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Surveillance, Data and Embodiment: On the Work of Being Watched

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Abstract

Today's bodies are akin to 'walking sensor platforms'. Bodies either host, or are the subjects of, an array of sensing devices that act to convert bodily movements, actions and dynamics into circulative data. This article proposes the notions of 'disembodied exhaust' and 'embodied exhaustion' to conceptualise processes of bodily sensorisation and datafication. As the material body interfaces with networked sensor technologies and sensing infrastructures, it emits disembodied exhaust: gaseous flows of personal information that establish a representational data-proxy. It is this networked actant that progressively structures how embodied subjects experience their daily lives. The significance of this symbiont medium in determining the outcome of interplays between networked individuals and audiences necessitates that it is carefully contrived. The article explores the nature and function of the data-proxy, and its impact on social relations. Drawing on examples that depict individuals engaging with their data-proxies, the article suggests that managing a virtual presence is analogous to a work relation, demanding diligence and investment. But it also shows how the data-proxy operates as a mode of affect that challenges conventional distinctions made between organic and inorganic bodies, agency and actancy, mortality and immortality, presence and absence.

Keywords

data-proxy, disembodied exhaust, embodied exhaustion, the networked self, technovisuals, visibility, work

> The agency would also like to be able to save and analyze all of the digital breadcrumbs people don't even know they are creating. You're

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> already a walking sensor platform. You are aware of the fact that somebody can know where you are at all times, because you carry a mobile device, even if that mobile device is turned off. You know this, I hope? Yes? Well, you should. (Gus Hunt, CIA's Chief Technology Officer)[1]

> A new body has been emerging. It is a body that is defined in terms of information. Who you are, how you are, and how you are going to be treated in various situations, is increasingly known to various agents and agencies through information deriving from your own body; information that is processed elsewhere, through the networks, databases, and algorithms of the information society. (van der Ploeg, 2012: 177)

Gus Hunt's insightful remarks highlight the extent to which contemporary bodies operate, as Michel Foucault (1977: 200) before him had suggested, as objects of information. His comments accentuate the contemporary entanglement of material bodies and networked technologies, and they attest to the emphasis that is placed by the intelligence community on retrieving and piecing together the 'digital breadcrumbs' people shed as they go about their daily lives. As Hunt puts it, the body is akin to a 'walking sensor platform'. Aside from revealing how we are all subject to the effects of ambient surveillance, Hunt's statement indicates how surreptitious this process is and how oblivious many people are to their creating flows of data – data which come to represent them in particular ways. In a similar vein, but with different motivations in mind, Irma van der Ploeg points to how our implication in such processes of networked surveillance is initiating a new bodily ontology and politics, where bodies exist in a 'symbiont' relationship with the digital data they produce. She notes how the notion of autonomy, of being able to freely decide an identity and trajectory, is increasingly contingent on the data profile one accrues and/or is assigned.

These issues are important, for the data profiles ascribed to an observed body progressively structure how its occupant experiences social life. How a body is encoded by a surveillance system (i.e. as desirable or as risky) has a significant impact on the treatment a person will receive in certain situations. Research in the interdisciplinary field of surveillance studies has shown how practices of data profiling – of attributing meaning to data that reflects and reifies

pre-existing cultural biases – perpetuate social inequalities on the basis of particular indicators like race, ethnicity, class, age, gender and sexuality. Research on closed-circuit television (CCTV) operation, for example, found that the camera operators in the UK disproportionately monitored young non-white males on the basis of their physical appearance, and not their actual behaviour (Norris and Armstrong, 1999: 201).

It is evident that bodies have a key role to play in practices of surveillance and dataveillance, both in terms of how they *watch* and how they are *watched*. This article develops these themes by proposing two concepts that elucidate the embodiment–surveillance nexus, and specifically the way in which the body functions dialectically as both a producer *and* recipient of data. I advance the notions 'disembodied exhaust' and 'embodied exhaustion' to conceptualise the body as a border site where data are simultaneously emitted and leveraged. Theorising how processes of data-based visibility mediate experiences of embodiment is a critical task as we move into the networked digital era. Such frameworks provide a means to better understand the politics and dynamics of everyday data-sharing and dataveillance practices. And they provide insights into the power relations, of the empowering and disempowering type, entwining these processes.

'Disembodied exhaust' refers to the data trails that, as affective transfers, are either voluntarily or involuntarily emitted from the body as it interfaces with networked sensor technologies: as its materiality is exposed by security scanners in the airport terminal; or as its physical movements are detected by a wearable fitbit wristband, for example. Disembodied exhaust gives rise to a *data-proxy*, an abstracted figure created from the amalgamation of data traces which serves as a representational signifier of selfhood in networked transactions between social actors and audiences. This 'unbodied' actant increasingly mediates and animates social behaviours and relations in online and offline contexts. And its existence radically transforms conventional notions and experiences of the body. 'Embodied exhaustion' describes the mental and physical demands placed on 'technovisuals' – that is to say, those who act *with* technology and are consequently visualised *by* it – as they attempt to manipulate a 'productive' and 'secure' data-proxy that yields desirable outcomes for them. Data-proxies paint a virtually intimate portrait of a person's habits and situation, a networked impression of self that

performatively intercedes social relations and identities. Management of the self in today's information-rich environments, therefore, involves expending resources on the care of a virtual presence that is informationally constituted (Whitson and Haggerty, 2008).

My analysis commences by considering how the spread of networked sensor technologies like the smartphone has produced a 'leaky' liquid body: a body that both passively and actively emits flows of data to an overlaying surveillant assemblage where they are subject to analysis. An important consequence of this situation is that 'networked publics' (boyd, 2014: 5) are *seeing* and *remembering* more, and are consequently *overlooking* and *forgetting* less. This, I argue, has important ramifications for how persons relate to their bodies, as bundles of matter, as aggregations of feeling and as conduits of information. I then consider how some technovisuals are responding to the challenge of maintaining an appropriate and meaningful data-mediated presence. This section illustrates how and why the task of looking after a vicarious data-proxy is tantamount to a labour process; with technovisuals having to (a) assume responsibility for alleviating the risks attendant on their degree of in/visibility, and (b) source coordinative services from a burgeoning data management industry. The examples presented challenge binary distinctions that are popularly drawn between organic and inorganic bodies, agency and actancy, mortality and immortality, presence and absence. I conclude by suggesting that an empirical focus on embodiment will put analysts in a stronger position to understand the nuanced meanings that are ascribed to the data-proxy, and the social practices and subjective experiences it stimulates. This will help them appreciate how the data-proxy operates as a 'networked actant': as a digitised translation of self that mediates *between* the boundaries of the body and the bordering virtual network (Latour, 1996: 376).

Datafication and Embodiment: The In-betweenness of Affect

The contested field of affect has orientated the focus of body studies in recent times. Key to the 'affective turn' has been transformation in social practice brought on by technological advancement, globalisation and the resulting networked era. Such change has been reflected in epistemological shifts in the social, human and natural sciences

'that emphasize the fact that social and natural phenomena are complex, processual, indeterminate, relational and constantly open to effects from contiguous processes' (Blackman and Venn, 2010: 7). These developments in *ways of being* (social practice) and *ways of thinking* (social thought) create important challenges for how we understand contemporary bodies as producers and consumers of data, as prosumers of digitised and unbodied affect (see Featherstone, 2010). Studies of affect offer useful insights and terminology for conceptualising the nature and dynamics of the body–data nexus, and the wider biopolitics of data circulations.

As Lisa Blackman (2012: 2) notes, 'Rather than considering bodies as closed physiological and biological systems, bodies are open, participating in the flow or passage of affect, characterised more by reciprocity and co-participation than boundary and constraint.' Affect, from this perspective, can be defined as the transformative forces that mediate social experiences, objects, events and relations, especially the flows of momentum that are in 'excess to the practices of the "speaking subject"' (Blackman and Venn, 2010: 15). It incorporates the intensities of sensation that are transmitted between actors and actants in diverse social contexts and configurations like the dancehall (Henriques, 2010), cosmetics and digital video art (Featherstone, 2010), and the collective memory of a post-industrial community (Walkerdine, 2010). As Seigworth and Gregg (2010: 1) assert, 'affect is found in those intensities that pass body to body (human, non-human, part-body, and otherwise), in those resonances that circulate about, between, and sometimes stick to bodies and worlds, *and* in the very passages or variations between these intensities and resonances themselves'.

Flows of data relating to bodies epitomise the character of affect, as they stem from, represent and mediate social relations, but in ways that are often opaque, unconscious and unintended. Data are both a product of *acting* and a product *acting on* those objects from which they originate or with which they correspond. As a medium of social practice, they have, therefore, boundless capacities to transform and to be transformed. What a doctor registers in an electronic record, for example, can markedly affect how a patient is consequently treated in different contexts by a prospective employer, by a state bureaucrat or by an insurance company. Data are thus an indeterminate and determinate actant in the ecology of

social life. They are created by and creators of embodied/unbodied affects. Data are constructed by actors as much as they mutually construct or represent them. Therefore, the relationship between technovisuals and their data outflows is distinctly dialectical in essence: each has a reciprocal role to play in determining the structure and fate of the other.

These points are exemplified in the case of an Australian self-styled social media sensation who recently renounced her 'networked self' after developing what she described as addictions to self-promotion and audience attention, and experiencing consequent feelings of performance stress and bodily betrayal.[2] Nineteen-year-old Essena O'Neill had spent three years strategically building up a global following of 612,000 on Instagram by circulating artifical pictures of herself in intimate postures, often with brands (for whom she was a paid advertiser) purposefully positioned as part of the picture. But the unbodied affect she was contriving ended up defining her embodied sense of self, initally validating it and then subsequently hindering who she intuitively sought to be. The labour and effects of manipulating her presented body image to satisfy the gaze of the audience are satirically noted in her social media swansong:

> Please like this photo, I put on makeup, curled my hair, tight dress, big uncomfortable jewellery . . . Took over 50 shots until I got one I thought you might like, then I edited this one selfie for ages on several apps – just so I could feel some social approval from you. THERE IS NOTHING REAL ABOUT THIS.[3]

The ideas of trans-subjectivity and relationality espoused by Erin Manning (2010) and Couze Venn (2010), which point to bodies as unbounded processes in a state of becoming – of being mutually conjoined to associated milieu – are instructive in this respect. From this perspective, the body is 'more assemblage than form, more associated milieu than being' (Manning, 2010: 118). By focusing on the dynamism of data aggregations as an extending co-constitutive referent of the body, we move outside the confines of a bounded singular body and 'speaking subject' to consider instead how *relational bodies* are 'made', 'unmade' and 'remade' in the context of data-sharing and dataveillance practices (Blackman and Venn, 2010: 21). It is increasingly the case that

circulations of data, despite being partially dependent on bodily behaviours, have removed the opportunities for unmediated participation in institutional life. This is because data operate as a medium of identification and communication, they encompass testimonies of spatially bound actions and attitudes which are transported to a virtual interface, where profiles and archives are then established, codified and acted on. As a flow of networked affect, data move freely between the real and virtual realms, *transforming* and being *transformed* as they mediate these intersecting domains.

Surveillance technologies target the materiality of the body – its surface identifiers and deeper registers of experience – and they extract flows of data that become representational proxies for the technovisual in networked contexts. Datafication refers to the process by which objects, behaviours, actions, motions, communications and spaces are converted into machine-readable data flows. Datafication, therefore, hinges on a complex and matrixed sociotechnical infrastructure – a 'surveillant assemblage' (Haggerty and Ericson, 2000) – that operates to create, capture and circulate digitised data from and to various monitory systems for inspection and warehousing. A pressing task for body studies scholars is to analyse in finer detail the embodiment – datafication – affective nexus. This involves exploring the subjective experiences and social impacts of bodily materials, feelings and behaviours being rendered into networkable data flows, and the political, economic and cultural factors underpinning this process. It demands that we examine the body's framing as a locus of information for remote forms of dataveillance in which actuaries code particular indicators to establish a risk probability for a targeted person or group. It entails looking at the many ways in which embodied technovisuals *become with* their unbodied data-proxies, specifically exploring how this interplay inflects on perceptions of self as in the example of Essena O'Neill.

Analysing the embodiment – datafication – affective nexus calls for a set of conceptual tools to distinguish key processes. I suggest that 'disembodied exhaust' and 'embodied exhaustion' are two such notions that help elucidate body–data dialectics, specifically in terms of theorising experiences of being watched and ensuing surveillant subjectivities.

Datafication and Disembodied Exhaust

Sensorisation and Datafication

> The coalescence of [data-traces] into the surveillant assemblage marks the progressive 'disappearance of disappearance' – a process whereby it is increasingly difficult for individuals to maintain their anonymity, or to escape the monitoring of social institutions. (Haggerty and Ericson, 2000: 619)

The term 'sensorisation' refers to the increased embedding of sensor technologies that autonomously extract *and* react to data into mundane objects, but also to the effects of these devices on society more broadly in terms of their developing mass surveillance dragnets and a profusion of data flows. Many of these data are created by the material body as it acts, communicates and moves. As intimated by Hunt in the opening epigraph, the bodies of technovisuals in the networked digital era have become trackable and mineable (or 'sensorised') resources. Even though most of us have yet to entertain the idea of implanting an RFID-enabled microchip in our limbs, we nonetheless find ourselves – either by desire or design – the subject of routine monitoring by various networked sensor technologies: as we move, converse, work, consume, play, rest, ail, age and expire. These devices have materialised and consolidated modern rationalities of 'action at a distance' (Latour, 1987: 219) and 'government at a distance' (Miller and Rose, 1990: 9).

Ambient sensors installed in the smartphone, for example, operate to record daily habits and social activities. These responsive sensors are connected to 'smart apps' that capture sleep trends, register mood, index sexual experiences and log consumption preferences. Each data sequence recorded is instantaneously displayable as a graphic visualisation, a comparative map that offers us insights into the interiorities of our bodies and subjectivities, but also those of other networked users. But these maps are also amenable to the gaze of third-party onlookers who can exercise legitimate or illegitimate means to peruse and attribute meaning. Data-traces, as a core currency of informational capitalism, are incessantly moving to and from nodal monitoring stations where they get collated and calibrated as 'derivatives'. As Louise Amoore (2011: 27) describes: 'The data derivative comes into being from an amalgam of disaggregated

data – reaggregated via mobile algorithm-based association rules and visualised in ''real time'' as risk map, score or colour-coded flag.' The derivative is the register through which state and commercial actuaries render represented phenomena normal or abnormal, risky or stable, valuable or expendable.

The last decade has seen an unparalleled growth in the production and volume of digital data, as technologies of data-capture and data-storage develop in sophistication, become cheaper to operate and proliferate in usage. According to computer giant IBM, there are 20 hours of video uploaded to YouTube every minute, 2.9 million emails sent per second and 1.3 exabytes of data are sent and received by mobile internet users per month. Cisco recently estimated that there was equivalent to 650,000 DVDs worth of data transiting the UK every hour in 2014, and that mobile data emissions will grow by 57 per cent from 2014 to 2019.[4] Google now receives and records more than 3 billion search queries each day, and it processes 24 petabytes of data a day. Facebook has over 936 million active users that generate 2.7 billion 'Like' actions and 300 million photos per day. As Mayer-Schönberger and Cukier (2014: 92) note, 'the resulting social graph [produced by Facebook] represents more than 10 percent of the total world population, datafied and available to a single company'. The average UK adult has personal information registered on approximately 700 separate databases. The Library of Congress claims its archive of public Twitter messages has reached 170 billion tweets, with 50 million new tweets occurring each day. Walmart holds 460 terabytes of consumer data, and Tesco holds two years of purchasing data for 14 million households, which equates to the consumption patterns of 40 per cent of the UK population.

Organisations extract and analyse data in a bid to minimise risks and maximise returns, and to complete detailed audits of performance. Making online and offline behaviours visible as computer-generated visualisations helps them to anticipate market trends, coordinate logistics and optimise services. Such simulations inform decision making and they help administrators prepare for particular scenarios. The data-industrial complex is powered by economic and cultural imperatives. These range from organisational desires to profit from mining reserves of data for insight, to individual desires to accrete self-understanding, self-validation and social status from data-sharing practices. The search for standards and deviations, for

knowledge and entertainment, for security and convenience, propels – and justifies – the introduction of more surveillance measures. As data increase, so new puzzles and problems are revealed that require additional data and refined algorithmic techniques to solve. A primary effect of increased data collection is the progressive 'disappearance of disappearance'; as previously discrete systems of surveillance become convergent and interoperable in terms of data-sharing practices, and technovisuals experience declining prospects to disengage from what is becoming a bordering 'surveillant assemblage' (Haggerty and Ericson, 2000: 619). The surveillant assemblage is an unbounded structure that shrouds moving 'targets' in fields of visibility which make their personal activities and whereabouts legible. A secondary effect of such processes is that networked audiences are seeing and remembering more, and are consequently overlooking and forgetting less. Each of these effects impacts on how technovisuals experience their bodies as material structures and as codified texts, and how they present and manage their social identities, issues to which I will shortly return.

The Signalling Body and Disembodied Exhaust

> The concept of liquid surveillance captures the reduction of the body to data and the creation of data-doubles on which life-chances and choices hang more significantly than on our real lives and the stories we tell about them. It also evokes the flows of data that are now crucial to surveillance. (Lyon, 2010: 325)

Bauman and Lyon (2012) introduce the 'liquid surveillance' notion to elucidate how information held in the material body gets dissolved into gaseous flows by the *extractive* and *circulative* mechanisms that comprise the surveillant assemblage. The term is deployed to illustrate how bodily activities are *liquefied* (i.e. reduced to information) as a result of their being exposed by surveillance systems, and how they are converted into *datafied* flows that are susceptible to dataveillance codifications. It helps to illuminate the growing supplemenation of selfhood (an embodied biography) with a networked persona (a virtual data profile), and the primacy that is placed on attaining 'textual evidence' from material

events (Smith et al., 2013). The concept of 'disembodied exhaust' helps expound the character of affective data emissions, specifically as these relate to experiences of bodily sensorisation and datafication. The concept refers to the affective data trails that are either voluntarily or involuntarily discharged from the body as a result of its activity, and that are consequently interpreted to assess its state. Just as fuel-dependent automobiles burn gasoline and emit carbonised exhaust into the atmosphere as a condition of their momentum, so the digitally tracked bodies of technovisuals release gaseous data signals as they interface with the sensorised matrix of the surveillant assemblage. Ambient sensing devices implanted in everyday technologies like the TomTom Sat Nav, Apple Watch or the vessyl smart cup[5] are activated as the technovisual acts: as she communicates, works, plays, consumes and transits. In this process, the body itself becomes akin to a signalling beacon, continuously leaking details that attest to its circumstances, its mood, its motives, its doings and its whereabouts.

The Production of Data-proxies

> A pervasive shadow of information is growing like a digital unconscious withholding unprecedented secrets and insights. (Reigeluth, 2014: 248)

As a form of affect that both produces and conveys transformative events, disembodied exhaust is circulated from a 'point of origin' to a 'center of calculation' where a data-proxy is duly spawned, a codified 'networked actant' that exists in the virtual field as a referential index of selfhood. Data-proxies are amalgamated fragments of generalised activity that recount particularised stories, like where a technovisual has visited, who she knows, what she has bought and how she experiences particular stimuli. It is from these mediums that agencies, by integrating hi-tech computational solutions, attain the means to progressively bypass direct encounters with the embodied subject and instead interrelate with an *un*bodied representation. Data-proxies are the primary intermediary or 'token of trust' (Lyon, 2002: 244) on which data profilers – be they commercial enterprises, security services or peer communities – formulate their impressions of technovisuals. Being subjected to

a credit check by a mortgage lender provides an apt illustration. It is not a verbal narrative that determines the outcome of a loan request. Nor is it a set of pre-existing relations. Rather, a computer algorithm calculates a 'default probability' from an actuarial analysis of (a) historical documentation relating to the applicant, and (b) historical insights derived from statistical inference of the aggregate. In this way, the traditional rituals of the interaction order that Erving Goffman (1959) famously analysed are radically disrupted by the appearance and medium of the networked self, as it is this affective actant that increasingly speaks – and acts – on behalf of its embodied referent.

Desires to project a successful networked profile intersect with fears of suffering data-derived harm. Constructing a 'destructive' or 'risky' data-proxy can, for example, constrain the autonomy of a person and adversely impact on their lifeworld. It can facilitate levels of scrutiny that are disproportionate or unwanted, and it can curtail forms of mobility. It can also occasion the attribution of a categorical label or 'marker' that operates in an oppressive fashion. Being placed on a USA 'No Fly' list on the basis of belonging to an ethnic group and geo-spatial territory that a sovereign authority adjudges to be perilous, or being dismissed from employment as a result of a Facebook post, would be illustrations of data-proxy-induced hardship – that is, when a detail obtained from the data-proxy comes to disadvantage its embodied referent in some way. Technovisuals possess only limited agency for contriving their data-proxy and for influencing how it is regarded (as, of course, it is conjoined in a relational bind with a set of data profilers who codify its meaning), and this is mediated by social factors such as gender, class, ethnicity and age (Whitson and Haggerty, 2008: 588). Regardless of what benign or malign ends are served by sourcing and analysing personal information, technovisuals are now the custodians of an additional 'networked self' that is the subject of attention by unseen and unknown third parties. The integrity and security of this data-proxy demands that the data dispenser is attentive to what 'affective transfers' (Blackman, 2010) are being transmitted as datafied flows *from* and *about* the material body as it interfaces with sensor technologies and sheds digital breadcrumbs. It is these 'networked informants' that betray a person's private habits and motivations to a virtual audience, and instigate consequent responses in the real world.

Data-proxy Management and Embodied Exhaustion

> the normal state of existence ... is no longer forgetting but remembering. Furthermore, because our identities are collections of digital traces and because traces are involuntarily and ubiquitously produced, who we are can no longer be considered in representational or subjective terms. (Reigeluth, 2014: 249)

Having outlined the process through which networked sensor technologies convert bodily activity into flows of data, I now wish to describe several labour relations pertaining to data-proxy management. As Whitson and Haggerty (2008: 575) observe, the:

> existence of the dividual is not exclusively a product of institutions, nor is it self-sustaining. Instead, flesh-and-blood individuals, beyond simply being the dividual's referent, have an active role to play in vigilantly managing, coordinating and occasionally providing a coherent and consistent personal narrative that tries to make sense of these discrete bits of information.

The notion of 'dividuals' here refers to the way in which bureaucratic organisations aggregate the numeric sequences attributed to individuals (and their behaviours) in vast statistical databases. Notwithstanding the political, economic and ontological significance of the data-proxy, little research has explored how technovisuals subjectively experience this networked actant and its wider effects on the nature and dynamics of social life. In particular, little is known about how or whether the data management practices alluded to by Whitson and Haggerty (2008: 575) are enacted by technovisuals as they voluntarily share and involuntarily shed data, and with what embodied resonances.

It is evident that being subject to near constant 'economies of attention' places unique performative demands on technovisuals in that it becomes difficult to ascertain and restrict who is intercepting their disembodied exhaust and judging their data-proxy, in which contexts and for what purposes. They must second guess how an errant flow of networked data might be instantaneously or retrospectively recontextualised – that is, codified with meaning – by a diverse set of data profilers dispersed in space-time. Indeed, the sensorisation and datafication of social life has significantly reduced the control

that technovisuals exercise over the dissemination of personal details relating to their embodied behaviours. Being variously visible and accountable to an obscure and de-territorialised audience made up of human actors and non-human actants raises novel considerations in terms of how leaked impressions are managed and responded to, and how a self-narrative is mutually co-constructed and co-relayed by interwoven networked parties. As the surveillant assemblage expands in reach and scale, scarce opportunities remain for unseen self-experimentation. There are fewer social spaces and experiences that are devoid of a mediated gaze, a reality that profoundly troubled former National Security Agency (NSA) contractor-cum-whistleblower, Edward Snowden.

Performance fatigue becomes a companion feature of living within digital ecologies, as interiority is 'exhaustively' externalised by networked sensor technologies. This fatigue concerns the stress of being perpetually contactable and on virtual display – that is, susceptible to the gaze and competing interests of a pluralised and often unknown audience. But it also relates to the uncertainty of anticipating how disembodied exhaust could be construed, exploited and acted on at some future point. Many of the issues raised here are immediately applicable to the case of Essena O'Neill outlined earlier, but are also germane to a new generation of technovisuals who spend inordinate amounts of time online and who thus participate in the mass sharing of data. While the medium of data can be used by technovisuals to artfully contrive networked presentations of self in online contexts, it can equally be manipulated by networked audiences to undermine such self-projections or to coercively govern the embodied lives of technovisuals in offline contexts. The emergence of practices like 'Roast Busting', where a group of young men in New Zealand are alleged to have preyed on inebriated underage girls and uploaded graphic pictures of them performing sexual acts to a Facebook page in a bid to 'slut-shame' their victims, is an egregious case in point.[6] The same goes for practices like 'revenge porn', where personal intimacies are maliciously posted on public forums online by ex-partners to harass and violate those represented in the data.[7]

The 'embodied exhaustion' notion can, therefore, be used to conceptualise subjective experiences relating to the management of the body's networked visibility and enduring datafied format. It helps elucidate the struggles of technovisuals as they both passively and

creatively respond to processes of datafication and dataveillance, in which aspects of personal experience are circulated into zones of opacity and encoded by incontestable criteria. While connectivity and data-sharing can be interpreted positively, in terms of providing enlightenment, participatory empowerment and community for socially marginalised or isolated groups, it is not my intention here to adopt this hermeneutic. My concern, instead, is with the labour investments that attend the profusion of personal data flows, and the embedding of these within ecologies of capital and culture.

Engaging the Data-proxy: Seeking Oblivion and Minimising Disreputableness

While some of the personal information fuelling the data economy is voluntarily shared, much more is involuntarily extracted from technovisuals as they transact with the medium of technology. A patent asymmetry stems from this relation in terms of (in)accessibility and ownership of data-proxy content. Although networked audiences and profilers can know a lot about technovisuals from the transparency of the latters' networked actions, the reverse does not necessarily hold true. Technovisuals have limited opportunities to establish how their data-proxy is constituted and how it is appraised. The parasitic processes of datafication and dataveillance are, in other words, predominantly opaque to the average data-host. Although free-floating in various networked spaces, data are nevertheless the exclusive property and preserve of data-owning magnates, and limited scope exists for contesting data-proxy representations and disputing how they are acted on by data profilers. We see this in various social media clauses that stipulate arcanely that all user-generated content belongs exclusively to the service provider. It is only the after-effects of data-proxy manipulation that are, for the most part, directly experienced and felt by technovisuals, as a derivative acts on a data-proxy and generates a codification that can have positive or negative impacts on a person's life.

This issue is particularly well illustrated in the documentary, *Erasing David* (2010). The film depicts the journey of David Bond as he strives to encounter and establish his data-proxy: what it is, where it is, who it reaches and how it mediates his embodied life. Bond, a British citizen, is concerned with the increased levels of surveillance

pervading his society, specifically the extent to which his life is documented in the database and determined by the derivative. Bond's alarm is initially triggered when he receives a letter informing him that two CD discs containing the personal details of 7 million UK families (approximately 25 million people) had been accidentally lost by HM Revenue and Customs. The letter instructs Bond to vigilantly monitor his bank account for evidence of unusual transactions. But it also draws Bond's attention to the existence of his data-proxy and its actant properties. It helps him to perceive his data trail as both a conduit of power and a source of vulnerability. He responds to this epiphany by attempting to ascertain what records of his activities are kept by companies, and how these get used as mediums in backstage decision-making procedures; measures that consequently structure frontstage performances.

Two themes imbue the film's narrative, each of which illustrates the embodied exhaustion analytic in terms of the experiential affects of involuntary visibility and the work of maintaining a propitious data-proxy. The first theme unfolds with Bond attempting to retrieve his data-proxy. He dispatches 80 subject access requests to various data-warehousing bodies (both public and private) for the release of his personal files. On receipt of the files, and on contemplating the enormity and intricacy of his data-proxy, Bond becomes noticeably disturbed and dismayed:

> [Reading aloud the notes that were recorded from a prior telephone exchange] 'Seemed angry'. That's more information than I've got, I don't remember how I felt on the 21st of November 2006 ... [at the end of another phone call to Transport for London to obtain his car journey records] I mean, thank you, but also sort of, fuck off.

Some of the details contained in his networked virtual profile do not correlate with his biographical remembrance of particular events, and they spark anxiety in terms of their permanence and potential to be rendered as glutinous labels that are determining of harmful outcomes: 'That's so sinister. Doesn't that just make you feel sick?'.

Having evidenced the nature and consequence of data-actancy, Bond then pursues the second theme by endeavouring to disconnect from the surveillant assemblage for 30 days to discover what would have to be relinquished in order to lead an invisible existence. Hiring two private investigators and presenting the duo with an assignment

to apprehend him, Bond then tries to abandon his digitally facilitated routines in a planned disappearance act. As he strives to elude his trackers and remain unseen, Bond develops intense feelings of stress, anxiety and paranoia. With only his publicly accessible data-proxy to go on, the investigators manage to locate the fugitive after only 18 days, an outcome that reveals Bond's degree of visibility and that perceptibly stuns him into experiencing a mix of disquietude and indignation. Overall, the documentary accentuates the physical and emotional strains of involuntary visibility: the exhausting nature of being the subject of perpetual tracking by an unseen and unknown audience (especially when this attention is uninvited or when one wishes to enshroud a stigmatising detail); the time and resources expended on data-proxy recovery and contestation; and the confronting encounter between an embodied referent and his disembodied data-representation.

The immense quantities and varieties of data (e.g. photographs, videos, newsfeeds, transaction histories and health records) in circulation that attest to the social lives and practices of technovisuals has prompted some to seek legal recourse and industry services so that compromising details – or machinic ghosts – are removed from corporate search engines. The legal notion of the 'right to be forgotten' has arisen as a consequence of the mass dissemination of data trails that make the personal histories and intimacies of technovisuals traceable and susceptible to third-party tracking. It is a relatively recent – and loosely defined – addition to human rights discourse. Its appearance reflects the desires of many technovisuals to better 'determine the development [of] life in an autonomous way, without being perpetually or periodically stigmatised as a consequence of a specific action performed in the past' (Mantelero, 2013: 231).

In a landmark 'delisting' and 'delinking' case brought against Google in May 2014 by Mario Costeja González – who requested that the company withdraw a link to a defamatory 1998 newspaper article that disclosed his failure to repay a debt – the European Court of Justice ruled that Google, as the data-controller, was legally obliged to comply with EU privacy laws pertaining to the erasure of 'inadequate' or 'no longer relevant' data from its search results. On the first day that Google conformed with the directive and provided an application process for link elimination, 12,000 content removal requests were received, with approximately half of these

solicitations seeking the erasure of reported criminal convictions.[8] But this 'right' to control associated data flows comes with an attendant responsibility: that technovisuals need to painstakingly retrieve elements of the data-proxy from data-custodians and attempt to suppress, or eradicate, discrediting details. And yet this is an exceedingly burdensome task to accomplish in a context where data are increasingly the legal possession of those transnational corporations administering the media platforms, or are subject to processes of viralisation and practices of multi-sharing, as in the case of revenge porn. The fluidity and replicability of digital data, and the networked and boundless nature of the ecology in which it circulates, means it is almost impossible to prevent it spreading, or to obliterate it.

The large number of requests to have disreputable records either amended or erased from search engines like Google, attests to the growing primacy that technovisuals place on projecting and managing an advantageous networked self that courts praise and that delivers desired returns.[9] It also shows that these entities – the presented self and its data-proxy simulacrum – are not always congruent: each requires sustained attention and diligent crafting if desired forms of social acceptance and 'attention capital' (van Krieken, 2012) are to be accrued. The digital age and the heightened visibility it effects have significantly expanded the scope and nature of Goffman's (1959: 57, 114) 'impression management' category. With social contexts progressively collapsing, it is difficult for technovisuals to regionalise their networked behaviours, to segregate audiences from digitised performances, to conceal specific flows of information and to prevent time-bounded types of data from surging across the virtual spaces of the network and sparking unintended (or uncontrollable) consequences in the real world. The art of managing impressions has become more diffuse, diverse and indirect as encounters between a networked performer and a networked audience are increasingly mediated, and as reputation is determined qua the signals that leak from the body. It is no longer merely a self-façade that an embodied presenter needs to performatively customise in a bounded interaction with a proximate audience. The parasitic data-proxy must also be carefully nourished if data-induced alienation is to be avoided: when the former is exploited in a manner producing a harmful or unremunerated outcome for the represented host (Andrejevic, 2011). This might involve a person staging a self-definition that is undermined

by a data-proxy which presents a contradictory narrative. The upshot is that neoliberalised technovisuals are expected to take responsibility for the custodianship of an embodied self *and* a data-proxy extending from the body as it engages with the networked conduits of the surveillant assemblage. And this situation raises interesting questions for our understanding of embodiment as it relates to – and is co-constituted by – sensor technologies and surrounding media infrastructures.

Umpteen vendors have materialised in recent times offering tools and provisions to support the care of a reputable and productive data profile. These companies make it their business to support – and economise – the work of being watched. Reputation.com, for instance, tenders a service that pushes down 'negative [web] content so that it's practically invisible in search results'. It assigns each subscriber with an expert 'reputation advisor' and a 'privacy concierge' who customises and optimises how and where a technovisual appears online. The site counsels:

> Online reputation problems don't go away on their own, and they can have a permanent impact on your life. With each passing day, the online world becomes more and more enmeshed with the rest of our [offline] activities. . . . It's important to keep tabs on what people are saying about you online and then take steps to correct any inaccuracies. . . . Do you really want to let someone else define your reputation?[10]

Reputation.com claims to have a million clients and it has colonised a lucrative 'data curation' market as time-poor technovisuals become attuned to the risks attendant on volitional data-sharing, and mandatory data exposing, practices. As an array of stories emerge depicting ignorant or imprudent technovisuals (from both affluent and disadvantaged backgrounds) being thwarted or harmed by their data-proxy, demand increases for applications that vicariously manage the content of disembodied exhaust. The goal of these mechanisms is to provide a service that helps technovisuals (a) elude data-based victimisation, and (b) erect a networked self which conveys a respectable story and which results in offline success. Reputation.com warns its browsers that 'profile searching' is now a standard convention as employers conduct pre-interview research on job applicants, landlords vet possible tenants and lovers run 'trustworthiness' checks.[11] Prospective customers are informed about the role

that data-proxies play in influencing life chances, and they are invited to invest in protective technologies that vicariously manipulate data-traces that, to their referent, are often indistinct or trivial in character.

Engaging the Data-proxy: Coping with Vulnerability and Preparing for Remembrance

It is not merely concerns pertaining to reputational profiling and optimising networked projections of self that brings the data-proxy to the attention of technovisuals as a symbiont force requiring diligence. As instances of cybercrime continue to escalate, and moral panics accentuate the practices of identity theft, hacking and cybergrooming, the data-proxy is recast as a medium of vulnerability susceptible to abuse and exploitation. A precautionary discourse, that comprises contributions from the state and industry, has accompanied the spread of datafication. As Whitson and Haggerty (2008: 574) note:

> Combined, these efforts signal a social project which we refer to as the care of the virtual self, whereby citizens are encouraged, enticed and occasionally compelled into bringing components of their fractured and dispersed data double into regular patterns of contact, scrutiny and management.

Indeed, when President Obama was asked what overriding advice he would give to a young person aspiring to be president, he said: 'I want everybody here to be careful about what you post on Facebook, because in the YouTube age, whatever you do, it will be pulled up again later somewhere in your life.'

This 'staying safe online' narrative instructs technovisuals to enact defensive online and offline behaviours, to look after their passwords and personal information as they participate in networked activity. Although organisational imperatives were responsible for creating the infrastructure and conditions amenable to acts of cybercriminality, it is technovisuals who are expected to assume personal responsibility for the management of informational risk and the prevention of data-related victimisation. Rather than depict identity as a fluid and formative intersubjective relation, this bureaucratic discourse presents it as a stable materiality that can be 'lost' or 'stolen' via negligent data-proxy conduct:

> Your identity is one of the most valuable things you have. Being able to prove who you are is important for most aspects of your life – from getting a home loan to starting a new job. If criminals steal your identity, you may find everyday activities like these more difficult. The stress and financial costs can last for years. The Australian government has published this booklet to help you protect your identity. It includes a number of quick and easy tips you can use to reduce the risk of becoming a victim of identity theft. You will also find suggestions about what you should do if your identity has been stolen. (Commonwealth of Australia, 2013: v)

Real-life scenarios are cited to dramatise the ways in which the data-proxy can be illicitly penetrated, and rendered as a target for extortion, as it circulates in cyberspace. These scenarios are portrayed in a manner that accentuates the feelings of trauma and violation endured by a compromised technovisual, and the concomitant embodied labour expended on rehabilitating the data-proxy to an appropriate state of desirability:

> With so much of my personal history available, one of these new 'friends' was able to forge documents and even make a fake ID using my photo. He then got a credit card in my name and ran up a debt of $500. Since then I am very careful about what I post, even if I think it's private. ('Justin', in Commonwealth of Australia, 2013: 20)

> Sorting the mess out has been a huge hassle. I've had to prove my identity to the tax office, apply for a new tax file number and have had to wait to receive my tax refund. They have also told me that my next year's return will be delayed until they make sure I was the one who lodged the return. I've also had to get a new bank account and change all my direct debits. ('Jian', in Commonwealth of Australia, 2013: 5)

These examples attest to an unsettling encounter between the embodied data-supplier and the disembodied data-proxy, when the latter makes available confidential or personal details that are exploited to perpetrate unlawful deeds. They evidence the affectivity of personal information flows – of their having an influence above and beyond those to whom the data indirectly belongs or corresponds. It is evident from the excerpts that the technovisuals cited had not comprehended the capacity of their data-proxy to vicariously betray information that made them vulnerable to a form of *hyperreal victimisation*, with the transgression occurring in the realm of the

virtual, but the effect eventuating as a lived reality. They had each in some way 'failed' themselves – and the wider community – by not anticipating the susceptibility of data-traces and by not attending to the work of safeguarding the data-proxy: of maintaining a secure virtual presence. Such work entails: regularly creating multiple complex passwords; encrypting files; purchasing and updating anti-virus software; vigilantly checking the authenticity of online correspondents; monitoring transactions for suspicious activity; correcting erroneous contact addresses; shredding confidential letters; and curtailing what is shared or broadcast virtually. It is here that the 'embodied exhaustion' analytic helps accentuate social effects contingent on technovisuals being involuntarily exposed to unseen eyes *and* performing diligent repertoires to control their thresholds of in/visibility.

My final illustration reveals the lengths to which some go to enrich the data-proxy. In this instance, it is rendered as a conduit to memorialise the self and to deliver messages posthumously: a process producing a simulacrum of the body or 'the image without body' to invert Massumi's (2002) reasoning. Sites like DeadSocial and LivesOn supply 'digital legacy' tools for those aware of, or preparing for, their impending demise to formulate a sequence of choreographed 'goodbye' messages that are delivered to loved ones and to their social media profiles on specific dates after death. These digitally facilitated applications furnish technovisuals with a means to indirectly issue memorandums from beyond the grave, to interactively participate in unfolding events and to sediment a permanent, if immaterial and inorganic, presence that radically surpasses the traditional eulogy inscribed on a gravestone or the shoe-box filled with mementos. They present users with novel opportunities to outlive the organic body and to continue existing vicariously through the immateriality of the data-proxy. In a sense, the parasitical data-proxy becomes the bequest; an important source of ancestral heritage and a post-vital actant that defies the laws of existence by exercising networked influence after its mortal host has expired. But ensuring the integrity and pertinence of this eternal figure necessitates the investment of attentiveness and solicitude. It entails the application of foresight on the part of the creator to foresee how issues (e.g. family dynamics or worldly events) might develop in her or his absence, and to customise communicative broadcasts accordingly. As the DeadSocial site outlines:

> Send out a final message to be released when you pass away and series of scheduled messages for dates in the future.... Messages can include text, video and images. The messages created are only distributed directly to each user's Facebook and Twitter profiles once their entrusted 'digital executor' feels the time is right to do so.[12]

LivesOn offers a tripartite customisation service in which subscribers expend time and energy meticulously training a computer program to recognise their interests, values and dialect. The application then tracks historical posts they have made on social media and analyses how specific stimuli (e.g. films, newstories, photographs, peer remarks, etc.) elicited particular responses. A personalised code is algorithmically assembled on the basis of the reviewed information feeds, and this program anticipates how the deceased persons would have likely reacted to certain events. It is from this machine-learned code that envisaged content is spontaneously derived and displayed on behalf of the departed subscribers, to keep them enagaged in social life in a necromantic capacity; and to ensure that their aura abides and prompts social continuance. Indeed, as the LivesOn marketing slogan rather satirically notes, 'When your heart stops beating, you'll keep tweeting.'

The malleable data-proxy, therefore, generates new possibilities for how processes of dying and death are culturally understood and curated as mediated and networked events, and redefines embodied and unbodied experiences of these episodes. Mediums like this artificially revitalise the dead and bring a perpetuity of presence that contests the physical impermanence and disappearance of the mortal body. They ensure that a networked residue remains and sustains presence; and can even exert influence over future social relations: relations that have yet to unfold as realities. Preparing for organic death entails preparing presciently for digital rebirth. It means envisioning and manufacturing a meaningful afterlife in the digital universe. This practice generates existential concerns for technovisuals, in terms of how they wish to be commemorated; how they want to appear and participate in the lives of those they leave behind; which facets of self they wish to suppress; and which dimensions they wish to project.

These issues are especially familiar to Lawrence Darani, a British man suffering from terminal cancer. Darani signed up to DeadSocial

in order to prolong his 'absent presence' in the real world via the medium of the virtual. On recording his first posthumous video sequence, Darani observes:

> As I was looking at the camera, I thought, gosh, I'm not only talking to my kids, I'm talking to my grandkids, and all my generations for years to come. It's always going to be out there, in the cloud. There's something comforting about that. Through DeadSocial, you can make sure the essence of who you are remains on the internet. It cheats death.[13]

There are a number of interesting threads contained in this account. Darani draws attention to the fact that traditional forms of storytelling and oral history are being markedly transformed by processes of datafication. His commentary reveals how subjectivity has been supplemented with a networked and intermediated constituent – a version of the self that is no longer merely determined by spatial and temporal confines or the result of face-to-face encounters with a proximate audience qua the rules of symbolic interactionism.

Digital interfaces and circulations of unbodied data make a co-constructed transgenerational interplay possible, a situation that allows for mediated affect to be transmitted to networked audiences separated in space-time, to onlookers who may be unfamiliar or unconnected with the deceased obituarist. There is also a profound flattening out of who and what is chronicled in the historical imaginary. It is no longer merely the rich and famous, and the notorious, who have a privileged claim to the public archive. Digitisation has made this resource all the more extensive and porous, with pursuance of personal and societal remembrance no longer the exclusive field of the traditional media and the professional chronicler. Moreover, a deeper existential point is raised by Darani vis-a-vis the 'comfort' of self-enshrinement. In a period when the significance of religious metanarratives relating to life, death and the afterlife are diminishing in certain regions – and are displaced by the agnosticism of consumer materialism and concomitant projects of self-reflexivity – there is solace and meaning to be found in envisaging the networked self as somehow 'cheating death' by means of its affective resonance, its transportability and its durability.

Even if the desired type of attention and agency is lacking while one inhabits an organic body, it can still be acquired vicariously in the digital afterlife via the data-proxy – a process tragically

exemplified in staged suicide broadcasts left behind by those seeking notice and redress. In a context of liquid living, where ephermerality is the norm and resiliency is a common discourse, this permanence has appeal: this capacity to immortalise the self – and its story – as a digitally screenable event and socially interactive mural. It incorporates the very ethos of advanced capitalism itself: the disposability of certain 'surplus' strands of life and the constancy of superficiality as this relates to product advertising or brandscaping. Perhaps what we are witnessing in the example of DeadSocial is a novel form of unbodied 'selfscaping', where certain interiorities of the self not deemed acceptable for public presentation are selectively externalised when the sentient subject has no longer the capacity to feel shame, guilt or embarassment; or to suffer adverse consequences. DeadSocial becomes akin to an afterlife diary, where technovisuals can choreograph mediated truths and confessions that were unutterable in person, and can contrive those parts of the self they wish a networked audience to retain from those they seek to expunge.

Darani asserts that he approached the pre-death video messages:

> like an ethical will, where he lays out what's influenced him and what he stands for to his wife, his three children, and the Daranis of the future. . . . 'I've got my weaknesses, but I've gone into great depths about who I am and what motivates me, what I need to improve on.' (Kleeman, 2014: 27)

This disclosure is intriguing in that it reveals both a directive *and* an unfinished self – a self that is inclined to issue a monologue of moral and ethical instructions and a self open to being developed – and reproduced – by family members in the course of their lives. Mirroring the thematic in the movie *Her* (2013), where a lonely LA divorcee falls in love with a responsive computer operating system called 'Samatha', digital afterlife services demonstrate the increasing degree to which technovisuals formatively *become with* (in terms of forming meaningful relations) – and attribute significant Otherness to – digitally generated data-proxies (Haraway, 2003). The avatars that are created in anticipation of future events comprise selective deposits of being, but in a way that fosters an independent and autonomous becoming- or digitised Second Coming. This equates to an everlasting participatory presence in the network, a situation highlighting the need for more studies to take 'the social life of

data' as their object of investigation. Their emergence also elicits a set of intriguing ontological questions pertaining to self-archiving, self-representation and time-space compression for digital sociology scholars to engage with. Irrespective of the broader issues raised, the materialisation of this kind of 'networked affect' troubles popular binary distinctions drawn between mortality and immortality, organic and inorganic bodies, agency and actancy, presence and absence. It reveals how the modern body produces affective transfers that increasingly come to orientate its trajectory, to register and represent its existence in networked ecologies, both in life and after death. This affect may originate in and be generated by the body as it acts, but it rapidly departs this context as a networked *in-between*, as it is circulated and comes to exercise influence over how that body is represented and coded, and how it is then read and remembered. As Blackman (2012: 14) instructively notes, 'It is not just that the human body is technologically mediated but that affect does not require a distinctly human body in order to pass and register.'

The surveillant assemblage creates the conditons for digitally facilitated deathlessness, for the intergenerational and intercorporeal transmission of networked affect between hosts and proxies, proxies and audiences. It permits an immaterial data-proxy to abide in the system as an active flow long after the material body has expired and detached from it. Novel existential choices attend how – and indeed whether – technovisuals opt to be perpetually recalled and conjured, and what type of canvas is selected for the embroidering of an abiding self-portrait. It is the energy expended on preparing a suitable data-proxy for the afterlife that evidences the *embodied exhaustion* of self-work in the digital era, as a metaphysical, theatrical, therapeutic, temporalised and mediated project that is contingent on personal circumstances – moralities, values and resources. It is a task of effectively managing one's degree of in/visibility and im/permanence in a world permeated by networked sensor technologies and sensing infrastructures. In the case of Darani, a decision was made to invest precious time and effort in crafting and projecting a simulated self that would gradually unfold itself as a framed oration after his death, rather than spontaneously expressing his hopes, wisdom, sentiments and meditations directly to his family while alive. The American novelist Sol Yurick (1985: 14–15) foresaw the consequences of this simulacrum some thirty years ago when he heeded the end of bodily

evanescence, and the emergence of 'cloud' computing with its eternalising powers:

> We will, like Jesus, like Faust, like Dante, achieve immortality and 'evolve' into computer-compatible and re-programmed history . . . . Our essences will be preserved in that great memory bank in the sky.

Concluding Remarks

The opening epigraphs highlighted how a mix of new technologies and organisational imperatives are refiguring the territory of the body in a culture that is increasingly obsessed with the production and consumption of data. I have shown how the networked character of the data-proxy impacts on how technovisuals experience their own material-mediated bodies, and the material-mediated bodies of others. The affectivity of this unbodied actant in mediating and animating social relations in ways that often bypass the awareness, let alone the influence, of its embodied referent, raises some important conceptual, methodological and existential questions. How, for example, is this flow best theorised? Should we employ a traditional hermeneutics of power to critique its determinative effects on social life? Or is a hermeneutics of companionship and significant Otherness more appropriate in capturing its indeterminate, in-between and participatory qualities? Similarly, given the plural nature and networked mobility of data-proxies, what research methods and instruments does one require to trace and establish its multiple meanings, uses and effects? Is it in fact possible to adequately analyse something that is so abstract, ephemeral and non-locatable? Lastly, to what degree does the existence of the data-proxy invite us to think about and study how technovisuals lead dual lives in an embodied sense, but also increasingly in a disembodied sense, through the vicariousness of their unbodied data? And what are the impacts of such paralleling? The last two questions posed demand that we employ phenomenological approaches to source experientially derived answers.

I have indicated how, in a context of neoliberal governance, the responsibility for conserving the content and for anticipating the probable uses and effects of disembodied exhaust progressively falls on the exposed technovisual – *the data-provider*, rather than on the exposing organisation – *the data-beneficiary*. For this reason, I have

introduced the embodied exhaustion analytic to conceptualise subjective experiences of performative fatigue that accompany the experience of data-based visibility, where impressions of self are leaked from the body to the bordering virtual network via the medium of data. But the term equally applies to the arduous and playful work of sourcing and crafting a reputable – and enchanting – data-proxy. I have argued that digital literacy is a key determinant of mobility for technovisuals in today's personal information economies, and possession of this proficiency is significantly mediated by social status.

The article has introduced a conceptual framework for engaging subjective experiences of datafication and the work of being watched. But it is evident that both body and surveillance studies need to focus greater empirical attention on the phenomenological borders of embodiment – the interface where (a) personal details are perpetually discharged as disembodied exhaust via data-sharing and data-extractive practices; (b) perceptions of disembodied exhaust get formulated and encounters with data-proxies occur; (c) impositions by a monitoring authority are routinely enacted and leveraged; and (d) labour is expended on managing levels of in/visibility and im/permanence. It is within this zone of experience that analysts can become better attuned to the opportunities and inequalities concomitant on the data-proxy's functioning as a 'networked actant', as a digitised translation of self that mediates between the permeable boundaries of the body and the bordering virtual network. It is here that naturally occurring social meanings and practices on the part of the technovisual emerge, and data-induced pleasures and traumas are tangibly and enduringly felt.

Studies need to engage the intersectional points *between* the material body and its digitised representation, and address questions like: how does the data-proxy impact on the lives and life chances of disparate technovisuals, and how may this relation be contingent on social markers like class, gender, age, ethnicity and sexuality? In what way does the data-proxy symbolise the self in terms of being biographically congruent or inconsistent? How is this avatar harnessed and what fields of power orientate its trajectory? How might data-regulators redress the exploitative nature of this parasitic actant in terms of establishing legal rights and responsibilities? As Irma van der Ploeg (2012: 179) asserts: 'With our bodies gradually becoming entities consisting of information … the boundary between the body

itself and the information *about* that body cannot be taken for granted anymore.' As affective resonances, flows of data often act in ways that transcend the influence of the embodied referents from whom they originate, and upon whom they impact. This raises crucial questions concerning the power of data-proxies to elude and outlast the data-subjects whom they represent. But it equally requires that scholars explore the diverse ways in which technovisuals from contrasting social backgrounds embrace and resist processes of datafication in situ, and establish the precise effects of these practices. An interdisciplinary approach, comprising insights and methodologies from affect studies, digital sociology, computational and social network analysis, is therefore urgently needed to better excavate the circulative and co-constitutive compossibility that now orientates the data-provider/data-proxy relationship.

Notes

1. See: http://www.huffingtonpost.com.au/2013/03/20/cia-gus-hunt-big-data_n_2917842.html?ir=Australia (accessed 22 September 2015).
2. See: http://www.theguardian.com/media/2015/nov/03/instagram-star-essena-oneill-quits-2d-life-to-reveal-true-story-behind-images (accessed 4 November 2015).
3. Cited from: https://www.instagram.com/p/9prbs2OWot/ (accessed 11 December 2015).
4. Cited from: http://www.cisco.com/c/en/us/solutions/collateral/service-provider/ip-ngn-ip-next-generation-network/white_paper_c11-481360.html (accessed 17 October 2015).
5. The 'vessyl' smart cup employs sensor technologies to automatically track the nutritional content of drinks consumed by its owner and to raise hydration awareness (https://www.myvessyl.com/vessyl/, accessed 13 November 2015).
6. See: http://www.huffingtonpost.com/2013/11/06/roast-busters-new-zealand-teen-rape-club_n_4221597.html?ir=Australia (accessed 13 November 2015).
7. See: http://www.theguardian.com/commentisfree/2013/oct/08/victims-revenge-porn-deserve-protection (accessed 13 November 2015).
8. See: http://www.europenews.net/index.php/sid/222490797 (accessed 20 December 2014).
9. Microsoft, for instance, claims that 91 per cent of computer users expend energies on managing their online reputations in some form

or another; see: http://www.microsoft.com/security/online-privacy/reputation.aspx (accessed 20 December 2014).
10. See: http://www.reputation.com/personal/what-online-reputation (accessed 27 December 2014).
11. Businesses like DateSmart.com offer to discreetly screen 'Who's lying next to you?' via a set of 'adultery technologies' that include the assignment of a private investigator to investigate the 'target' (http://datesmart.com/basic.htm, accessed 27 December 2014).
12. See: http://www.deadsoci.al/ (accessed 20 December 2014).
13. Cited from Kleeman (2014: 26).

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