material, a threshold of dematerialised data flows materialising as images on the smudged surface of a glowing screen, images of a world increasingly dematerialised by the abstractions of data algorithms in the service of the very material realities of social control and corporate profit. As discussed in Chapters Two and Three, the result of this 'transcendent ethereality and complex materiality' of the contemporary image-machine, to quote Franklin (2012a, 452) again, is an affective ambience of anxiety. The interface is unsettling.

If the circulation-image of control operates as response to this anxious affect of the interface, the politico-aesthetics of my creative practice have centred on

staying with and in the trouble of the interface, through attention to its rhythms. Recognising the limitations of both visual abstraction and material visual practice as strategies to counter the operations of the image-machine of control, for the reasons discussed in the previous section, I came to focus on disrupting the image-machine through disturbing its rhythms of fluidity and stasis, circulation and capture, flow and arrest. In Massumi's (2002, 217) view:

> The true duality is between continuity and discontinuity […]. This is not a metaphysical opposition. It is a processual rhythm, in and of the world, expressing an ontological tension between manipulable objectivity and elusively ongoing qualitative activity (becoming).

Control is the containment of becoming, the confinement of an outside, and thus the management of rhythm. In Chapter Four, I discussed Bergson's notions of duration and the virtual and their influence on Deleuze's formulation of control and its outside. The virtuality of the visual, its liberatory potential, may be expressed, I suggested, in the duration of the interface. With reference to Bachelard and Whitehead on relations between the continuity (of duration) and discontinuity (of the instant), I agreed with Goodman (2012, 82) in concluding that, rather than duration *per se*, 'it is a concern for potential vibration and the abstract rhythmic relation of oscillation, which is key.' For the virtual to become actual, it is to 'the virtuality of the tremble' we must look.

With these issues of rhythm and vibration to the fore, my visual practice evolved as an enquiry into the interface as a relation between continuity and discontinuity, a threshold between stillness and movement. To pursue this enquiry I used photography and video, technologies of the still and moving image respectively. As already noted, my use of these older technologies of new digital visual media was, in part, motivated by the recognition that, to quote Munster (2006, 164) again, 'the place where electronic art and the postcolonial impulse have met lies with forms such as digital photomedia and video'. The use of these digital art practices can 'undermine, parody and forcibly differentiate the smooth flows of global speed along a meridian of new vectors and [keep] them open to contestation' (Munster 2006, 171).

My early thinking, then, on the choice of photography and video for my digital art practice centred on how such 'critically reflexive practices of technologically outmoded new media art' (Munster 2006, 164) could be deployed in the metropolitan centre of global capitalism, New York City, to play with and contest the 'smooth flows of global speed', disrupting their tempo and inciting turbulence. Subsequent theorising of the image-machine of control, in conjunction with my interest in the 'everyday' as a generative time-space of resistance, also reinforced my interest in using the most quotidian forms of image-making (video and photography) and platforms of image-sharing (a Tumblr blog) as tools for troubling the smooth flows and functioning of the image-machine.

In this respect, Lefebvre's (2004) conception and practice of 'rhythmanalysis' as a way to understand capitalism's regulation of 'space, time and everyday life', and thus glimpse the possibilities of counter-rhythms of resistance to such regulation, was influential. For I came to see not only that the interface was a time-space of encounter with the rhythms of capitalism's image-machine, but also the uses I could make of photography and video, as visual technologies of stillness and movement, to explore the vibrational potential of the interface.

The visual strategies I developed for this exploration, and the photographic and video work I created as a result, are discussed below. In Section 5.3, I present my photographic work, and its use of photomontage to be in the folds of the digital-visual interface (in *medium specific*), as well as haptic imagery to get in touch with a sense of its virtuality (in *surface gaze*, *figure ground*, and *touch light*). Section 5.4 discusses my experiments with video as a way to express and experience the vibrations of/at the interface, through setting up interference patterns (in *look screen*) and sonic and visual counter-rhythms (in *moving still*).

5.2.3 Unsettling sound

Sound, and an appeal to the sonic, has often been used to challenge the 'sovereign' sense of sight, and the anthropocentric mastery, in practice white, male, European and ruling class, that this ocularcentrism was taken to imply (Bryson 1988; Jay 1988; Jay 2006). In what Sterne (2012, 9) characterises as the 'audiovisual litany', the sense of hearing is often configured, in both academic and popular discourse, as a challenge to the mastery of sight; where sight is distanced and perspectival, hearing is close and immersive. Davis (2000) proposes that '[a]coustic spaces can create different subjectivities; they open possibilities and potentials, particularly on aesthetic and informational levels, that can help us feel our way through the spaces we are opening up and moving into.' For this reason, such spaces are 'much, much, stronger than a visual experience, which tacitly distances you, places you in a transcendent, removed position, rather than embodying you at the center of a new context.'

This understanding of sound as an opening of potential, helping 'us feel our way through the spaces we are opening up', resonated with my interest in exploring the 'virtuality of the tremble' in the time-space of the interface. As my practice evolved toward a concern with the data circulations of the image-machine of control, and with the interface as a site-moment for experiments with counter-rhythms of movement and stillness whose vibrations might resonate with a sense of potential, an outside of control, I grew increasingly interested in the ways in which I could conjoin and disjoin images and sound to generate such counter-rhythms.

Exploring this virtual quality of the sonic became an important part of my visual practice. In part this reflected a commitment to de-throning the visual by emphasising the sensorial impurity of both sight and images. Mitchell (2008, 16) insists that 'all the so-called "visual media" are mixed or hybrid formations, combining sound and sight, text and image', while Pink (2011, 4) invites us 'to acknowledge the multisensoriality of images'.

That the digital has militated against this acknowledgement by virtue of the 'degree to which our habitual focus on the visual may bind us to the screen' leads Bassett (2013, 151) to argue that a 'sonic perspective (even if a virtualized one) provides a fresh way to audit social media operations.' In similar vein, Goodman (2012, 22) refers to Davis' (2000) theorising of an 'acoustic cyberspace', which is 'essentially invasive, resonant, vibratory, and immersive', as a challenge to the prevailing models of 'virtual reality' premised on a Cartesian I/eye of disembodied subjectivity through perspectival mastery.

My interest in the anxious affect of the circulation-image also prompted an interest in the acoustic experience of the digital-visual interface, for, as Davis (2000) makes clear, '[m]usic and sound are tremendously powerful forces for organizing affect'. I saw the value of playing with the vibrational potential of the sonic, its intimate capacity to unsettle bodily rhythms in ways that the more distanced sense of sight cannot. But if it was clear that sound should be of interest to any project seeking to challenge the visual operations of control, it was also important to avoid a simplistic distinction between visual mastery and sonic subversion. Sterne (2012) cautions that naive contrasts between the sonic and the visual risk reaffirming rather than challenging the othering of the auditory as non-Western and 'primitive' in relation to the privileging of vision as defining of Western modernity.

More concretely, Goodman's (2012) account of 'sonic warfare' details the many ways in which the sonic is deployed as a technology of domination and control. This ranges from the use of holosonic weapons in crowd control to the role of Muzak in the ambient modulation of public space. Indeed, Goodman (2012, 144) suggests that the shift from Muzak's use of stimulus progression as a form of sonic discipline to the 'horizontality of background, atmospheric control in quantum modulation that no longer needs to correct individual action directly' provides 'a sonic microcosm of what Deleuze described as the shift from disciplinary societies to societies of control.'

As sound has emerged in my work, then, it has done so ambiguously. On the one hand, sound as Goodman (2012, 65) suggests 'is often understood as generally having a privileged role in the production and modulation of fear, activating instinctive responses, triggering an evolutionary functional nervousness.' The affective anxieties produced by and helping to reproduce the image-machine of control has always had a sonic dimension; the 'sonic is particularly attuned to examining one strand of this ecology of fear: dread' (Goodman 2012, 12).

On the other hand, sound, and in particular noise, has long been hailed for its excessive properties as well as generative potential: 'noise as rhythmic reservoir' (Goodman 2012, 107). Knowing that 'noise arises everywhere information is produced' (Mowitt 2012, 221), the minimisation of noise, as already noted, was a primary concern of Shannon and Weaver's (1963) work on information theory as the basis for efficient communication, so influential in the control paradigm delineated by Deleuze. In this sense, noise militates against the logic of control. As Clarke (2010, 164) suggests, 'the productive ambiguity of noise emerged from the consideration that it too is information - and precisely unexpected information, an uncanny increment that rolls the dice of randomness within every communicative and calculative transmission.'

An 'uncanny increment', noise is the excluded remainder out of which the new can emerge. Noise is a turbulence, generative in ways that the concept of the interface in fluid dynamics was developed to account for, as discussed in Chapter Four. It is noteworthy that for Serres, whose work on turbulence as the source of emergence was so influential on Deleuze and Guattari's emphasis on the 'line of flight' as that which could escape the striated space of control, 'the concept of noise, often stands in for, or is interchangeable with, the notion of turbulence from physics' (Goodman 2012, 105). Interfaces are noisy, out of whose vibrations the 'potentiality of something else' can emerge.

This radical politico-aesthetics of noise has long been recognised. Kane (2014) recalls the efforts of Dadaism 'to subvert clear and compressed visuality through a series of decompressed, noisy, political acts.' She (Kane 2014) notes that Tristan Tzara, author of the 1918 Dada manifesto, argued that 'noise, in opposition to normative views of sound and music, embraced a logic of "complication"'. For experimental musicians such as John Cage, 'noise became *the* core issue in audiovisual experience' (Kane 2014, emphasis in original) as a means of disrupting the normative conventions of such experience.

Indeed, it is noteworthy given my earlier discussion of the sense of the virtual to be seen in visual abstraction, that in the experimental musical compositions of Eric Satie, Edgard Varèse, Karlheinz Stockhausen, and Pierre Boulez among others, as Kane (2014) notes, 'colorful visual abstractions were often integrated into their experimental performances, such as the pivotal multimedia event engineered for the 1957 World's Fair in Brussels.' Linking the potential inherent within both informatic and sonic noise to introduce a generative turbulence into communicative circuits, Clarke (2010, 164) concludes that 'from the standpoint of art forms instantiated in informatic media (aural sounds, visual images, linguistic signs), the noise is the art.' The specific ways in which my video work explored this generative turbulence of noise, sonically and visually, is discussed in detail in Section 5.4.

5.3 Photographic work

5.3.1 In the folds of the interface: *medium specific*

The informational space-time of computational capitalism is best understood, as Chapter Two explained, as a topology of flows and folds. In recalling, from Chapter Two, Wark's (2015, 5) discussion of the 'third nature' of informational capitalism, which he contrasts with the 'second nature' of industrial capitalism, he characterises the former as 'rather more topological'. The data circuits of the image-machine of control operate in this topological space of folded flows.

In these conditions, the ground of perspectival representation is unsettled. 'No longer is perspective fixed; instead, relationships, such as representations and their prototypes, are dynamic in the expression of conceptual and literal space', notes Bucksbarg (2010, 152), a dynamic that is 'expressed with the notion of "the fold"'. Ertuna (2009, 280) names the implications of this clearly:

> In other words, the non-linear, labyrinthine nature of fold defies the ideas of a cohesive space and time. But perhaps more importantly, the notion of fold also challenges humanist visions of subjectivity where the subject figures as a central, unified and cohesive whole.

The 'fold', then, has attracted the interest of theorists of new media who want to look beyond 'humanist visions of subjectivity' and see the potential for resistance to, or emergence from, the 'measures and constraints' of algorithmic control.

The figure of the fold features prominently in Munster's work on new media and embodiment. She (Munster 2006, 32) writes that the 'fold will provide us with a useful concept for inscribing the creases, doublings and separations that characterise the differential relations of bodies and code within information aesthetics.' As do others (Murray 2008), Munster makes extensive use of Deleuze's discussion of the 'baroque' as an aesthetics of the fold, in order to explore its liberatory potential, given that, in Walton's (2011, 140) account, what defines the 'baroque [is] its aesthetic dedication to emotion, movement, materiality and multiplicity.'

My photographic work *medium specific* seeks to play with these baroque qualities of movement, materiality and multiplicity within a visual fold. The six images I present were taken over the course of my doctoral work, in locations in Brooklyn and Manhattan. I experimented with a photographic practice using refractive mediums to be found in urban surfaces to cause light to move and pleat in ways that are specific to and contingent upon the materiality of refraction and the multiplicity of conditions in which the images were taken. The glass of windows in buildings and cars, and the perspex used in the temporary fencing that surrounds the proliferating building sites that dot many gentrifying neighbourhoods, provided the mediums for such refraction.

An early influence on my work as I began this experimentation was the celebrated New York street photography of Lee Friedlander. His images of pedestrians and their reflections in the windows of store-fronts and other buildings provided a commentary on the fragmented nature of the urban landscape. I was less interested, however, in any kind of social realist commentary, and more focused on the formal qualities of multiplicity and movement that could be expressed in an image by taking photographs through reflective/refractive mediums.

For this reason, one of the criteria guiding my selection of images for inclusion in the final work of *medium specific* was the degree to which the images expressed a visual heterogeneity, abstracted from but not 'of' the urban environment. The images are not situated in any definable way in the specific locations in which I took them. They have an abstract quality which draws the eye into the image itself, rather than through the image and out toward the photographed object. I emphasised this quality of formal abstraction by only choosing images which were devoid of people. In this way I also sought to direct attention away from the tropes of mirrors and reflections used in the theorising of fractured subjectivity, and instead insist on attention to the images as an interface with the image-machine and its flows of light-data.

I think of these images, then, as a live photomontage, whose arrangements of light are undetermined by algorithm or photographer. As photomontage, these images are a folding of layers of light over each other in baroque configurations that both illumine, and may interrupt, the imagistic flow of the image-machine of control. In Munster's (2006, 6) view:

> Both baroque and digital spaces engage the viewer visually, seductively and affectively. They operate by creating clusters of objects, images, sounds and concepts that belong together in variation and dissonance. These clusters are not formed through arbitrary associations but emerge as the outcomes of differential connections.

The political potential of photomontage as a clustering of variation and dissonance has long been recognised. In Rancière's (2011, 26) account, the politics of collage and photomontage inhered in 'the clash on the same surface of heterogeneous, if not conflicting, elements.'

For the surrealists, Rancière (2011, 26) notes, photomontage 'served to express the reality of desire and dreams repressed under the prosaic character of bourgeois quotidian reality.' An inspiring example for me of this approach to using montage in photography was the work of Alvin Langdon Coburn, whose Vortographs, as he termed them, were produced by a camera outfitted with a multifaceted prism, enabling him to pioneer the first extended series of nonrepresentational photographs, bringing multiple perspectives and temporal instances into a single frame (Rexer 2009).

I was also conscious of the politically explicit use of montage by Hanna Höch, John Heartfield and Martha Rosler among others. Marxism, Rancière (2011, 26) explains, seized on photomontage to 'render palpable, through the incongruous encounter of heterogeneous elements, the violence of the class domination concealed beneath the appearances of quotidian ordinariness and democratic peace.' The ways in which montage might be used in photography to not only expose but also challenge such hierarchical relations has been highlighted by recent writing on the digital manipulation of images.

Digital 'mash-ups' of appropriated imagery were a significant feature of the visual activism of the Occupy movement, with its roots, as already noted, in Situationist détournement. Devlin (2012) emphasises that it 'is important to note the denial of a range of hierarchies that these digital photomontages embody. There is no distinction made between iconic historical photographs, popular film/television shows or artistic 'masterpieces.' As a result, Devlin (2012) points out, Occupy activists' use of photomontage:

> has had the useful effect of demolishing the authority of the documentary image as a statement of fact, and allowing instead for a reconsideration of the use of photographic imagery as a catalyst for debate, becoming in the process reflexively political.

My work with *medium specific* is less literal than this, not least because it plays with the desire for representational legibility (of self, of world) on which the 'affective capture' of the image-machine of control relies. In its contingent folding of light as opposed to purposeful juxtaposing of images, the live photomontage of *medium specific* becomes a time-space of pause and break within the imagistic flow. This creates a visual uncertainty, delaying or eluding the stimulant action of the circulation-image. McLean (2013, 59) emphasises that montage is 'a sensibility and mode of engagement with the world – one seeking to align itself not with explanatory recourse to an established order of significations (society, history, context) but with a generative instability'.

It is this sense of generative instability that the folds of *medium specific* suggest. As Massumi (2002, 134) notes, 'the virtual is best approached topologically.' The folds of photomontage enfold a sense of potential. Massumi (2002, 1343) is clear that:

> The appearance of the virtual is in the twists and folds of formed content, in the movement from one sample to another. It is in the ins and outs of imaging. [...] Since the virtual is in the ins and outs, the only way an image can approach it alone is to twist and fold on itself, to multiply itself internally.

In *medium specific*, the images twist and fold on themselves, and in so doing multiply potentials.

Willerslev and Suhr (2013, 4) characterise this 'generative instability' as a 'vibrating dissonance', a trope I return to in the next chapter when discussing the vibrational ontology of the digital-visual interface, whose liberatory potential I explore in my video works *look screen* and *moving still*, presented in Chapter Five. As they (Willerslev and Suhr 2013, 4) write:

> The "extra thing" that is created through montage can, however, also be conceived in terms of a "gap" - that is, as the opening up of a kind of incongruence, fuzziness, or vibrating dissonance erupting through the confrontation of unlike elements.

But where they figure this dissonance primarily in spatial terms (as a 'gap'), produced by the juxtaposition of 'unlike elements', *medium specific* is also interested in dissonant temporalities and how these may interfere with the tempo of the circulation-image of control.

The accelerating speed of capitalism, since Marx's (1977) celebrated account of space being annihilated by time, and the impact of informatisation as a motor of further acceleration, has centred theoretical and artistic attention on temporality as a ground for critique and intervention (Virilio 1977; Land 2011; Noys 2014). Deleuze and Guattari (1987, 500) end their discussion of accelerating capitalism with a call to invent 'new paces', and it is to digital visuality that many have looked as the place for such invention. Hansen's (2004) discussion of the radical potential of new media, to which I return at more length in the next chapter in my discussion of the duration of the interface, is centred on the disjunctions between machine time and lived time that digital media can provoke.

Crucially, given the forgoing discussion of affective excess, this sense of temporal disjunction and its creative potential is affectively experienced, sub-perceptual. In discussing Bill Viola's use of extreme slow motion in his video works installations, Hansen (2004, 265) notes 'that consciousness is made to live through (affectively, not perceptually) the very process through which it continually emerges, from moment to moment, as the selection from a nonlived

strictly contemporaneous with it', and thus sense the capacity to 'create the unpredictable, the experimental, the new' (Hansen 2004, 8).

The enfolding of body and code in our encounter with the digital image, Munster (2006) suggests, also renders the temporal as the locus of the political. As she (Munster 2006, 171) notes '[i]n all modes of digital media production we are witnessing the move from regimes of spatialization to those of temporalization', meaning that 'the temporal delays characterizing new media are a device that disrupts the forces of standardization and homogenization in global culture' (Munster 2006, 22). My work with photomontage is similarly committed to such delays and disruption, through a folding of light that slows the encounter with the imagistic flow.

Where the circulation-image of control, fuelled by its affect of anxiety, stimulates an incessant tempo of interactivity with the screens of the image-machine, a tempo under constant pressure to increase (with the unrelenting quest for faster data connections), *medium specific* invites a curiosity and contemplation, a slower rhythm of relation to the image. In the folds of the photomontage, the data flows of the image-machine are stilled, held in suspension, if only briefly, creating a temporal 'gap' in which to feel the image as more than itself, whose sense of emergence, to quote Massumi (1995, 105) again, can 'enable triggerings of change'.

I asked in Chapter Two what remains of the digital image for a visual activism that would engage with the operations of power under conditions of informational capitalism and concluded that we must focus on the circulations, patternings and de/formations of data that now constitute the image. In the topology of informational space these data flows are inherently unstable, for topology, as Massumi (2002, 134) reminds us, is 'the science of 'self-varying deformation', concerned with continuous transformation.

It is to the modulation of such unstable flows that the image-machine of control is directed. Modulation operates through affective capture, and specifically the anxious affect induced by the processes of dividuation and informatised abstraction (discussed in Chapter Two) of computational capitalism. The modulatory operations of the image-machine of control work through the circulation-image, whose incitements to interactivity with the digital screen are fuelled by such affective anxiety. Affectivity, however, is always excessive, and in the folds of *medium specific* I have sought to make room for its generative remainder. Within the stillness of these folds of photomontage, and the 'vibrating dissonance' (Willerslev and Suhr 2013, 4) they introduce into the circulations of the image-machine, we may sense the digital-visual interface as a time-space of contingency and change.

5.3.2 Touching potential: *surface gaze, figure ground, touch light*

The term 'haptic', used by Deleuze and Guattari to characterise the 'close vision' associated with smooth, deterritorialised space, was drawn from the art historical work of Riegl, who distinguished the haptic engagement with an art object from the optical. As Wood (2004, 168) explains:

> Haptic was a neologism of the period derived from the Greek verb haptein, meaning "fasten" or "attach." Haptic referred to a mental fastening or attachment to the artifact. It could just as easily be characterized as a participatory or empathic relationship to things.

Deleuze and Guattari (1987, 493) deployed this distinction in contrasting the modes of vision associated with the striated grid of control, which 'relates to a more distant vision, and a more optical space', with that of the smooth space which 'is both the object of a close vision par excellence and the element of a haptic space'.

In Section 4.4, I reviewed Deleuze and Guattari's theorising of the creative potential for resistance inherent within the turbulence of deterritorialised smooth space, as the space of 'lines of flight' from capitalism's control. But they were always clear-sighted about the limits of this potential. 'Never believe that

a smooth space will suffice to save us', they caution in their famous closing line to the chapter on *The Smooth and The Striated*, at the end of *A Thousand Plateaus*, for 'smooth spaces are not in themselves liberatory' (Deleuze and Guattari 1987, 500).

It was the interplay between smooth and striated, the deterritorialising and reterritorialising operations of capitalism, that concerned them. 'What interests us in operations of striation and smoothing are precisely the passages or combinations' Deleuze and Guattari (1987, 500) emphasise, and in the era of computational capitalism, it is the digital-visual interface where these passages and transitions, the interplay between striation and smoothing, may be most clearly felt. Hookway (2014, 93) notes that the 'interface is the space and temporality of translation and reversal' between the striated and the smooth. As he (Hookway 2014, 93) continues, '[w]hile as a boundary condition the interface is a kind of striation, it is a striation that is also smooth in that it has already effaced itself within fluid form.'

Haptic vision is a way of looking that keeps us in touch with the smoothness of the interface, its volatility and potential for resistance to control. While smooth spaces are not inherently liberatory, Deleuze and Guattari (1987, 500) insist that through being in contact with such spaces 'the struggle is changed or displaced in them, and life reconstitutes its stakes, confronts new obstacles, invents new paces, switches adversaries.' In the smooth space of the interface we may feel the potential for the emergence of the new. As a sense of close looking, the haptic is exploratory, open to what may be felt with the eyes; with the haptic, the digital-visual interface remains an opening. Haptic vision gets us close and puts us in touch, in 'empathic relationship to things'. In Massumi's (2002, 158) view, this 'purely visual touch is a synesthesia proper to vision: a touch as only the eyes can touch.' As Marks (2004, 79) affirms, 'I prefer to describe haptic visuality as a kind of seeing that uses the eye like an organ of touch.'

I see my use of photographic close-ups in *surface gaze, figure ground* and *touch light* as haptic in this way, seeking to get in touch with the interface as a smooth space. My turn to the haptic was, in part, influenced by Graham Harwood's *Uncomfortable Proximity*, a website on its collection of paintings by Turner, Wheatley, Gainsborough, Hogarth, Rossetti, Reynolds, Holman Hunt and others commissioned by Tate Britain. Harwood's digital collage, in which sections from these paintings are combined with other pictures from the faces and flesh of Harwood, his friends and family, draws on some of the same impulses that motivated my work with *medium specific*. But I was especially interested in his use of extreme close-up. As Fuller (2000) writes of *Uncomfortable Proximity*, the 'digital camera allows a proximity to material, to skin, to the surface of paint that exceeds the eye's trained ability to sort and recognise.'

The close seeing of haptic vision is ambivalent, inviting both an 'empathic relationship to things' and the discomfort of disordered visual legibility. My early experiments with haptic imagery, in *surface gaze*, sought to play with this ambivalence, by deploying it to disrupt the subject-object relations of the gaze. In *surface gaze*, I face the gaze of the faciality function and attend to its torn and marked surfaces as an invitation to get close to the image, whose tight framing at the same disrupts the face-to-face encounter. As a 'between faces' that is also a 'facing between', the interface is a liminal time-space, and with *surface gaze* I explore this liminality, moving between the lure of the eyes, and the cuts and blotches on the image's skin, and the loss of the face, in the middle, as it were, of a looking that is restless.

My photographic use of haptic visuality evolved over the course of my doctorate, coming to focus on the interface itself, and its rhythms of movement and stillness. I became interested in exploring ways of using haptic imagery as an invitation to pause in the contingency of the interface by getting in touch with the folds of its flows. Deleuze and Guattari (1987, 493) suggest that

'haptic, smooth space of close vision […] operates step by step' and with the extreme close-ups of *figure ground*, I invite the eye to wander 'step by step' over the surface of the image, feeling its way into the image. Smooth space is above all nomadic in Deleuze and Guattari's formulation. It is this visual wandering that *figure ground* invites.

The images comprising *figure ground* are the distillation of my photographic exploration of urban surfaces around where I live in Brooklyn. I took many photos, close up, of walls in my neighbourhood, using a macro lens and acute angles of view to create images that particularly played with the 'eye's trained ability to sort and recognise.' The images chosen for inclusion in the photoset *figure ground* were selected on the basis of their aesthetic vibrancy, of colour and texture, which draws the eye into and then across the image surface.

These close-up images also play with the figure-ground distinction, so central to perspectival representation, and with the loss of this distinction within the topological flows of informational space, discussed in Chapter One. In *figure ground*, the two terms constitute and confront each other in a zone of indetermination: which is the figure, and which the ground? As both ground and figure, and neither at the same time, the cracks and blotches of the wall disorient our looking. Deleuze and Guattari (1987, 494) emphasise that:

> Where there is close vision, space is not visual, or rather the eye itself has a haptic, nonoptical function: […] there is neither horizon nor background nor perspective nor limit nor outline or form nor center; there is no intermediary distance, or all distance is intermediary.

We lose perspective in *figure ground*, with neither 'outline or form nor center' to orient us. But in this smooth space of the image a deterritorialised looking becomes possible, open to new connections and directions.

My photographic practice, especially with *touch light*, also invokes the curiosity of haptic looking; the three images taken were the result not of composition through the viewfinder, but of pressing the camera up against a wall, macro

lens pointing up toward the sky but set to its shortest focus distance, and seeing what I would find. This aleatory approach to haptic image-making took inspiration, in part, from Silvio Wolf's photographic light abstractions in his Chance series, whose stacks and bands of colour, hue and saturation evoke the paintings of Rothko and Newman. In Rexer's (2009, 192) description, 'Wolf's images occurred at the surface. They expended themselves there, involving the viewer in complex, even disorienting optical experiences.' In this way, Rexer's (2009, 192) writes, these images 'suggest not so much a stripping away as an embrace of all possibilities, as if the totality of what can be shown and seen might be contained in a single image.'

I was similarly interested in bringing the eye to the surface of the image to see what might occur there. 'Haptic visuality sees the world as though it were touching it: close, unknowable, appearing to exist on the surface of the image' Marks (2004, 80) makes clear. And in her description of haptic seeing as a meeting and mingling of surfaces, Marks (2004, 80) echoes the conception of the interface as a dynamic boundary condition discussed earlier:

> In haptic seeing, all our self rushes up to the surface to interact with another surface. When this happens there is a concomitant loss of depth – we become amoebalike, lacking a center, changing as the surface to which we cling changes. We cannot help but be changed in the process of interacting.

As a dynamic threshold, the interface is a time-space of indeterminacy, and haptic imagery holds us there, present to its potential. Rexer (2009, 192) emphasises that haptic images 'hold us at the surface, never allowing a deeper gaze, keeping the eye present and the mind, especially, engaged and aware.'

This presentness is an immersion, which is the characteristic of smooth space and, in a different register, the quality of lived being in time, in whose sense of duration, for Bergson (2004), lay the creative potential of life. In Section 4.5, I discussed Hansen's use of Bergson to explore the liberatory potential of the digital image, and specifically the ways in which digitisation has returned the

image to an embodied, affective experience, in whose temporality is the potential to feel the duration of an 'enlarged now'. To quote Hansen (2004, 266) again, this affectivity of the expanded now, its felt duration, is the 'capacity for the body to be radically creative, that is, to be the agent of a framing of digital information that generates images independently of all preexistent technical frames.' Crucially, this embodied experience is an 'affective "supplement" to the act of perceiving the image', which Hansen (2004, 12) characterises as a 'properly haptic domain of sensation'.

My use of the haptic in *figure ground*, *surface gaze* and *touch light* is concerned with feeling this 'affective supplement', the affective remainder of the digital image. Chapter Two concluded its discussion of the impact of informatisation on the loss of the representational force of the image by emphasising that the political potential of the image may be found, not in its representations, but in the volatility of the informational flows in which it is enmeshed. This is what remains of the image for a visual activism that would seek to disrupt the visual operations of the society of control. My haptic photography seeks an immersion in these flows by being present with their tactile surfaces in the image, inviting a time-space of encounter with the interface, whose affective remainder is the feeling of its potential for indeterminacy.

The intimacy of haptic visuality puts us in touch with the indeterminacy of the interface, whose contingency is a function of its dynamic condition, its volatile movements. In this sense, the contingency of the haptic is a direct counter to the instrumental touch incited by the circulation-image, 'a mouse click, a keystroke, or a button press' to quote Franklin (2015, 164) again. The image-machine of control is tactile, but algorithmically so, with each touch of the screen helping to refine its modulations.

By contrast, the haptic image can evoke the volatility of the interface, a sense of movement as creative potential, for 'hapticity is also related to our sense of

mental motion, as well as to kinesthesis, or the ability of our bodies to sense the mutable existence of things and movement in space' (Bruno 2015). Moholy-Nagy's (1947) work on Vision in Motion also evoked the sense of a 'haptic unconscious, or the idea of a technologically based tactile experience of vision' (Terranova 2012, 234). If, as Marks (2004, 82) insists, '[h]aptic images and haptic visuality, in order to have the kind of radical potential I saw in them, need to be motivated by something radical', it is to their evocation of the unsettled movements of the interface that I look for such potential. The 'vibrating dissonance' of these movements, to quote Willerslev and Suhr (2013, 4) again, is the focus of my two video works, to which I turn next.

5.4 Video work

5.4.1 Thresholds of interference: *look screen*

In *look screen*, I am concerned with the 'virtuality of the tremble' in the digital-visual interface. The film begins with flow and ends with vibration. As an interface, the film is an encounter with looking, within the frame and out from the screen, evoking the superposition of looking that characterises the folded informational space of the image-machine, discussed at the end of Section 4.1. With *look screen*, I incorporate visual elements from my earlier photographic work, setting them into motion in order to unsettle their stasis and explore their flux. Images enfold each other in a montage, spatial rather than linear, whose duration becomes a space of de/formations.

The film draws on my previous experiments with a haptic visuality to invite a looking that feels close(ly), challenging the controlling sight of optical distance. The touch invited by the haptic image is curious and contingent, a staying 'in touch' with the image in order to feel what it looks like. As with my photographic practice, reviewed in Section 5.3, the haptic quality of the imagery used in *look screen* pushes toward the edge of representation, exploring its limits while at the same time touching on the logic of abstraction underpinning algorithmic capitalism, whose informatisation the digital image nervously expresses.

Haptic imagery in *look screen* interrogates sight, the common sense of dominant (because distant) sense perception. I was interested in the ways in which close ups of the eye, which falls out of focus, could suggest a minoritarian sense perception, similar to the minor literature that Deleuze and Guattari (1986) identified in Kafka. As discussed in Chapter One, this kind of minoritarian artistic practice is interested in disrupting dominant codes of signification and representation through a stuttering and stammering with, in Kafka's case, language.

This disruption works, as O'Sullivan (2012, 6) suggests, through 'moments of noise – or glitches as we might call them' that constitute a 'rupturing of representation.' O'Sullivan sees in this rupturing the potential to create the kinds of non-communication, which Deleuze saw as a means to 'hijack speech'. He (Deleuze 1995a, 175) insisted that '[c]reating has always been something different from communicating. The key thing may be to create vacuoles of non-communication, circuit breakers, so we can elude control.'

As articulated by O'Sullivan (2012, 7), such circuit breakers can be produced by an 'affective stammering', which 'operates as a kind of singularity that in itself counteracts already existing affective/signifying regimes, whilst at the same time, crucially, opening up a gap within these all too familiar series and circuits of knowledge/information.' I see my use of haptic imagery as similarly opening up a gap in normative sense perception, whose vibrations in close up, expressed in the physical effort of holding the camera close to the object of sight for an extended period of time are, literally, a visual stammering which seeks to act as a circuit breaker in communicative flows.

From my photographic experiments with fold and touch, I turned to video in order to investigate further this 'stuttering' of a minoritarian visuality, and in particular the ontology of the digital-visual interface as a sight and site of vibrational forces, 'circuit breakers' interrupting both the smooth flows and arresting stabilisations of the scopic regime of control. My interest in the vibrational ontology of the interface centres on the time-space it opens up to disrupt the workings of modulation, being the impressing of rhythms of circulation and capture, as well as patterns of fragmentation and aggregation, that constitute the operations of control. Digital video, as a durational medium, lends itself to this exploration of the time-space of the interface; as a moving image of discretised data, digital video is itself the ideal time-space in which to interrogate the intensive potential of the oscillations inherent in the relation between duration and instant, continuity and discontinuity.

My approach to the making of *look screen* was influenced by the video compositions of James Richards, who has said of his work (Rittenbach 2013):

> My working process has always begun with the idea of collage; of bringing disparate things together in such a way as to make something new, but also to keep hold of the sense of those fragments being very different—or from very different sources—each with a life of its own.

This arranging together of 'disparate things' recalls the generative potential of baroque folds discussed in Section 5.3.1. As Richards (Rittenbach 2013) suggests, '[t]hough my work deals a lot with the disjointed, the fragmented and the random, I feel I'm very much trying to make something expressive.' Similarly, in *look screen*, I bring 'disparate things together in such a way as to make something new', expressive of dissonant rhythms that counter the affective anxiety and urgency of the circulation-image of control. I sought this dissonance, in part, through a temporal montage of visual fragments which move in and out of easy legibility, a movement of uncertain looking that invites an immersion in the digital-visual encounter itself, that is to say, the interface.

The visual components of *look screen* are based on over 30 hours of video that I shot over the course of the PhD, in and around my home in Brooklyn and in several locations in Manhattan. My video image gathering was guided by the principle of looking 'uncertainly', whether using extreme close-ups to render strange the surfaces and textures of the city streets, screens and subway trains and platforms or by extended fixed frame shots of urban circulations, of people and vehicles, the contingency of whose movements across the frame I wanted to register. I was interested in the generative potential of 'looking at looking'. In *look screen* we look at other screens, and other eyes, looking back at us, and thereby sense the time-space of 'between faces' that is a 'facing between'.

I also made extensive use of 'wild sound' to generate dissonant audio-visual rhythms. For Richards (Rittenbach 2013) too 'it started in sound' and his account of the role of the sonic in his compositional process was influential on my own video practice:

I think a lot of the work in editing or composing a piece is in feeling out the internal rhythms of the footage that I'm using, and letting that guide the sound of a particular section and how I work it into the next.

With a debt to Pierre Schaeffer's conception of *musique concrète*, in which he sought to take 'sounds recorded from the natural or urban environment and strip them of their signifying power in order to produce a properly abstract music' (Barry 2013), the soundtrack of *look screen* makes audible a sense of sonic ambiguity, in part by setting up audio-visual discordancies, splicing together the images from one video clip with the soundtrack from another. As Balsom (2017) notes when discussing Everson's use of wild sound in his video *Tonsler Park* (2017), a portrait of workers at a polling station on November 8, 2016, the 'slight cleavage of image and sound ruptures any possible impression of total capture' and thus constitutes a 'refusal of mastery' that 'demands that we look nonetheless'. In this way, the dissonance of sound and image call attention to the interface of the digital-visual encounter itself.

On the soundtrack of *look screen,* the ring tone and its unanswered call, distant sirens in the city, subway noises and the machinic thrum that accompanies the folded montage of digital screens, are all used to induce an affective tone of uncertainty and anxiety. Will anyone answer the call? What danger do the sirens warn of? This affective tone is vibrational, for '[w]hat is edginess, nervousness, or the jitters if not the potential of vibrations to spiral into goalless, open-ended hyperactivity?' asks Goodman (2012, 71). Set against this affect of anxiety, in dissonance with it, are the sounds of the everyday, people talking and walking, the flow of life. As discussed in Chapter One, with this everyday hum I invoke the spirit of resistance to control that de Certeau (1984) and Lefebvre (1991) among others found in the quotidian practice of life (Highmore 2002).

In this I was inspired by Conley's (2002, 492) poetic acknowledgement that '[m]eaning emerges from noise, from the murmur of the opaque folds of the world.' My discordant use of sound was part of my broader strategy to

generate visual and sonic noise, as interference patterns to expose and explore the vibrational ontology of the interface, and the trembling virtuality of its data flows. Such interference patterns, as visual moiré, are often an artefact of images produced by digital imaging and computer graphics techniques, when differential resolutions and scanning produce a secondary and visually evident superimposed pattern, vibrating in relation to the original image. I found that slow motion video capture of a video signal on a large public digital screen (the so-called Big Screen in Manhattan), when re-screened on a computer monitor, produces such visual moiré. I was less interested in the representational content of the imagery being screened which, in effect, were randomly selected; I filmed whatever was being shown on the Big Screen on that day at that time. But I was drawn to the moiré patterns created, as a form of visual interference with smooth flows of visual communication.

Significantly, given my interest in and use of folded montage and haptic visuality to disrupt or elude the image-machine of control, the term 'moiré' refers back to a type of textile, whose rippled or 'watered' appearance is produced by pressing together layers of textile when wet, whose differential spacing of warp and weft threads then creates characteristic patterns when the layers dry together. The moiré patterns produced by digital visual artefacts carry within them a texture of folds that can be felt; digital moiré invites a getting in touch with a visuality that interferes with the circulations and modulations of control's image-machine.

My use of digital moiré in *look screen* as a form of visual interference is, in the sense of the minoritarian visual practice discussed above, part of a broader effort, to misquote Deleuze, to 'hijack visuality' from its deployments within the image-machine of control. This emphasis on the use of creative media to interfere with the smooth operations of capitalism can be traced back to the strategies of détournement called for by the Situationist International from the late 1950s onwards (Debord 1970; Plant 1992; McDonough 2002; Rancière

2013), whose influence on recent and contemporary anticapitalist struggles, notably Occupy Wall St (McKee 2016), was briefly reviewed in Chapter Two.

As a form of interference with the patterning of control, my use of moiré is more specifically grounded in the generation of a 'noise', whose vibrations disrupt the signaletic flows of capitalism. With the emergence of information theory (Shannon and Weaver 1963), and its understanding of information as signal, rather than signification, attention has been drawn to the problematic of noise, as already briefly reviewed in Section 5.2.3. In Terranova's (2004, 15) useful summation, information theory posits that '[t]he information flow establishes a contact between sender and receiver by excluding all interference, that is by holding off noise.'

The impact of the digital on the loss of the image as a stable site of representational meaning, discussed in Chapter Two, is in part grounded in this shift from signification to signal. The visual operations of control, as Chapter Three made clear, are based on a similar signaletic logic, being conducted by the circulation-image, whose function is to accumulate and circulate 'raw data for the machine', the image-machine of control.

But if information theory reduced visual and other forms of communication to the engineering problem of maximising signal-to-noise ratios, its unintended consequence has been to generate interest in the potential of 'noise' as a form of resistance, aimed at disrupting the smooth efficiency of the communication machine' (Terranova 2004, 17). This view of resistance, as 'what hinders and dissipates the energy flow of domination', to quote Highmore (2002, 151) again on de Certeau's (1984) understanding of everyday resistance, is what interests me. But in contrast to using 'noise' to interrupt the representational efficiency of the communication machine, my work has addressed the 'noise' inherent within the volatility of the interface itself.

Again, with reference back to television in Lazzarato's (2002, 72, cited in Thomsen 2012) formulation, the digital image is 'a living and dynamic field of energy, an oscillation that only seems fixed to the extent that it exceeds our capacity to a degree to perceive small units of time.' My work with *look screen* exposes and plays with this oscillation as digital noise. The moiré patterns of *look screen* literally tremble, resonating with artefacts at the level of the pixel and its edges. If computationality's logic of discretisation is based on a cutting into the flux of life to produce discrete 'bits' of information (and, in visual terms, discrete pixels of light encoded as information), echoing Bachelard's (2000) insistence on the primacy of the instant as the basis of duration, then the trembling of digital moiré exposes the vibrational potential within such discretisation.

In this way, *look screen* becomes an unsettling scene of digital flux, an openness to continuous variation usually taken to be the distinctive quality of the analog as opposed to the digital. 'While the digital, it is argued, in its discrete binary constitution of bytes frames a predetermined, precoded field of demarcated possibility, can there not be a potential for mutation immanent to the numerical code itself?' Goodman (2012, 122) asks. Parisi is clear about such potential. As Clough notes (2012), citing the work of Parisi (2009), this potential 'transform[s] the logic of binary states, yes and no, into the fuzzy states of maybes and perhaps', such indeterminacies being 'not merely qualitative renderings of a digital binarism,' but instead to be understood in terms of new processes of quantification that recognise 'the full densely packed zones of information that are the intensive surrounds of zero and one'; zones defined by 'an intrinsic numerical variability which remains computationally open.'

In their indeterminacy and instability, the moiré patterns of *look screen* interfere with the logic of control and its algorithmically 'predetermined, precoded field[s] of demarcated possibility'. To adapt O'Sullivan's (2012, 6) formulation, 'these moments of noise – or glitches as we might call them' free computational

visuality 'from itself, at least, from its signifying self, by putting it into contact with other forces.' This interest in the glitch is a focus of 'glitch aesthetics' or 'new aesthetics' (Berry et al. 2012; Sterling 2012).

But instead of the cognitive dissonance, and therefore reassurance, that the 'new aesthetics' discourse appears to emphasise (as in, 'look, the digital image-machine of control does not function perfectly'), what is interesting about the glitch as it is invoked by the kinds of becoming-art that Deleuze and Guattari identify in Kafka is the intensive potential of its affective quality. As O'Sullivan (2012, 6) emphasises:

> We might say that the listener – or spectator – must respond to the glitch, the affective-event, as an event, as the bearer of the potentiality of something else. […] The glitch then, I would argue, is co-produced through object and subject – in fact, it names a passage between the two.

Might we see the glitch, then, less an exposure of the malfunctions of the image-machine of control, and more a resonant, affective encounter with the play, the room-for-manoeuvre, in the machine? And how might this room-for-manoeuvre be experienced in the digital-visual interface? I see the interference patterns of digital moiré in *look screen*, through their vibrations, as helping to work loose the circuits of communicational flow, making room for leaks and seepages that may move us to see and experience the potential for the new.

5.4.2 Trembling virtuality: *moving still*

With *moving still*, I continue my investigation of the vibrational ontology of the interface. If the image-machine of control operates through its continuous modulation of data flows, the continual scene of this modulation is the turbulent potential of the digital-visual interface. In *moving still*, I use encounters between the still and moving image to form this turbulent interface, its instability being its potential for the new. Through extended dissolves, the film mixes still and moving images to create a continual flux at the surface of the screen: nothing seems settled. Bergson (2004, 28) wrote of the imagistic flow constituting matter that '[r]epresentation is there, but always virtual -

being neutralized, at the very moment when it might become actual, by the obligation to continue itself and to lose itself in something else.' This is the tremble of virtuality in the interface; the settled image, as an actuality, is lost in the glare of light from the imagistic flow, as soon as it appears.

An unsettled screen, a sense of stillness moving or movement being recurrently stalled, is unsettling. Hito Steyerl's 'still' video piece *Red Alert* (2007), a new media remake of Rodchenko's red-yellow-blue triptych, was one inspiration for *moving still*. As Lütticken (2013, 82) notes, 'the piece contains no moving images, and yet, as video, it remains a time-image - demonstrating the diffusion of such terror alerts, little mini-shocks in their own right, in the time of life.' A second significant influence was the film work of photographer John Stezaker. In *Horse* (2012), Stezaker uses near-identical pictures from many editions of a racehorse catalogue over the past 30 years, to create a film of an apparently nervous racehorse that cannot keep still. His *Crowd* (2013) is composed entirely of film stills of crowd scenes from movies. 'These "still" films are anything but motionless', notes Cumming (2015). The result is an unsettling visual experience. 'The eye is baffled, and so is the brain', Cumming (2015) observes.

But it is also generative, as Cumming (2015) continues:

> For strangest of all, in the end, is the curious stillness to which these films revert. […] They are meant to spark thoughts and so they do, these objects of contemplation that hover in the air like humming birds moving at superhuman speed.

I was similarly interested in this 'curious stillness' of movement, and its potential to provoke a sense of the new or unexpected, but at a very different rhythm to Stezaker's 'superhuman speed'. Accelerating speed has become a defining characteristic of computational capitalism; the image-machine of control operates with an urgently anxious tempo. The use of extreme slow motion, for example in the video work of Bill Viola and Douglas Gordon, as an aesthetic interruption of this tempo, creating a caesura within which to experience a temporality outside of capitalism's accelerationist imperative, was

briefly reviewed in Chapter Four. Hansen's (2004) insight concerning the 'affective supplement' of temporal experience below/beyond the threshold of conscious perception, generated by this use of severe slow motion, heightened my interest in the generative potential of slowness, approaching stillness, in the moving image.

This affective supplement aroused by a 'decelerationist' aesthetics may have a range of emotional tonality. In his account of Wendelien van Oldenborgh's slow motion blending and fading of film stills projected over each other, Lütticken (2013, 67) notes that 'the viewer-listener becomes suspicious and somewhat irritated' as the '[i]ndustrial sequential order is transformed into a curiously meandering time. Instead of producing an abstract negation of measured time, the piece stretches and dilates it.' It is the 'radically creative' potential of dilating time in which *moving still* is interested.

My work on *moving still* was influenced by Koepnick's (2014, 9) elaboration of her concept of 'aesthetic slowness', which 'makes us pause and hesitate, not to put things to rest and to obstruct the future, but to experience the changing landscapes of the present in all their temporal multiplicity.' Given that 'the central challenge is to think of the present as a space of multiple trajectories and possibilities' (Koepnick 2014, 12), then the radical potential of aesthetic slowness, Koepnick (2014, 14) suggests, is:

> the promise of contingency—freedom, indeterminism, surprise, and wonder —while challenging how today's culture of speed, ubiquitous computing, and neoliberal deregulation has appropriated contingency as one of its primary ideological building blocks, as part of a new language of inevitability.

Crucially, this promise is premised not on a simple inversion of speed into slowness, but an aesthetic exploration of multiple temporalities and rhythms. '[A]esthetic slowness wants us to explore modes of mobility and perception that do not simply reverse—and thus surreptitiously reaffirm—what is seen as the dominant regime of speed' Koepnick (2014, 6) emphasises.

With *moving still*, I use extremely slow dissolves between still images, and between still and moving images, to create an experience of the digital-visual interface as an unsettled flux. Its vibrational quality is 'the promise of contingency', an evocation of a reality always in process and never fixed, calling attention to 'the experience of being in time', and the creative potential that Bergson (2004) saw as inhering within this experience. There are three sequences of flux in *moving still*, expressing the unsettled interface in its continually changing form.

As with my other work, the imagery used in *moving still* was 'taken' at different times throughout the course of my doctoral work. The first sequence uses dissolves between a video clip and photograph of the same face on fence-mounted mural celebrating the diversity of the Lower East Side. Drawn by my interest in challenging the faciality of the gaze, I returned to this scene on several occasions, sometimes shooting video and sometimes taking photographs. If the content of this first sequence reflects my theorising of the 'faciality system', and in its particular choice of facial imagery gestures toward the returned gaze of the visually marginalised non-white subject, my primary impulse, aesthetically and politically, was non-representational. This is to say, that whatever the circumstances and intentions of their original 'capture', my evolving interest in the fluid dynamics of the interface as a time-space of unstable data flows led me to use these still and moving images, together, to create such an interface. In *moving still*, I seek not a representation of an interface but an immersion in the spatio-temporality of its contingency.

Similarly, in the second sequence of *moving still*, I re-purpose two of the haptic images that I use in *touch light* as a further visual expression of the interface as vibrational flux. When viewed together, as elements of *interfaces of resistance*, these video and photographic works thus reference each other, co-constituting the contingencies of the interface in their resonant hapticity and vibration. The final sequence dissolves between two images of an electronic 'wanted' sign

used by the New York Police Department, in this instance alerting the public that a young black male was a suspect in a crime of sexual assault.

Once again, my choice of imagery reflects my political interest in the visual apparatus of social control, in this instance gesturing towards its racist 'vision'. But my deployment of this imagery in *moving still* is less to do with exposing this vision, and more concerned with the vibrational experience of the interface as an interruption that 'makes us pause and hesitate' amid the circulations of the image-machine of control. That this image-machine is indeed racist is merely, if meaningfully, glimpsed as the second image of the pair used in the sequence resolves into clarity. As an experience of the 'virtuality of the tremble', the unsettled interface of *moving still* 'stresses the extent to which the virtual is deeply embedded in what we call and perceive as the real' (Koepnick 2014, 14).

Sound also plays an important function in generating both a sense of the unsettled vibration of the real and a unity in multiplicity across the three sequences of visual flux. To create the machinic hum of the soundtrack, I sourced wild sound from the streets and subways of New York City, then slowed the audio track down and applied a low pass filter to accentuate its bass frequencies. Goodman (2012) associates bass frequencies with forms of acoustic resistance to the sonic modulations deployed by control societies. He (Goodman 2012, 188) contrasts the higher frequencies that 'abduct consumers immersed in both the transensory and non sensory soup of vibro-capitalism' with the 'messy, leaky, low frequencies with an affinity to hapticity, immersion, and congregation' (Goodman 2012, 187). With vibrating image and bass thrum, *moving still* invites an immersion in the 'seeping edge of the virtual' and its potential for the new.

5.5 A practice of resistance

I began my creative practice with a desire to use visual media to explore what control cannot control, the leaks and stains of its remainder. This is the potential for resistance that remains with the digital image. To get a sense of the openings for the new within the closed circuits of the image-machine of control, I have immersed my practice in the digital-visual interface, in whose trembling turbulence this potential may be felt. My practice has ranged from the explorations of the fold through photomontage to the use of haptic imagery to feel the smooth space of the interface, to the setting up of interference patterns and visual and sonic vibrations in my video work. In these ways, I have engaged with the dynamic threshold condition of the interface as the moment-site for an experience of rhythms that counter the insistent anxieties of the circulation-image.

As a time-space of forming, rather than a relation between pre-existing forms, the interface is an opportunity to keep open the process of forming and the question of what is being formed. My photographic and video work has sought to stay present with both this process and this question. Such presence makes possible, to refer back to Massumi (1995, 105), 'a pragmatic understanding of emergence' which can 'enable triggerings of change'. When we feel its tremble, the interface may become an intensive site and sight of this emergence, releasing energies for change.

The presentation of my creative practice on the blogging platform Tumblr grounds its claim to be a site and sight of emergence. Tumblr, with a self-declared 355.6 million blogs and 150.8 billion posts in 18 languages, invites you to 'follow the world's creators' (Tumblr 2017). An incitement to circulation is Tumblr's brand, and its commercial logic; 'Tumblr lets you effortlessly share anything […] wherever you happen to be' the platform announces (Tumblr 2017). With this location, my work situates itself amid the digital-visual infrastructure of circulation that I have termed the image-machine of control.

Key to the platform's spectacular growth since its creation in 2007 has been its emphasis on user control. Recalling his frustration with existing tools for sharing user-generated content on the internet at the time he created Tumblr, including WordPress and Blogger for text, Flickr for photos and YouTube for videos, David Karp emphasised that he 'was perfectly happy with all these tools but at the same time, constantly frustrated by the limitations imposed by all of them' (Alfonso 2013). Such limitations persist. Photo sharing platforms Instagram and Flickr both allow the sharing of video clips but severely limit their length, to 60 seconds in the case of the former and three minutes for the latter. Video sharing sites such as You Tube or Vimeo are not designed to display portfolios of still images.

By contrast, Tumblr claims to be a limitless platform, as expressed in its insistence that '[y]ou can customize everything' (Tumblr 2017). This flexibility accorded well with my transmedial interest in presenting a body of work, combining both photography and video, that could engage with the flows and captures of the image-machine of control and explore the emergence of the new within the moving stillness of the interface. Equally, Tumblr is a proprietary platform that 'encloses', and thereby monetises, the storage and distribution of users' creativity through the allure of creating a commons for unlimited sharing. Its business model, then, is premised on Kember's (2012) insight that, in the age of both ubiquitous computation and pervasive image-making, our image apps and digital screens 'contribute to the reordering of us as prosuming subjects becoming data objects for markets'. On Tumblr, we may discern 'our emergent status as precisely the sort of embodied informational agents that serve us, then, in a double sense, transforming as they reinforce us, serving us – up' (Kember 2012).

Tumblr, as a platform, is paradigmatic of the image-machine of control. In May 2011, James Bridle (2011) used Tumblr to launch an ongoing research project into 'artefacts of the heterogeneous network', which point 'towards new ways

of seeing the world, an echo of the society, technology, politics and people that co-produce them.' He termed this project the New Aesthetic, 'a cascade of images, a collection, an archive, or more specifically, a database that attempts to document a certain unfolding condition' (Berry et al. 2012). This condition is marked, Sterling (2012) suggests, by the 'eruption of the digital in the physical'. For Berry and his co-authors (2012, 41), the 'New Aesthetic, then, can be understood as a comportment towards "seeing" computation, responding to it, or merely being correctly attuned to it.'

That this comportment be critical is clearly important. 'Part of the challenge for citizens of a regime of computation is to bring the digital (code/software) back into visibility for exploration, research and cultural critique' notes Berry (2012, 44). Such visibility would make clear that (POSZU 2012):

> The New Aesthetic reeks of power relations. Drones, surveillance, media, networks, digital photography, algorithms. This is largely about the technology of "seeing", and how we see this new technology of seeing. But the technology is also for watching. The ability to watch someone is a form of power. It controls the flow of information.

Yet the New Aesthetic Tumblr itself has been taken to task for a certain political naivety when it comes to confronting such power relations, its criticality undermined by a fascination with the surface effects of the eruption of the digital into the realm of the visual on our screens.

For Berry and his co-authors (2012), this kind of 'screen essentialism' flattens both analysis and critique by neglecting the layers and complexities of code and computational infrastructure 'beneath' and 'beyond' the screen and their ramifying cultural and political effects. They (Berry et al. 2012, 62-63) conclude that:

> Tumblrs, and related collection-oriented computational systems certainly contribute to visualizing forms of understanding, through the generation of geometric and photographic truths manifested in painted screens and surfaces. However, there is still important critical and creative work to be done to fully confront this reality of 21st century visual culture, one that is computationally mediated and saturated with consumerism and markets.

Tumblr then provides an appropriate setting for my 'critical and creative' response to the digital visuality of control. Based on my theorisation of the circulation-image and its functions within the image-machine of control, this response centres on the interface as a site/sight of critical comportment toward the computational conditions of the image-machine, and I use video and photographic work on Tumblr at https://interfaces-of-resistance.tumblr.com to constitute a set of interfaces as a practice of resistance to such control.

Here, the two video pieces and four photography portfolios, which together constitute the mixed media work *interfaces of resistance in the image-machine of control*, are presented. This visual work is accompanied by an opening text that frames, theoretically and politically, its intention and production. Each of the six pieces also has its own very brief framing text, including technical production details. For the videos there are two points of user interaction, namely the play button and expand button. The photography 'windows' are set to 'slideshow', meaning that the still images are in episodic motion. Clicking on the image takes the viewer into an enlarged, user-controlled slideshow, presenting an arrested flow of images that requires the viewer to activate into movement by clicking on the screen.

The frames within frames of *interfaces of resistance* become a digital-visual interface when the user interacts with the screen. But crucially this interactivity is limited to activating the interface. All other sharing functions provided by Tumblr, notably the 'reblog' and 'like' buttons, have been switched off. Presenting *interfaces of resistance* as a Tumblr blog customised in this way turns the platform against itself, using its affordance of user control to operate against its incitement to further circulation. When the interfaces of *medium specific*, *surface gaze*, *figure ground*, *touch light*, *look screen* and *moving still* are activated, they become a site-moment of pause, hesitation even, within which to sense 'the promise of contingency—freedom, indeterminism, surprise, and wonder', to quote Koepnick (2014, 14) again.

As an invitation to pause rather than incitement to circulate, *interfaces of resistance*, inspired by Flusser (2000, 2011), 'plays against' the image-machine of control, though not at the level of the image and its representations but rather in terms of the data flows of imagistic circulation. This is the 'resistance' politics of *interfaces of resistance*, to be found in its commitment to playing against the socio-technical conditions that both make the work possible and that constitute the operations of the image-machine of control. For, as Lütticken (2013, 234) suggests, 'the aesthetic project at its most apposite is a problematization of artistic autonomy that is, at least potentially, also a politicization.' The politico-aesthetics of *interfaces of resistance* are that it is both component and critique of the image-machine, necessarily impure, foregrounding 'its own status as a questionable thing', and 'demanding a constant renegotiation of autonomy and heteronomy' (Lütticken 2013, 234).

This renegotiation is ever more pressing in the contemporary '"gamified" cultural economy' Lütticken (2013, 159) suggests, 'in which work increasingly becomes "creative," (2013, 54) and is 'marked by the inability to distinguish between labor and leisure, between work and occupation, between working hours and free time - between performance and life' (2013, 195). The scene of this real subsumption of life by capitalism is increasingly the digital screen. In the image-machine, the viewer-as-worker learns to play, not as a ludic but as a cybernetic practice. Digital screens, to adapt Steyerl's (2017, 106) critique of computer games, 'are not only playgrounds for free choice, but also training grounds for habits. They rehearse certain response patterns and create muscle memory.' As Lütticken (2013, 159) laments, is 'there even a subject behind these acts, or just a distended subjectivity modulated by the flow of images?' The dilation of such flows, opening up the digital-visual interface to the contingencies of its folds and haptically smooth space, its interference patterns and visual and sonic vibrations, is an opening of an 'outside' inside the image-machine that I see as my form of visual resistance.

6. Conclusion: What Moves Us Still

What does resistance look like in the era of ubiquitous computation? How does control work on and through the digital screen, and what does this mean for the kinds of visual activism called for by Mirzoeff (2016, 293), 'the interaction of pixels and actions to make change'? These are the questions that have animated my creative practice, and moved me to investigate the interface and its vibrations as a time-space of disrupting the visual operations of control. If the screen is the scene of a patterning of light whose affective force incites an interactivity to augment and sustain the data flows of informational capitalism, then the interface as the turbulent encounter of, and with, these flows can be seen as an uncertain event, a vibrational moment rather than temporary stabilisation, whose resonances may yet move us to 'actions to make change.'

The modal form of this conclusion is instructive, for the question of agency, as the will and capacity for action, shadows the political concerns and desires of my creative work. A thesis whose questions were formulated as Zucotti Park near Wall St was being occupied, in the name of the 99 percent reclaiming their agency from capitalism's plutocracy, reaches its conclusion in the summer of Trump, whose racist populism and cult of the strong leader is, in effect, a negation of everything that the Occupy movement appeared to represent. This is to say that my creative work, to which I looked in order to release my own sense of blocked agency, has been undertaken during an extended political 'moment' of deepening crisis for the progressive Left.

When 'take back control' ('of our country', 'of our borders') becomes a dominant meme of politics, the urgency of confronting the operations of control is not only ever more pressing but ever more challenging, not least artistically. As Goodman (2012, 194) says, it 'is essential, therefore, to get things in perspective.' In paying attention to the the micropolitics of frequency as he calls it, Goodman (2012, 194) warns against 'grand claims regarding the

spontaneous politicality of the so-called emergent creativity of the multitude.' For as he (Goodman 2012, 194) emphasises, '[e]xperiments with responses to frequencies, textures, rhythms, and amplitudes render the divergence of control and becoming ever diminishing.'

There is a broader context too with respect to the movement of my creative work in response to the digital visuality of control, and that is the real subsumption of the visual by computational capitalism, identified by Franklin (2011), which itself can be linked to the subsumption of art as a neoliberal aesthetic (Bishop 2012; Osborne 2013; McKee 2016). I can do no more than gesture to this here, but such a context is significant when it comes to reflecting on my creative process and, for want of a less grand term, my political progress. As Ngai (2005, 3) concludes, in her wonderful account of the ugly feelings seemingly associated with artistic production in the midst of neoliberal capitalism:

> The evidence here would suggest that the very effort of thinking the aesthetic and political together - a task whose urgency seems to increase in proportion to its difficulty in a increasingly anti-utopian and functionally differentiated society - is a prime occasion for ugly feelings.

Her discussion of these ugly feelings, among them envy, anxiety, paranoia and irritation, is concerned with the 'negative affects that read the predicaments posed by a general state of obstructed agency with respect to other human actors or to the social as such'; in other words, 'situations of passivity' (Ngai 2005, 3). Crucially, these 'dysphoric affects often seem to be the psychic fuel on which capitalist society runs' (Ngai 2005, 3).

As Bishop (2016) notes, in her critique of the ideology of art as social practice which has characterised much artistic production in the era of neoliberalism, '[i]n retrospect, it does seem that so much art of the 2000s […] was suffused in melancholic resignation resulting from the failed anti-war protests of 2003, the unstoppable march of neoliberalism, and a sense of political impasse.' My own ugly feelings of 'obstructed agency', then, which prompted my turn to visual

forms of creative expression to engage with the problems of control in the first place, have themselves risked being heightened in the 'situations of passivity' induced by the real subsumption of visuality and aesthetics, and the 'ugly' rightward turn of politics in recent years. At the same time, I am aware that in pushing my photographic and video work to the 'edge of representation', I am doing so from a privileged positioning in hierarchies (of gender, race, sexuality and class) in which the question of 'feeling represented' has never arisen. And this during a political moment when the Black Lives Matter movement has insisted on visibility and self-representation as among its most urgent political energies for those who are not only discarded but assassinated by the 'system'.

Compounding the feelings of 'obstructed agency' are those of political irrelevance, if not counter-productivity. What does it mean to embrace a visuality of abstraction, itself the operation of capitalism, at a time when the claims for dignity and humanity through self-representation by those denied it are being made with renewed vigour? Mirzoeff (2017), in relation to whose proposal for a renewal of visual activism I have situated my own practice, continues to insist on a reclaiming of representation, and in his most recent work highlights the importance of creating spaces for envisioned liberation, spaces 'where we catch a glimpse of the society that is to come.' As he (Mirzoeff 2017) urges:

> I want a space in which to appear—whether an institution or public space— that doesn't reproduce white supremacy, that doesn't represent a prison, in which there isn't expropriated labor, there isn't extinction, and there isn't genocide. What would that look like?

Balsom reminds us that 'before romanticizing the escape of invisibility, we must remember that to be invisible is also to be cast out of the body politic, into the precariousness of ungrievable life.' She (Balsom 2017, italics in original) calls for a return to visual practices that enable 'a form of *thinking with appearances* that depends simultaneously on the image's ties to phenomenal reality and the image's differences from it.' 'The appearances of the world need our care more than our suspicion', she (Balsom 2017) insists.

Such calls for a return to representation, whether representing the world as it is or the world as it could be, take place within a larger context of artistic activism unleashed, in part, by the Occupy movement. A thorough review of the complex reordering of relations between art and activism in the six years since the Zucotti park occupation is beyond the scope of my own project. But what the extensive literature on this reordering suggests is that art's liberatory potential persists (McKee 2016; Sholette 2016; Shukaitis 2016; Thompson 2015; Roberts 2015; Léger 2013; Demos 2013; Mitchell et al. 2013). Assessments of where this potential is to be found differ, but McKee (2016, 238) is persuasive in his insistence that artistic practices be embedded in the 'living fabric of collective political struggle'.

I see my own practice as a strand of this 'living fabric', albeit one with a different texture to the politically declarative and counter-representational visual activism that has characterised political struggle in the post-Occupy era. For such activism and its radical deployments of the image must reckon with the computational ontology of the image and its functions within an infrastructure of data aggregation and analysis, whose imperatives are corporate profit and state control. For Berlant (2016, 393), 'infrastructure is defined by the movement or patterning of social form. It is the living mediation of what organizes life: the lifeworld of structure.' The image-machine, being the infrastructure that organises any digitally-based visual activism, is the lifeworld of contemporary social control, whose movements and patterning of data expose the limits of visual-political representation. Not only has informatisation rendered the workings of power less representable than ever, it has also unsettled the subject positions on which political claims to representation have long rested.

My visual practice, then, as a form of resistance to the operations of control, has looked not to representation as the site of struggle, but to circulation, and the unstable movements within the image-machine itself. Between the subject-

object positions that conventionally characterise relations of the image, between the looking subject and looked-at screen, is the digital-visual interface as contingent boundary condition. Experiencing this boundary condition is to sense not only the insistent demands of the circulation-image which lures us as visual subjects to interact with visual objects (by clicking, swiping and tapping the screen) in order to keep the data moving. It is to feel also the openness and indeterminacy of the interface itself, its generative potential.

In the image-machine of control, operating through the circulation and capture of data, the interface is a time-space where this rhythm of circulation and capture is necessarily unstable, susceptible to arrhythmic vibrations and patterns. I have worked to generate such vibrations and patterns, in part through the folds of photomontage to slow down the tempo of the circulation-image of control and through the haptic qualities of close-up photography to get in touch with the smooth space of the interface and its potential for deterritorialised looking. My creative practice has also worked with the interference patterns of video and vibrational forces of sound to set up counter-rhythms that resonate, not with capitalism's imperative to circulate and capture, but with a moving stillness that vibrates with the potential of other movements, other directions. I have sought different resonances at the digital-visual interface that may yet release energies for change.

The interface is a super-positioning, in which everything is moving, unsettling my own positions of privilege as much as the claims to representation based on identitarian positions that are themselves vulnerable to control's capture. Through this sense of super-positioning, the vibrational politics of the interface unsettles the fixity of position and reliability of movement tracking on which control relies, and on which its self-image as 'being in control' is predicated. If the political task remains to not merely see the world differently but to act to change it, the interface as that which still moves is an unsettling, and thus useful, place to start.

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