CHAPTER 6

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The Material Impact of 'the Digital' in Counter-Archival Video Works by Hito Steyerl and Brenda Lien

Annie Ring

University College London

By 2021, more than six billion people worldwide owned Internet-enabled devices such as smartphones. The core operations of states and global economies have moved online over the past few years, and everyday lives are increasingly lived on the Internet, not least since the Covid-19 lockdowns beginning in 2020. In the same period, the Internet and networked technologies have tended to be thought about through corporate metaphors invoking immateriality. The Internet continues to be known as 'the web', data storage is referred to as existing in a remote 'Cloud', and the metaphor of the 'digital' itself has become ubiquitous for talking about all kinds of computational processes and artefacts without reference to their effects in the world. Such language encourages a focus on surface abstraction, making it difficult to picture the material impact networked technologies and their radically expanded uses are having on bodies and environments. Can it be that these phenomena do no more than glisten like webs or clouds, and glide over the life-forms present here in the world?

On the contrary, the radical changes caused by networked technologies have very material effects on lived experiences and on the planet.[1] The most world-changing technological event was the inception of the Internet, and it has led to such disturbing phenomena as remote drone warfare, the monetisation of mined personal data, and the presence of surveillant smart machines in the home, all of which risk abuse. In response to the ubiquity and purported immateriality of Internet cultures, contemporary screen artists Hito Steyerl and Brenda Lien have both deployed aesthetic strategies aimed at a new defamiliarisation, to reveal and explore the material impacts of new technologies. Repurposing some of the most familiar content and interfaces of the contemporary Internet, the citational screen works by these artists draw attention to the computational practices of our present day that are creating real but often hidden impacts on lives, bodies, and environments.

In this chapter, I analyse video works by Steyerl and Lien in which portrayals of apparently abstract technological processes are intruded upon by surprising images

of materiality. Abstraction is especially important to Steyerl's installation *Liquidity Inc.* (2014), about a high-frequency trader who turned wrestling commentator after the Global Financial Crisis of 2008. In the installation, Steyerl works as both artist and critic, at once displaying and analysing the pleasures associated with the Internet as an abstract space of play. The negative underside of today's pleasurable abstractions becomes visible when Steyerl juxtaposes animated reproductions of computer interfaces with spoof maps of conflict zones, and images of floods and overwhelming waves. Through its citational montage, the installation makes visible the harms that are washed out of sight by the smooth CGI world that envelops viewers like a beautiful, mind-numbing wave. Below, I interpret Steyerl's *Liquidity Inc.* with reference to writing by Lisa Purse on the excessive aesthetic smoothness of the digital composite image. This way of looking at the piece necessitates a return to Bertolt Brecht's theory of defamiliarisation, which illuminates how Steyerl's fragmentary citational style productively alienates viewers from unfelt complicity with the violent phenomena of our Internet age.

I then turn to the video artist and composer Brenda Lien and her video *Call of Comfort* (2018), which was shown at animation and documentary festivals as well as online. The final part of a trilogy released in 2016–18, Lien's video attends more closely than Steyerl's installation to the pain and discomfort experienced by bodies, both human and animal, in relation to the Internet's soothing imagery and hidden data-mining processes. Lien's trilogy as a whole is concerned with the extremes of objectification the Internet makes possible, particularly the objectification of women and animals, as viewers see women, cats, and men in states of injury and painful training, alongside images and tropes familiar from standard online interfaces. I analyse *Call of Comfort* in terms provided by Donna Haraway's work on the *location* of knowledge about technology. Haraway is interested in 'situated knowledges', which permit more ethical ways of assessing technology than is possible from the position she terms the 'astral', a distant plane of vision which I think here in terms of contemporary 'Cloud' computing.[2] Reading Lien's video through Haraway's concepts of situated knowledge and entangled 'trouble' draws out the connected subjectivity explored in the video. It also troubles ways of watching it with a distantly critical gaze, as some viewers may be tempted to in traditional gallery spaces.

Both Steyerl and Lien work counter-archivally, as they cite and spoof ubiquitous Internet interfaces such as search results pages and data-sacrificing 'consent' screens. They both appropriate popular memes and commercial video formats and set them alongside live-action and CGI footage related to their chosen topics of new technologies, finance, and/or data mining. In Steyerl's installation, repurposed images appear from classic animated film and even famous artworks, while Lien turns to computer games and memes to explore the pain and pleasure of life online. These citational video-works render the content of today's 'digital' archives vulnerable to ethical examination, which is at once connected, as a form of 'situated knowledge', and ambivalent. Neither artist simply advocates switching off our screens and withdrawing into an apparently pure life offline, cut off from

the webs and threads of Internet connectivity. Therefore, through their challenging aesthetic effects, these works pose questions that are problematically absent from the abstractions of commercial language about the Internet. More, their methods of appropriation and re-use raise the topic of the interdependence and even complicity of visual arts with contemporary technologies, allowing, so I argue, for a productively entangled interpretation.

The Material Life of Technology

In this so-called 'digital' age, there is a perception that both the Internet, and the data it makes available for misuse by governments and surveillance companies around the world, operate in an abstract, immaterial sphere. Data are said to be stored in a space known by its corporate name, the 'Cloud' and the Internet has long been described euphemistically as 'the web', metaphors invoking porosity, flexibility, and insubstantiality rather than material consequences in a world utterly changed by its developing technologies. The metaphor of 'the digital' itself is misleading, too. 'Digital' refers simply to linear numerical functions of any kind, and as such has little to do with the specific ways technologies operate and have effects.

Leading theorists of technology have been predicting the increased prevalence of immaterial thinking since the beginning of the Internet age. In the 'Cyborg Manifesto' (1985), Donna Haraway anticipated that human bodies would themselves take on more immaterial qualities, changing from the 'material and opaque' bodies of the analogue age to the ethereal cyborg body, implanted with technological prostheses.[3] N. Katherine Hayles developed Haraway's idea, arguing that embodied thinking was neglected in a world of 0's and 1's: while it was aided and accompanied by more effective machines, the human body in the burgeoning age of the Internet was being philosophically neglected in favour of a fascination with human and non-human cognition.[4] With the rise of the participatory Internet, Web 2.0, and the emergence of social media interaction on Myspace and MSN Messenger, Aylish Wood argued that the important embodied quality of these new media was still not being recognised.[5]

Despite early technological optimism, life in the age of the Internet continued to be highly unequal, and there is a wealth of recent work concerned with the complicity of digital technologies with the persistence of inequality and resulting material harm to people's lives, bodies, and futures. Safiya Noble writes that the Internet 'is wholly material in all of its qualities', moreover 'our experiences with it are as real as any other aspect of life'.[6] Noble's insistence on the material character of the Internet comes from her investigation of Google's search algorithms, whose racist coding means that different groups are represented very differently online, and she argues persuasively that such algorithmic biases lead to a perpetuation of discrimination in the world beyond the screen. Meanwhile, Cathy O'Neil and Virginia Eubanks have examined how the exploitation of big data harms data subjects differently based on their social positionality, in terms of class and global geography, among other factors.[7] With regard to the gendered impacts of

big data, Caroline Criado Perez has revealed bias in the way data are applied in heart medication and car safety-testing, creating dangerously different outcomes dependent on patients' and drivers' gender.[8]

These harms done by the apparently immaterial phenomena of the Internet and data-analytics are happening alongside material harms to the environment. Networked devices stay switched on 24/7, and research by Kaminska has found that the 'ICT sector [is] using 50 per cent more energy than global aviation', and the production of personal networked devices has a significant carbon footprint.[9] These devices are made of substances mined in unacceptable working conditions. The materiality suggested by data-*mining* is meaningful too, in the sense that the large quantities of data produced by networked technology use are stored and processed in vast server farms made from silicon, steel, and glass, containing thousands of computers powered by fossil fuels. Data centres are connected by heavy fibre-optic cables laid under the ocean, and they are always on, contributing significantly to climate change as well as damaging local environments, entrenching harmful colonial and military legacies, rural marginalization, and post-industrial decline.[10]

Further inequality exists in the distribution of networked technology's impact on the planet, with those living in poorer parts of the world already most likely to experience the worst effects of climate breakdown. By contrast, new technologies have usually been privatised phenomena, and as such they concentrate power into the hands of a tiny group of companies such as Google and Amazon, whose unstoppable monopolies enjoy low regulation and non-existent taxation. The data those companies skim from Internet use become the material which AIs, owned by those same companies, experiment on. Cognising machines learn quickly when they have access to large datasets, so their owners have been capable of developing sophisticated machine cognition without incurring any cost.

Metaphors such as the 'web', the 'Cloud', and the 'digital' obscure these tangible ways in which networked technologies materially impact communities and exacerbate inequalities. In the face of the combined invisibility and inevitability of tech users' implication in the 'digital', with all the harms and abuses that implies, more material viewpoints, concerned with the way technologies are connected to living bodies and environments, are extremely valuable. To think the body and the natural world back into the context of our contemporary life can make conscious what is happening in this era of new media, which Wendy Hui Kyong Chun rightly views as being designed for 'habitual' rather than fully conscious use. Entangled with these technologies through habitual consumption, Chun argues, our bodies become 'archives' of the networked world, holding stores of unacknowledged behaviours of complicity with the hidden material harms of our 'digital' age.[11] Countering such forgetful complicity, with its dangers of abstracted domination, come the counter-archival video works of Hito Steyerl and Brenda Lien. These videos share a counter-archival technique of mixed-media citation, aimed at encouraging more conscious modes of using and interacting with networked technologies.

Against Smoothness: Fragmentary Materiality in *Liquidity Inc.* (Hito Steyerl, 2014)

What can progressive filmmaking look like in the era of computerised 'film' production? The computer-generated composite images that replaced analogue film may have seemed to signify a radical break from Hollywood-style cinema, with its well-sutured sequences of cuts that provide soothing narrative and visual continuities. Yet, as Lisa Purse writes, '[d]igital compositing [...] is distinguished from its predecessor by its capacity to erase edge bleed and other indicators of co-presence at pixel level'.[12] 'Digital' video benefits from the technical capacities of computer editing to smooth the appearance of edges in an image, caused for instance by superimposed material. Free of the more rudimentary editing techniques of earlier analogue film, the digital composite image is even more capable than analogue of eliding the cuts and shifts of perspective between shots.

Thus, contemporary 'digital' filmmaking does not guarantee more productively fragmented aesthetics, which could help viewers adopt critical perspectives on today's smoothly mediated realities. Moreover, no matter how participatory today's Internet is, it is also defined by visual formats that leave little interstitial space for different ways of seeing. Hito Steyerl's video installations pose a challenge to the excessive seamlessness of these contemporary visual cultures. In *Liquidity Inc.*, she explores the affordances of digital video to disrupt the problematic smoothness of current visual formats, creating mixed montages of found footage, live action, and CGI in citational montages with jarring, rather than suturing, effects. These citational montages are designed to prompt viewers to analyse the current regimes of techno-capitalism that tend to appear inevitable, and so render other options invisible or un-picture-able too.

Liquidity Inc., a thirty-minute-long single-channel video installation, was released in 2014 for gallery display. Its title cites Derrida's theoretical text *Limited Inc.* (1988), in which he argues that language is subject to 'nonclosure', in the sense that it can never be comfortingly fixed, because the coordinates for its meaning are context dependent.[13] In line with Derrida's idea of linguistic nonclosure, Steyerl's citational mixed-footage video explores the threshold and limit-zones where contemporary knowledge is constructed. Like others of Steyerl's works, *Liquidity Inc.* has the character of a collage. Viewers see a wild mixing of both live action and computer-generated footage, the latter made up of animated mock-ups of common television, smartphone, and Internet interfaces such as weather reports and the smartphone lock screen. The installation's opening theme is the 'digital' economy. This economic era began with the rise of big tech companies, like Microsoft and Amazon, that boomed in the dotcom bubble of the 1990s, and it continued through the financial crisis of 2008 to boom again in the mid-2000s with the rise of big data and the big profits they make available to a small number of corporations. From that starting point, the installation takes in the inception of 'Cloud' computing and draws connections between technologies and military power throughout the twentieth century and into the present day. As the titular theme indicates, the material qualities of water guide the installation's aesthetic exploration of these 'digital' histories and their material impacts.

The installation's plot presents a parable of the Global Financial Crisis of 2008. Its first section tells the story of Jacob Wood, a financial analyst who lost his job during the crisis and ensuing recession and became a professional mixed martial arts (MMA) commentator. In telling Jacob's story, the installation articulates a fascinating code of conduct regarding the type of subjectivity required in the post-crisis age of 'liquid modernity'.[14] Viewers hear this code communicated at the start of the installation in words quoted from Bruce Lee's advice to martial artists to 'be like water'. We hear Lee advising them to adapt, as water does, to the shape of any container. While Lee's voice intones the mantra of total flexibility, a digital desktop background is gradually replaced with the computer-generated image of a rippling sea (Figure 6.1).

Fig. 6.1. A defamiliarised desktop reveals rippling water as Bruce Lee intones a code of conduct for total flexibility, still from *Liquidity Inc.*, dir. by Hito Steyerl (Germany, 2014). This and all subsequent images from this installation are CC 4.0 Hito Steyerl, courtesy of the artist, Andrew Kreps Gallery, New York, and Esther Schipper, Berlin/Paris/Seoul.

The sea in the new image ripples realistically, but at the same time it is being generated via clicks of a visible cursor. In this opening montage, the video shows on several levels how a 'reality' can be created: this is one in which subjectivity becomes more entrepreneurial, or more liquid, while the container (the financial world) supplies less and less security. It is also a troubling 'reality' in which the appearance of a natural environment can be created through computerised manipulation of a few pixels.

The installation abruptly cuts to the next scene, the cut accompanied by jerking sounds of audio recordings gone wrong. Viewers see a montage of the build-up to an MMA fight, at times in double-projection (Figure 6.2). Women in bikinis warm the audience up for the match which will involve high impact punching between

players. MMA is based on ancient Asian cage fighting traditions and its players are trained to keep moving in order to win. A full contact sport, MMA matches are won by force, and are not staged like in the physical theatre of WWF Wrestling, for instance. To win, a competitor has to fight their opponent to the ground, causing physical injury in order to come out on top. Echoing the physical force required by MMA fighting, Steyerl introduces a new image into her sequence in the arena, using the screen in the backdrop to project footage she filmed of huge waves crashing onto a beach in California. The commentators in bikinis look vulnerable among the fully-dressed spectators; with the image of the overwhelming wave looming behind them, that impression of vulnerability is increased. Moreover, this sense of vulnerability is linked to the theme of global economies underpinning the installation as a whole.

Fig. 6.2. A mix of footage appears in double projection in the wrestling hall sequence, still from *Liquidity Inc.*, dir. by Steyerl (Germany, 2014).

At the end of this montage, the excited voices of the crowd fade, and Jacob's voiceover narrates the collapse of Lehman Brothers on a day he was entering a fight. He lost his job the following morning and moved on to work in MMA. The financial crash had an unmistakable impact on the life of this former white-collar worker, an impact reflected in the form of the huge crashing waves. The wave footage indeed carries over into the next sequence. This shows a re-enactment of Jacob setting up a company, which takes on the same name as Steyerl's installation. The 'Liquidity Inc' company's headed letter paper is shown in an animation of water bubbling and swelling, making the screen of the installation appear as if in 3D (Figure 6.3). Meanwhile, a feeling of dread builds as Jacob tells the story of the financial crisis.

Jacob recalls how 'there were purges every year because of the economy'. The language of 'purges' invokes the violence committed by Stalin in the early

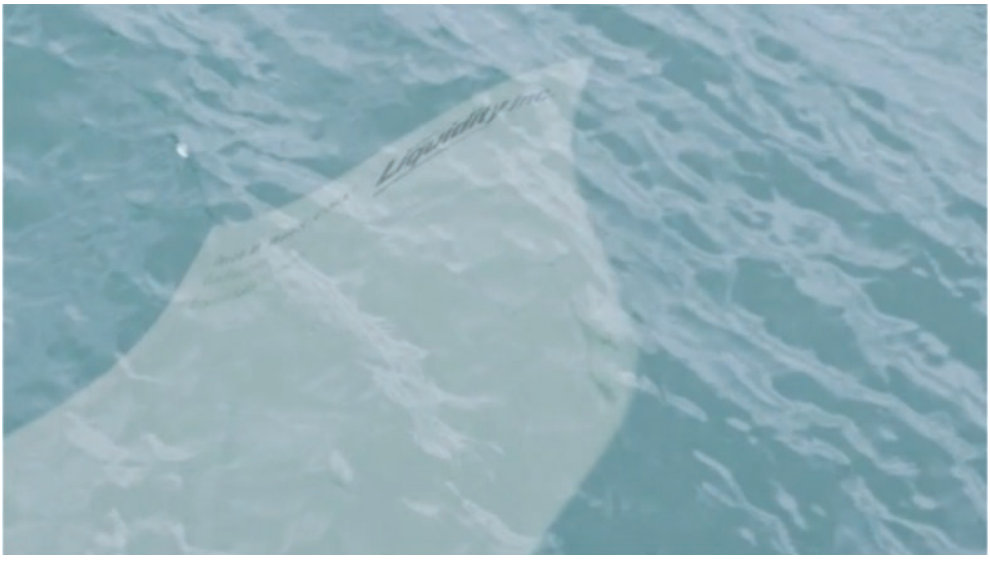

Fig. 6.3. The computer-generated image bulges with the hapticity of water, still from *Liquidity Inc.*, dir. by Steyerl (Germany, 2014).

twentieth century. However, Jacob is describing redundancies made in the wake of the Global Financial Crisis, firing practices which are now built into the structure of capitalism's current flexible forms. Jacob and his colleagues in the financial industry needed to become ultra-flexible, like the liquidity in the name of his new company. He speaks about an entrepreneurial, post-crisis subject who needs to be 'shockproof', and adaptable to the market with the same fluidity that Lee advocated: 'you don't wanna be frozen. That's the kiss of death'. The montage now returns to the MMA match, showing the fighters warming up. They rehearse the constant, fluid movement they will perform together in the fight, never staying still or 'freezing'.

The theme of a fluid, flexible subject continues through the remainder of the installation. In it, Steyerl seeks to link the exhaustion of the entrepreneurial subject, who risks going under in the world of speculative, high-speed finance, to global geopolitics. The installation's middle section begins to articulate these links, tracing a relationship between an entrepreneurial post-crisis capitalism — which is ironically inflexible in the entrenched forms of precarity it now employs as a defining norm — and images of harm to bodies. After the MMA sequences, a rough animation shows graph figures being dropped into water as if falling from aeroplanes, or placed there by a large machinic hand.

The graph-figures have the shape of human bodies bobbing just underwater (Figure 6.4), seemingly the right way up — though the location of ground is unclear in the image. They appear to bounce on what could be the bottom of a pool or an upturned sky. These figures are not linked in the piece to any particular national or ideological context. Therefore, the sequence represents a generic mass of people, their graph forms recalling machine vision, as well as the linked techniques of

Fig. 6.4. Graph-bodies bobbing in water accompanied by the haunting notification: 'budget cancelled', still from *Liquidity Inc.*, dir. by Steyerl (Germany, 2014).

psychometric surveillance which now map out a person's psychological contours for data-mining, without accounting for effects of this dataveillance on the mapped subject's individual life.

When a notification box pops up on the bottom screen, viewers see an email has arrived (from Steyerl herself) announcing a budget is being cancelled. The notification is a citation of a familiar format from computer desktops. At the same time, the cancellation of a budget generates a sense of threat to accompany the non-specific images of graph-people bobbing helplessly in water. This worrying yet familiar-feeling animation is explained more as the installation returns to Jacob's story, and he recounts how he would open his computer daily and see the companies of the dotcom boom growing and attracting more investment. The workers who needed to remain 'liquid' and flexible did not benefit from the boom. This inequality is illustrated when the camera's distance from Jacob's desk grows and his bed is revealed to be just offscreen and very close to his workspace, in a manner redolent of the home-working conditions some people benefited (and suffered) from during the Covid-19 lockdowns. Through this narrative sequencing, viewers are guided to link the graph-bodies to the story of people losing their work in the dotcom industries, which boomed, then faltered in the 2008 crisis, and re-emerged into more profitable — because more insecure — work contexts.

This story at the start of the installation is disquieting but still tells a tale of relative safety for Jacob, who has found a way of subsisting after he was purged from his job when the dotcom bubble burst. However, the sense of a disaster which has built up through the overwhelming wave footage and drowning animation comes crashing in in the second section. The installation returns to the MMA arena, but now, Steyerl's California surf-wave footage is replaced with television

footage of a terrible storm, and of freak weather events: a tsunami, a tornado, floods. This footage of catastrophic weather then travels from the screen at the arena to a smartphone in the next sequence, lying on Jacob's desk, and later onto his television. The footage also appears within a mock-up of a Tumblr page, which shows search results for the hashtag #Hokusai. Steyerl edited the classic nineteenth-century woodblock print *Great Wave Off Kanagawa* by Katsushika Hokusai to show it blinking in rainbow colours like a stock Internet image ready to be copied and re-circulated ad infinitum. The installation's threatening mood continues as these Hokusai rip-offs appear and reappear alongside the frame of the raging tornado.

Here, the installation's techniques of montage and appropriation recall Bertolt Brecht's *Verfremdungseffekt* [alienation effect], his political and aesthetic theory that sought to break artistic productions down into productively fragmented form. Brechtian, political aesthetics went radically against the *Gesamtkunstwerk* [total work of art], an emotionally-consuming production, such as Wagner introduced to the German and international stage in the second half of the nineteenth century in Europe, whose aesthetic conventions encouraged the spectator to relax and forget themselves and their contexts. For Brecht, the total artwork is an ideological fantasy that covers up political tensions; in its place, he advocated for a radical separation of the elements of the theatrical production, so that it no longer held its audiences in enthralled and anaesthetised states, but instead woke them up to the political contradictions defining their lives.[15] Fragmenting the production involved a use of non-naturalistic acting, and a deconstruction of standard theatrical practice, for instance by showing rehearsals as part of a performance, and through the excessive, destabilising repetition of words and events. Such fragmentation was used politically in Brecht's theories to generate critical understanding rather than passive consumption of performance.

As the treatment of the Hokusai print implies, nothing is sacred in the installation's techniques of a new post-Brechtian defamiliarisation, even as it addresses such disastrous topics as the Global Financial Crisis and the climate collapse of the twenty-first century. In the next sequence of the installation, a weatherman appears in a balaclava, suggesting he belongs to the black-bloc or *Autonomen* protest groups, as well as an owl t-shirt designed to prevent machine-vision from reading his face. He stands in this disguise before a mocked-up map of a horrifying new world order, in which disturbing new sovereignties are foretold. This spoof version of the geopolitical events since the turn of the millennium includes a Middle East where arrows point at random to places labelled with 'collapsed state', 'conquered insurgent state', and 'stateless people'. The passage reminds viewers that the financial crisis, thematised in the first part of the installation, happened soon after the second Gulf War, which heralded another kind of global instability, alongside the development of advanced military technologies.

These new technologies are invoked by the large black and white label 'The Cloud', which enters the frame as a force overseeing a scene of geopolitical chaos shown on the map. The weather reporter's computer-generated voice reports that the Cloud is causing problems, because 'huge quantities of data are raining down

from their cloud storage'. His words appear in large speech bubbles, producing a comic effect, as the spoof weather report gives an outlandishly material description of the effects new technologies are having in the world. While the metaphor of the 'Cloud' evokes an evanescent and inoffensive phenomenon, here it is depicted as the overarching cause of the geopolitical and climate disasters befalling the spoof world map. The same 'Cloud' is also linked in the weatherman's script to self-improvement discourses based on the idea that individual behaviour can improve the state of the world. Apparently, the viewer can control the weather with their mind. Surely then, it is up to the entrepreneurial subjects watching the report to solve the crisis being mapped out before them.

The third section of the installation travels back earlier in the history of modern warfare, to take in the ripple effects of the Vietnam war. The voiceover reveals that Jacob came to the USA in 1975 as part of the tragic 'Operation Baby Lift', an airlift authorised by President Ford to bring babies from orphanages in Vietnam to the US for adoption. Hundreds of the babies died when one of the planes crashed, just after take-off, into the sea near Saigon. As a voiceover narrates this background to Jacob's story, opaque silhouettes are shown plummeting into a choppy sea. This sequence, along with the voiceover about the deaths of the orphaned babies from Saigon, invokes the Vietnam War's legacy, the many people it killed, and the repercussions for those like Jacob who live with the loss of family members and displacement. The sequence is followed by more reports from the weatherman, who is shown dancing to jarringly upbeat techno music, and from Steyerl's daughter, who appears in another anti-machine vision owl t-shirt.

The final sequences of the installation show further mixed footage, as the weatherman makes more outlandish predictions about global weather and politics forecasts. The theme of drowning continues as Steyerl introduces cut-out footage of the animated figure Kaonashi/NoFace from Hayao Miyazaki's *Spirited Away* (2001). In Miyazaki's original animation, Kaonashi represents a wild mastery of energy; a silent figure who glides around formidably in the world outside, when Kaonashi enters the bath-house he begins thrashing around, then upon leaving the bath-house, returns to calm. In Steyerl's repurposing of the figure, however, Kaonashi is not the master of alternating stillness and powerful splashing; rather, he is being washed helplessly underwater.

The waves that have been building up throughout the video overwhelm Kaonashi in this graphic montage, as his figure is overlaid with images of waves that threaten to pull him under (Figure 6.5). The image of drowning is layered into a collage of more email notifications and common Internet-era symbols of a camera and a smiley. The meaning of this citational montage is not immediately clear. It follows on from the anxiety-inducing weather report, and the story of the drowned Vietnamese orphans. Through its rhetorics of mixing and cutting, the sequence links the drowning of the usually sovereign and masterful anime figure to the geopolitical disasters indicated on the map.

The viewer is left wondering about the precise nature of the connection between these images of water: of Hokusai's paintings of the great wave, of Kaonashi, and

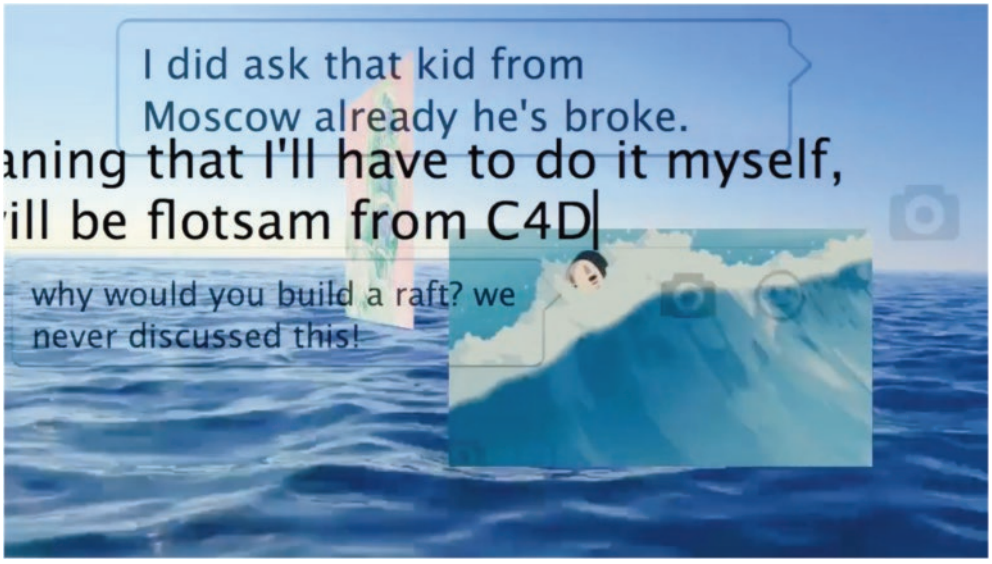

Fig. 6.5. The layered montage shows a repurposed Kaonashi not splashing but drowning, still from *Liquidity Inc.*, dir. by Steyerl (Germany, 2014).

of the MMA fights. They might ask: why does Steyerl's daughter appear late in the video? This representative of a new generation summons Walter Benjamin and the *Angelus Novus*, the figure from Paul Klee's oil and watercolour print of 1920, who observes the disasters of history unfolding as he is blown irrevocably into the future by strong winds.[16] The montage of citations in Steyerl's installation works to connect apparently disparate events from the histories of war, the climate, and finance. The collage confronts viewers, moreover, with images of extreme materiality: the crashing waves, the bodies that punch and are punched in the MMA arena, the images of bodies tumbling and drowning. We see these material images amid tropes familiar from the surface world of the Internet, that Cloud phenomenon into which all history threatens to disappear as just so many results from a hashtag search.

A present-day example of Brecht's alienation effect, the installation seeks to generate critical understanding of the smoothness new technologies create in the online world and even in the aesthetic forms of computerised filmmaking, such as Purse analysed. Against the smooth flow of water, the installation employs its rough and choppy montage, defamiliarising well-known machine interfaces, from smartphones, weather reports, Google searches, and email platforms, and placing them within a collage-narrative of fictional and historic disasters. Thematically, the liquidity of the installation's title shifts in meaning, as the topic moves from the injunction to be a flexible, entrepreneurial subject, to the memory of the deaths of children in the Vietnam War. By bringing these disparate topics together in one flood of images, Steyerl attempts to divert, or, in the words of the Situationist International, *détourner* the metaphor of liquidity, rerouting it from a positive aspiration to a metaphor that can reveal the complicity between global finance, military power and new technologies. Moreover, the repeated citation of Internet

interfaces and demonstrative showing of hardware such as television screens and smartphones suggests that the factor connecting all these phenomena is technology; or rather, the interest of the finance and technology companies whose profits are sourced from speculative economics and data-extraction. These are immaterial sources of wealth, and, at the same time, they are based on the extraction of lived experience, as well as being implicated in the fates of their less powerful players, like Jacob Wood. These players are then blamed for their failure in the game of financial speculation, exhorted to be more entrepreneurial, and encouraged to reinvent themselves constantly if they are to survive materially in an extremely turbulent future.

Making Dataveillance Palpable: *Call of Comfort* (Brenda Lien, 2018)

Like Steyerl, filmmaker and composer Brenda Lien employs a mixed-footage approach in her work, bringing in live-action drama, CGI, and original animations, and reproducing familiar images and tropes from the participatory Internet. She also makes original vocal and instrumental soundtracks to accompany her videos' citational formats. One of Lien's most substantial works to date is her *Call of...* video trilogy, released in 2016–18, which investigates the impact of the Internet's personalised interpellations to users to give up data in order to improve themselves and their experiences on the Internet. The trilogy cites such familiar content as influencer videos, cat memes, and the infamous 'consent' screen that invites technology users to agree to delicious-sounding 'cookies' (another misleadingly harmless metaphor) in return for a promise of more relevant advertising. Citational versions of this content appear in collages that include imagery as diverse and shocking as rotoscoped animations of famous cat memes being mutilated, and slow-motion close-ups of male genitalia bleeding. The trilogy's layered richness and Lien's use of bright neon colour and lighting lend its scenarios heightened, visceral qualities.

My focus here is on the final video in the trilogy, *Call of Comfort* (2018), a piece of eight and a half minutes, which won the German Short Film Award in 2018. This English-language short depicts a sci-fi world where people are fitted with implants that surveil their bodily and emotional state in real time. Lien mixes live-action footage in the piece with animations of spoof Internet interfaces and data centres, as well as close-up body shots. The combination makes palpable the exploitative data-mining practices to which Internet users consent when they go online. And yet the video's pretty and sensuous visual effects are confusing: Lien's Internet is a place of pleasure and pain at once; 'digital' images and data-extracting practices are both abstract *and* harmful to their users, who cannot withdraw from their ambivalent entanglement with technology.

The video opens with a flawless spoof of a YouTube advert purporting to come from a big data company. In the advert, a data-mining firm addresses itself to smaller businesses, asking: 'do you want to sell your product, service or ideology?' The spoof shows up how online advertising seeks to generate anxiety in business owners with lines such as: 'I master the new data economy: will you?' Like the entrepreneurial subject in Steyerl's video, the recipient of this advertisement is

exhorted to stay on their toes and keep up to date with a new economy based on data-trading. The main body of the video then consists of live-action scenes of technicians, who are giving 'treatments' to a patient, applying make-up that can purportedly mine emotional and psychographic data. These passages bring in a gender critique to the topic of data-mining: the material being painted onto the data-subject's skin can read facial expressions and extrapolate psychological and emotional states from them. They are also sold as beauty products, as part of an industry typically targeting women consumers.

The passage does not specify what the gender of the subject receiving the data-mining make-up is. Meanwhile, the choice of a Black actress to play one of the data-mining technicians brings in a further challenge to viewer expectations. The second technician seen is played by Yodit Tarikwa, who applies layers of data-mining 'make-up' to the face of the data-subject. Tarikwa adopts a tone at once soothing and deceptive, representing the voice of the data-mining practices that trap users into giving false consent to processes they can neither refuse nor control. Given the way current surveillance regimes subject Black people and other People of Colour to disproportionately high levels of surveillance, as explored by Noble, this reversal keeps Lien's own viewers on their toes. The sequence destabilizes expectations about which kinds of subject are operated on by surveillance, and who risks being co-opted into carrying out the operations of data-trading industry.

The practitioner played by Tarikwa explains that facial expressions say a lot about the subject's 'emotional, mental and physical condition', and these will all be monitored by the layer being applied to the skin, in order to generate an optimised experience of the Internet for the user — and to bring in the profits promised by the Datacore advert. In these sequences of the datafied body being irreparably modified, Lien's video sets up a fictional scenario in which the body is totally implanted with technological features, like the cyborg in Haraway's 'Manifesto', but without any of the liberating potential associated with that figure.[17]

Lien does all she can to make this scenario of datafication — or cyborgisation — palpable to the viewer. The data-mining implants are applied as if they were make-up, and they are painted directly onto the camera lens, such that the viewer takes on the perspective of the data-subject who is being operated on (Figure 6.6). Viewers are dazzled meanwhile with colour, for instance through the bright pink light that is shone into the data subject's eyes to check the sensor-lens implants are in place. This light almost blinds the viewer with mesmerising and image-blocking light from a miniature torch, recalling the eye-cutting sequence at the opening of *Un chien andalou* (Luis Buñuel, 1929), analysed by Lawrence Alexander in his chapter above, which frames spectators as complicit with classic film's violent cuts and splices — but using the newest videographic and CGI techniques. The screen also shimmers as if in response at each touch of the make-up/data-mining artist. The artist's touch, carried out with fingers, pads, and brushes, is presented as if the screen itself had a skin that responded to the touch of the data-mining technology. The message is that the human body here is yielding to the pleasurable experience of being pampered and, at the same time, to the high-profit extractions of

Fig. 6.6. Yodit Tarikwa plays a technician painting a layer of data-mining 'make-up' onto the viewing subject's face, still from *Call of Comfort*, dir. by Brenda Lien (Germany, 2018). This and all subsequent images from this film are printed by kind permission of Brenda Lien.

datamining.

The palpable touching of the face as screen, which is visualised in these sequences, mimes what technology users do more and more, namely, to touch sensitive, smart computing devices in order to operate them (and so be operated upon by them). Thus, as the second practitioner wipes off the viewer's current 'face mapping mask' and presses the ('organic') cotton wool ball in towards the camera, the screen glows with a purple pattern similar to that on the Datacore icon. Like under the pink light above, here, it is as if the data-subject's skin is made up of a network of data-points rather than veins and dermal layers. The screen as face is therefore shown to be enmeshed with data-gathering technologies. Unable to separate itself from that net, this skin-as-web yields to being touched. Here, the confusion of pleasure and pain in Lien's representation of the Internet is especially palpable. The shimmering of the screen in rainbow colours, pink, and gold even invokes a luxuriating of the body in the pleasures of the Internet, despite the horrendous surveillance implants that are being applied. The video thus makes palpable the experience of being surveilled through data-mining, and, at the same time, it places emphasis on pleasure through a script that repeats the idea of 'fluffiness', regarding the 'fluffy' blanket the agent comfortingly rubs her face against, as well as the 'fluffy' cotton wool, and 'this fluffy brush' used to apply even more data-mining 'make-up'.

The unseen protagonist does not relax, however, and more tension arises when a consent screen pops up, asking them to agree to an 'update', which involves relinquishing all their biometric information to Datacore (Figure 6.7). We momentarily see a drop-down view of the terms and conditions, a lengthy document informing

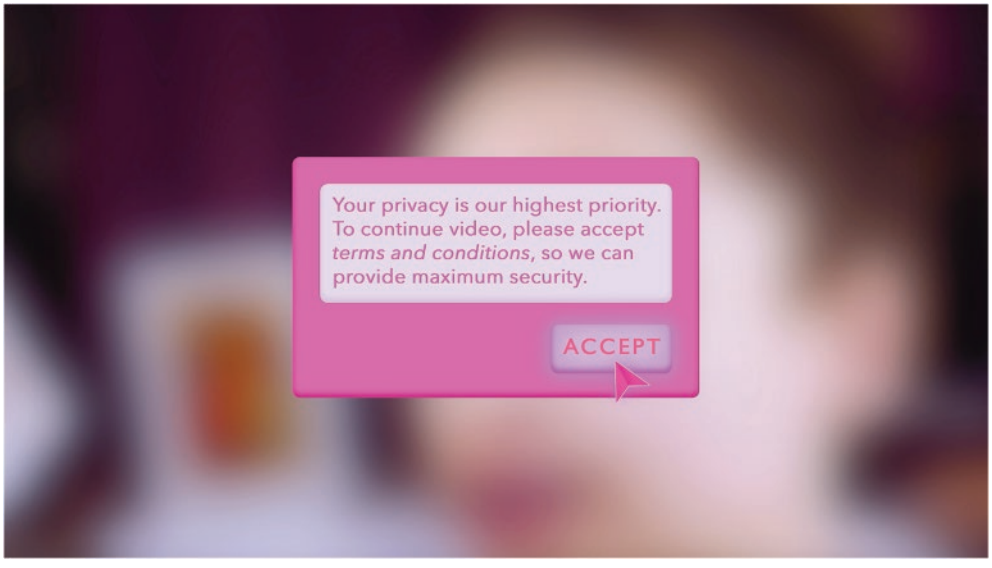

Fig. 6.7. A spoof 'consent' screen gives only one option, still from *Call of Comfort*, dir. by Lien (Germany, 2018).

the user that their data will be gathered by Google and other corporations. This is a spoof of the common consent screen, with its false promises that the user can take back sovereignty over their data by 'managing cookies' or 'requesting' apps do not track them. The lack of any option other than 'accept' in this spoof shows it is more difficult to withdraw from surveillance than online consent screens suggest. Lien's user character, behind the cursor, at first attempts not to accept the terms and conditions, and quickly receives a negative response to this decision from the machine. A jarring 'blonk' sound plays each time they attempt in vain to access messages, online shopping, and contacts.

Contact and sustenance, symbolised by familiar icons for the mailbox and the shopping trolley, are now behind a firewall that the user cannot pass without consenting to more surveillance. We see from the block screen that they cannot be part of 'the Community', as the online space is cosily called, unless they agree to the data-mining update and its privacy violations. How can the user now be recognised as part of a social system, if they cannot communicate with others or participate in the marketplace? The anxiety caused by such exclusion is underlined as the video shows the user's cursor moving frantically around the screen (Figure 6.8). The panicked movements make palpable the fear of being shut out of the Internet, now that contacts, shopping basket, and even a phone line are out of reach. It is impossible to withdraw and simply say no to data-mining, because this would shut out the possibility of fulfilling material needs such as online banking, paying rent and bills, accessing healthcare, and staying in touch with others.

Finally, the protagonist accepts the terms and conditions and logs back in, agreeing to have a forced update of data-mining implants. The final 'data-mining' procedure shown in the video brings in the most shocking sequence in Lien's works

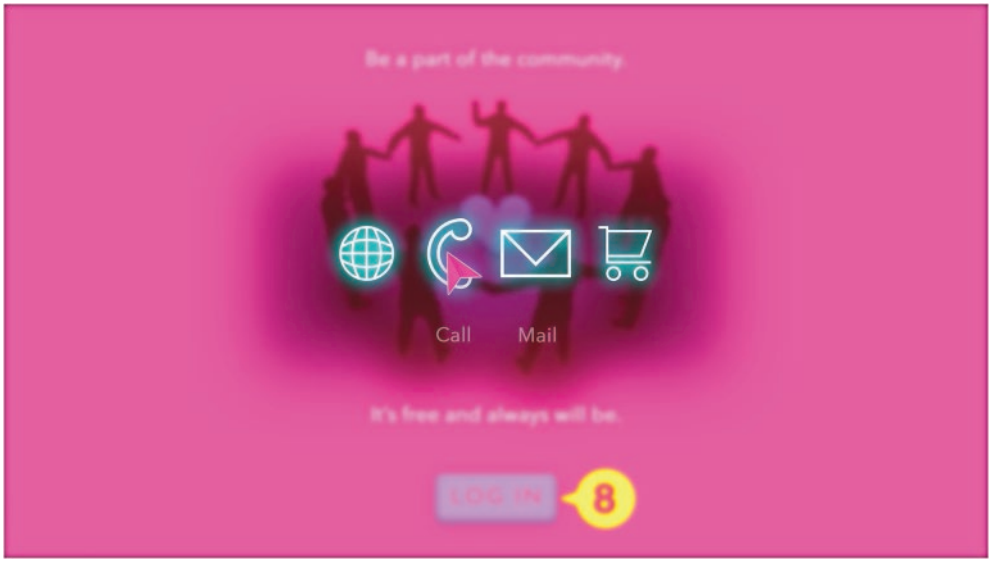

Fig. 6.8. A cursor moves frantically as a tech user tries to access the Internet without giving up data, still from *Call of Comfort*, dir. by Lien (Germany, 2018).

to date. A voiceover of a woman leading a breathing exercise runs over footage of a pair of legs opening, revealing male genitalia. A woman's hand rubs talc into the pubic hair, then mixes a bowl of hot wax in slow motion as the voice guides the data-subject: 'inhale... and... exhale, your body becomes heavy, relax'. The genitals are then shown being waxed in graphic close-up, and some of the skin bleeds as the wax strips are torn away. The sequence is shocking to see, yet the soundtrack also gives it a mesmerising quality. The breathing meditation gives way to Lien's composition of pastiche-sacred choral music, and though the image suggests — just like in Steyerl's piece — that nothing is sacred anymore, the music implies an important and even pleasurable ritual is being performed.

There is a level of gender critique to this sequence. To show male genitals being waxed until they bleed is to both cite and *détourne* conventional rituals of beauty and self-improvement, to which women are more often subjected. One way to read Lien's close-up of the genital waxing is as an obverse citation of Andy Warhol's early video installation *Blow Job* (1964), which consists of a long-duration shot of man's face, on which rumination and pleasure play out. In the Warhol film, the face has a metaphorical function, communicating the physicality happening outside the shot. In Lien's waxing sequence, however, there is a direct display of genital physicality, so that individual experiences of pleasure or thoughtfulness become secondary. In place of the metaphorical function, of a face conveying physicality elsewhere, in the waxing sequence there is no subjectivity, and a close-up image of extreme vulnerability.

Lien's video deploys beauty treatments as metaphor for a subject being datafied for the profit of Internet companies. This data-subject is manipulated into being a free provider of matter for an industry destructive to democracy and to a private life not

monetised by corporations. In order to explore the phenomenon of dataveillance, Lien creates palpable audiovisual effects that draw out what it means to experience surveillance in the age of the 'digital', effects that are often confusing and at times intensely haptic. The bright colour and language of fluffiness in the make-up scenes contrast starkly with the scene of genital waxing, evoking extremes of pleasure and pain, and bringing bodily physicality into the depiction of 'digital' surveillance as an extremely material process. The user's forced compliance is presented as an intimately painful process of beautification-as-mutilation, of a body being subjected to technological processes as extreme bodily modification. And Lien's techniques of collage and citation are always at work anchoring the viewer's experience in the embodied world of sensation. The final images in *Call of Comfort* show further spoof advertisements, offering more videos of interest, titled '<3 Positive Affirmations' and 'Boyfriend Roleplay ASMR'. The citation is so persuasive here that viewers cannot immediately tell if this screen is part of Lien's video or if it is really a link to pleasure-inducing videos that they could watch next.

However, the sensation most powerfully invoked in the video is pain, and this creates effects that are arguably somewhat one-sided. Through the pain it conjures up, the video even risks making the case that privacy should be prized above risky Internet-connectivity. It might reflect the view that technology has a negative impact on 'authentic' human selves, espoused for instance by conservative German cultural theorist Peter Sloterdijk, who writes of our 'infinite need for noncommunication'.[18] Sloterdijk advocates for a distant attitude that lacks the possibility of having positive impact in a shared world because it is so individualistic. And yet, there is a more progressive implication to Lien's representation of datafication as painful modification too, for instance in the sequence with the quivering cursor, demonstrating how frightening it is to be excluded from basic services such as banking and food shopping. That sequence shows how, if an Internet user is not willing to accept the terms and conditions of life online (i.e. surveillance), then not only will inconveniences ensue, like not being able to play a game or access a news report, but also more serious exclusions.

Rather than a Sloterdijkian argument for logging off, we can instead think about Lien's representation of a life inevitably entangled with the high-surveillance Internet in terms developed by Haraway since her 'Cyborg Manifesto'. In the 1980s, Haraway argued for 'situated knowledges' that reject 'rational knowledge claims', in favour of 'the view from a body, always a complex, contradictory, structuring, and structured body, versus the view from above'.[19] This 'view from above' is a god's-eye view that exhibits no care for the world it maps. Given the ongoing importance of aerial surveillance for drone warfare today, and the harmful effects of data being stored in the 'Cloud', Haraway's worry about these gods of the skies, which also continues into her most recent work, is pertinent.[20] Contemporary screen artist Lien shows life on the Internet as inevitably entangled and as having serious material impacts, not least the discrimination that theorists such as Noble see happening via dataveillance and algorithmic governmentality. To think about the web in this way, and admit all of our entanglement with it, means moving away

from the destructive aloofness associated with Haraway's sky gods. It turns viewers instead towards a situated sense of human entanglement with technologies. Many of these are designed, at present, for surveillance and profit — but these are by no means the only options.

Anarchival Citation and Picking Up the Thread of the Web

Both Steyerl's and Lien's mixed-footage videos seek to make visible the impact of the Internet's uses and cultures, and in doing so they reveal the inescapability of technology consumers' complicity with those impacts. The entanglement of everybody who uses the Internet with the effects of new media and technologies is inescapable, and these artists insist through their works that we need to think from within it, rather than attempting to adopt a distant, apparently 'neutral' viewpoint. Such neutrality is also impossible for screen-media artists such as Steyerl and Lien, who work with the very 'digital' media their works critique. In place of scepticism about the affordances of technology, these artists engage with it, producing different kinds of defamiliarisation that are only possible by engaging with the content and tropes of the Internet, in order to critique them. As a result, these video works guide their viewers to think materially about the ways in which technology users live through the Internet and how it lives through us. Moreover, they do this work counter-archivally, in that they cite tropes and images familiar from the participatory Internet with a view to *détournement*, rerouting them, generating critical perspectives on what their presence means, in viewers' lives and in the world.

As these visual artists experiment with ways of representing the abstract matter of the 'digital' age, they each update traditional techniques of cinematic reappropriation from found-footage film. In the counter-archiving practices of both artists, a mediatic vulnerability is indexed, as 'digital' content and interfaces are appropriated and spoofed, and so shown to be vulnerable to counter-archival re-use. For instance, it is likely the viewer of Lien's video may see the Internet consent screen differently now that it has been shown in sequence with the extreme close-up of male genitals being waxed to the point of bleeding. Through this kind of horrifying juxtaposition, these appropriations of Internet content subject today's 'digital' archives to imitations that amount to ethical intervention and productive new uses. In Derrida's terminology, their works offer 'anarchival' approaches to the storage and reproduction of knowledge in digital modernity — approaches which go against the archontic authority of centralised, corporate web archives. In both pieces, troubling imitations show how familiar 'digital' aesthetics and everyday screen interfaces can be subjected to anarchival citation, in order to reintroduce bodily and material experience into thinking about networked technology.

The two artists practise this kind of anarchival citation in distinct ways. Steyerl's collages of spoofed material are aimed at creating knowing irony and distance in viewers. *Liquidity Inc.* draws on an archive of existing footage and imagery, and combines these with new animations and live-action material in order to generate

a new alienation effect. This effect works counter to the smooth visual wash that obscures the deeper histories of our technological present. She repurposes images of the technological present as counter-archival material, so producing a fragmentation that permit moments of wondering what there is beyond the familiar archive of computer-generated images. For instance, the military history of the Internet is recalled in the links Steyerl makes between dotcom finance and the history of global warfare, so that her viewers come away with more perspectives on how self-improvement and even entertainment are entangled with the technologies of war. Steyerl uses Internet and moving image archives in this way to counter-archive the proliferation of corporate metaphors such as the 'Cloud', which obscure the technological processes they refer to and their connections to global political events.

By contrast, Lien's citational video seeks to incite feeling about the Internet, the fear of being shut outside it, and the vulnerability it elicits with regard to privacy and personhood in a time when both of these qualities are monetisable. Lien's citational practice is less distantiating than Steyerl's because it brings the body back into the realm of 'the digital', in a depiction of dataveillance as a grim process of intrusive beautification. In this way, the body is shown to be matter that is violently shaped, even produced by dataveillance. More than Steyerl's, Lien's work borders at times on scepticism about the potential of technology, and, for some viewers, could seem to advocate switching off all Internet-enabled devices and withdrawing from using current technologies. However, it ultimately insists on the impossibility of staying away from the Internet for long. Her data-subject finally submits to total surveillance rather than live without access to the services the Internet provides. More, her video even explores the pleasures that continue to tempt technology users back onto the Internet, as at once a risky zone of surveillance and a necessary space of encounter and exchange, without which life can be much poorer.

Given the impossibility of withdrawing from new technologies and the abuse of data they make possible, I have written elsewhere of the need to find new forms of cooperation, including with machine intelligence.[21] In their counter-archival practices, these video works give examples of just such a cooperation with technology, in this case through the citation of content, tropes, and gestures from the participatory Internet in appealing and challenging aesthetic forms. The resulting screen works are destabilising and oddly anxiety-inducing as they reveal glimpses of the hidden matter of dataveillance and violence, which technology users are interpellated to consent to when they participate in life online. Viewers come away from both of them understandably horrified at times, but also with a sense that their options are not just a seamless drowning in technology that overwhelms and obfuscates, or the Sloterdijkian position of separation and switching off communication entirely. A third position emerges here, one of grappling with the images that are constructing a world of meaning around technology users, coming to consciousness of the web they are entangled in, and picking up the image-material that constitutes that web anew, not as a trapping snare, but as a malleable and useable thread. At their best, these counter-archival works therefore call on their viewers to be less docile spectators and more active users of the archives and images available to them.

Notes to Chapter 6

1. See Annie Ring, 'Data that Matter: On Metaphors of Obfuscation, Thinking "the Digital" as Material and Posthuman Co-Operation with AI', *Paragraph: A Journal of Modern Critical Theory*, 46.2 (2023), 176–91.
2. Donna Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective', *Feminist Studies*, 14.3 (1988), 575–99 (p. 581).
3. Donna Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century', in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991), pp. 149–81 (p. 153).
4. See N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (Chicago: Chicago University Press, 1999).
5. See Aylish Wood, *Digital Encounters* (London: Routledge, 2007).
6. Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism* (New York: New York University Press, 2018), p. 61.
7. See Cathy O'Neil, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy* (New York: Crown, 2016); and Virginia Eubanks, *Automating Inequality: How High-Tech Tools, Profile, Police and Punish the Poor* (New York: St Martin's Press, 2018).
8. See Caroline Criado Perez, *Invisible Women: Exposing Data Bias in a World Designed for Men* (London: Penguin Books, 2019).
9. Izabella Kaminska, 'Just Because It's Digital Doesn't Mean It's Green', *Financial Times: Alphaville*, 2019 <https://ftalphaville.ft.com/2019/03/06/1551886838000/Just-because-it-s-digital-doesn-t-mean-it-s-green/> [accessed 25 March 2024].
10. See Nicole Starosielski, *The Undersea Network: Sign, Storage, Transmission* (Durham, NC: Duke University Press, 2015); Mél Hogan, 'Data Flows and Water Woes: The Utah Data Center', *Big Data & Society*, (July-December, 2015), 1–12; Julia Velkova, 'Data Centers as Impermanent Infrastructure', *Culture Machine*, 18 (2019), 1–11; Alix Johnson, 'Data Centers as Infrastructural In-betweens: Expanding Connections and Enduing Marginalities in Iceland', *American Ethnologist*, 46.1 (2019), 75–88; Jenna Burrell, 'On Half-Built Assemblages: Waiting for a Data Center in Prineville, Oregon', *Engaging Science, Technology, and Society*, 6 (2020), 283–305; Asta Vonderau, 'Technologies of Imagination: Locating the Cloud in Sweden's North', *Imaginations*, 8.2 (2017), 8–21; and Graham Pickren, 'The Factories of the Past are Turning in to the Data Centers of the Future', *The Conversation*, 2017 <https://theconversation.com/the-factories-of-the-past-are-turning-into-the-data-centers-of-the-future-70033> [accessed 13 August 2021].
11. Wendy Hui Kyong Chun, *Updating to Remain the Same: Habitual New Media* (Cambridge, MA, & London: MIT Press, 2017), p. xi.
12. Lisa Purse, 'Layered Encounters: Mainstream Cinema and the Disaggregate Digital Composite', *Film-Philosophy*, 22.2 (2018), 148–67 (p. 150).
13. Jacques Derrida, *Limited Inc*, ed. by Gerald Graff, trans. by Jeffrey Mehlman and Samuel Weber (Evanston, IL: Northwestern University Press, 1988), p. 136.
14. Zygmunt Bauman, *Liquid Modernity* (Cambridge: Polity Press, 2000).
15. Bertolt Brecht, 'The Modern Theatre is the Epic Theatre: Notes to the Opera *Aufstieg und Fall der Stadt Mahagonny*', in *Brecht on Theatre: The Development of an Aesthetic*, ed. and trans. by John Willett (London: Methuen, 1964), pp. 33–42.
16. Walter Benjamin, 'Theses on the Philosophy of History', in *Illuminations: Essays and Reflections*, ed. by Hannah Arendt, trans. by Harry Zohn (New York: Schocken Books, 2007), pp. 253–64 (p. 257).
17. See Emily Baker and Annie Ring, 'Now Are We Cyborgs?: Affinities and Technology in the Covid-19 Lockdowns', in *Lockdown Culture: The Arts and Humanities in the Year of the Pandemic, 2020–21*, ed. by Stella Bruzzi and Maurice Biriotti (London: UCL Press, 2022), pp. 58–67.
18. Peter Sloterdijk, 'Spheres Theory: Talking to Myself about the Poetics of Space', *Harvard Design Magazine*, 30.1 (2009) <http://www.harvarddesignmagazine.org/issues/30/talking-to-myself-about-the-poetics-of-space> [accessed 18 April 2023].
19. Haraway, 'Situated Knowledges', p. 589.

20. Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, NC: Duke University Press, 2016), p. 31.
21. Annie Ring, 'Complicity', in *Uncertain Archives: Critical Keywords for Big Data*, ed. by Nanna Bonde Thylstrup and others (Cambridge, MA: MIT Press, 2021), pp. 87–98 (pp. 92–94).