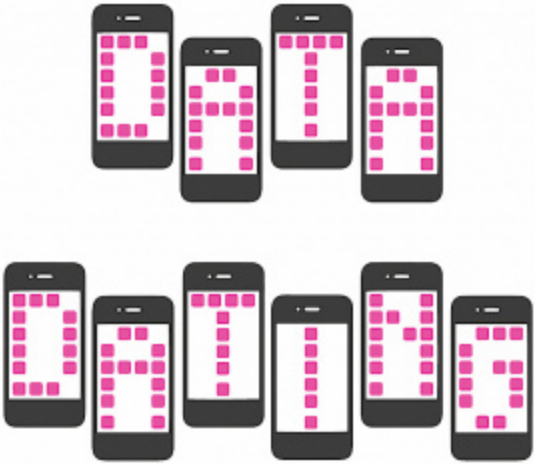

Love Technology Desire

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Romance in a Time of Dark Data

Lee Mackinnon

Introduction:

Today, some suggest that the *biosphere* comprised of living organisms, has been supplanted by the *technosphere*, described as the sum total of human technical achievements. The technosphere encompasses the totality of human techno-ingenuity that propagates and sustains the world's populations. This totality includes agriculture, social systems, global transportation networks, pollution, the internet, waste, and humans themselves (Zalasiewicz 2018). In its ultra-rapid evolution since the industrial period, coordinates that began by securing Western sovereignty over the biosphere have gradually become its undoing in the technosphere. In this chapter, the technosphere will be largely represented by the circulation of digital data, characteristic of human interaction and information systems. While data was once a stationary stock of information, in a digital era it has become fluid and dynamic (Cukier 2014). It is suggested here that data has become not only an organising metaphor for the technosphere, but one of its meta-layers whose many streams and stratifications inhabit IT systems, consuming space as vast *databergs* of information. As a metaphor, fluidity was once considered threatening and dangerous, associated with the indeterminate forces of the feminine. In recent literature, it is celebrated for suggesting mutability and difference, while being the latest iteration of capitalist liquidity, subject to aggregation and monetary value. Within a system defined by fluidity, the discrete is suggestive of the hybrid, the singular of the multiple, and life-itself becomes the corporate asset par excellence.

In this chapter, we are particularly interested in how the most intimate aspects of our lives and identity have become digital assets, exchanged and traded through dating platforms. The liquidity of these assets ensures that *intimacy* now describes the relationship between data broker and data-body, rather than a romantic exchange between human subjects. Furthermore, forms of romantic expression will be seen to result in vast repositories of redundant, obsolete, or even dark data. In its totality, such data can be seen as the archive and expression of a tenderness not for one another, but toward the current automated paradigm of capitalist appropriation. We begin by thinking through the metaphorical properties of 'fluidity' and its passage from an ancient signifier of negativity, to a liberatory state that is ubiquitous and characteristic of the technosphere.

1. *GENDERED FLUID*:

Fluidity is a term that has long been synonymous with a loss of form and has also been used to refer to a loss of meaning. In Ancient Greek literature, the notion of fluidity was at odds with the bounded realities of masculine value and power. Pythagaros famously divided the world into a system of binaries, in which women and men were opposed. On the side of women were formlessness; limitlessness; potential, passivity; darkness and matter; while on the side of men were form; light; definite limitation; unity; and goodness (Jacobs 1999: 12). These distinctions helped consolidate and naturalise paternal social systems, as described in Anne Carson's examination of women in classical Greece. Being subject to patrilocal marriage, women were defined by their relative mobility which made them the potentially dangerous transgressors of borders, whether physical or geographical. Women's desire itself was considered as fluid and formless and as such, a threat to organised human societies of the West. Carson explains that ideas regarding women's fluidity are also

prevalent in mythology where women often embody the threat of mutability and transgression of limits:

> 'In myth, woman'[s] boundaries are pliant, porous, mutable. Her power to control them is inadequate, her concern for them unreliable. Deformation attends her. She swells, she shrinks, she leaks, she is penetrated, she suffers metamorphosis (2000: 133).

In keeping with their fluid associations, women were described physiologically and psychologically *wet* in Greek philosophy, which Aristotle suggested required the tricky imposition of boundaries upon them (see Carson 2000: 131-2). The marriage and relocation of women was a way to mitigate and manage the threat they posed to the immediate household. At the same time, homosocial relationships between men were consolidated through the exchange and sale of women. In short, marriage was a means of relocating women within a new set of physical and emotional boundaries and redeploying the threat of their desirability.

For Carson, love is considered to be the principle motivation for women's flight from form, and the immanent dissolution of boundedness: female desire brings with it the danger of pollution due to its 'liquescent effect' and 'fiery heat' (ibid 134). The language of desire is evoked in terms of waves or floods: it dissolves or melts. It burns. It is the language of liquidity. Today, the language of liquidity will be seen to be liberated through the digital network as endless iterations of data and desire. Indeed, we are used to thinking about the liquidity, not only of desire, but of assets: that is, the readiness of possessions to be converted into flows of cash, while retaining a fixed value. In terms of commodities or stocks, liquidity expresses the degree to which a sufficient number of buyers and sellers exist to make prices relatively stable. "Finance" is the name for such capitalism, understood from the perspective

of the investor for whom the convertibility of any asset into money—its *liquidity*—is distinct from any other utility an asset may have (Meister 2017). It is possible to suggest that women's association with fluidity and formlessness, requiring paternal oversight and 'exchange', helped to naturalise woman's position as a proto-commodity, securing her servitude for centuries.

In recent writing, fluidity has conceptual associations not only with women as objects of exchange, but with data, in an era characterised by the digital database. These states of fluidity are not mutually exclusive, since they are etymologically bound by *matrices,* a reference to the maternal and also to a branch of computer science that is used in digital forms of simulation. In early Latin, *Mātrix* referred to a pregnant animal, and later came to refer to the terms *womb, source, and origin*, from *mater*, or *mother* (Harper 2020).[1] The technical and figurative sense of the word are derived from the idea of *origin, enclosure*, or '*the place or medium where something is developed'*(ibid). We see such uses in mathematics, and in technical grids as, for example, used in building computer simulations. The Western etymology of the term *matrix* already seems to chart the place of *origin* away from the biosphere to the technosphere; and from Mothers as the originators of life, to technocrats who splice genes in the dream of creating motherless reproduction. The life-giving medium that was once the preserve of the maternal animal, makes way for the symbolic systems of mathematical and linguistic structures that now code technological existence. Furthermore, in relating women and data, Yulia Grinberg (2017) claims that in the cultural imaginary, data is like a woman 'the language of liquidity, flows, leaks, streams, oceans, rivers,' indicating that today, data is 'a proto-natural substance that fills objects and bodies' (112). The idea that women are like data infers the status of either as neutral mediums that are productive,

[1] This shift from animal to human bearer of life and load reminds me of Mcluhan (1994: 93) and Virilio's (2007:40) respective observations that 'the first pack [bearing] animal was woman.'

reproductive and can be put to work in the service of patriarchal societies in order to maintain them. In Grinberg's suggestion that data is taking on the status of nature as the medium, or matrix, integral to life, we should note that data is increasingly the resource central to capitalist function, becoming one of the main arteries of value circulating through the globally integrated, but unequally distributed, technosphere. If data is taking on the mantle of nature, then it not only fills 'objects and bodies' but it may also be said to constitute them.

2: AUTOFLOW

Fluidity has become characteristic of much more than women, data and finance in the global North, and is now used in reference to social systems, identity, sexuality, gender, and geographical borders (Lyons 2010; Bayraktar 2015; Sin 2015; Ahmed 2012; Hine 2018; Patent 2017). It seems that the world in its totality can be understood in terms of flows and liquescence. Indeed, gender itself has *become* fluid, rather than describing qualities associated with the feminine. For decades, *the feminine* was a synonym for 'gender', but now, in its redefinition as 'fluid', gender has been untethered it from its feters to become a free-floating signifier that defies easy categorisation. It is perhaps its positive association with non-binary gender that means we associates fluidity with a liberatory state, rather than the new protection of old privileges. This positive dimension emerges elsewhere too. For example, Ray Sin (2015) draws attention to a sexualised subject that has no essence or fixed identity, being 'fluid,' (414). Volker Patent (2017) suggests that 'borders are historically, socially and culturally fluid', sanctioned only by: 'a shared belief in their legitimacy'. Even more compelling here, is the understanding of fluidity as a verb that expresses interaction within the digital networks. Thus, Zygmunt Bauman has described the digital database as a ''vehicle of mobility", that privileges the global and marginalises the local (cited in Lyon

2010: 328). Power, it is asserted, is evaporating from the nation state into the electronically facilitated ‘‘space of flows’’ (ibid 331). This space of flows again points toward the transnational technosphere, where information generated by global communications is the prime commodity. For those U.S. digital corporations who own, organise and trade our data, the fantasy of fluidity is also one of acquiescence to power without physical oppositional form: it is the dream of a seamless horizontal network through which power flows unimpeded.

Contrary to the optimism above, for writers such as Nilgun Bayraktar (2015), European ideals of mobility and fluidity are deeply enmeshed with immobility (4). While Bayraktar refers in particular to geographical borders, we can apply such a notion to the geopolitical space of the digital, with its promise of fluid interaction and the continuous circulation of free information and bodies. For Bauman, the digital database is also an ‘instrument of selection, separation and exclusion,’ (Lyon 2010: 331). Bodies and borders can be made visible and permeable by data flows so that they become temporary zones of dematerialization and exception that are more amenable to government control. The term *dematerialisation* itself presupposes a physical instantiation that must be actively negated, as does fluidity. This is emphasised poignantly by Sara Ahmed (2012) who notes that present social theory expresses the central motif of fluidity whether in the mobility of Urry, or the liquidity of Bauman (2012: 85). Fluidity can thus be a means of obfuscating forms of hegemony and overwriting the bodies of those who oppose it. For example, questioning the pre-eminence of white men in corporate America can be to question the apparent naturalness and structural fluidity of power relations (Ahmed 2017). In this respect, Ahmed has argued that fluidity is an effect dependent upon one’s own position: if we come up against a flow contrary to our own, then it becomes a wall that solidly resists our passage (2012: 187). In

such cases, one's own body becomes an impediment to fluidity and the smooth functioning of power (Ahmed 2017). An unquestioned submission to fluidity in systems such as digital networks is also a submission to systems of automation: in allowing ourselves to be carried along on such currents, we willingly give rise to- and help to entrain- the automated AI that might soon replace us. Automation and fluidity are seen to be increasingly conjoined throughout our analysis of dating platforms in the remainder of this chapter.

Despite dreams of resistance, the power of digital corporations to draw us into consensual flows and menus of options progressively signify the automation of the human. As Zalasiewicz acknowledges, we are not directors of the technosphere, but its components, constrained and compelled to keep it in existence for our own survival (2018). The process of human automation is enacted and evidenced by much of our everyday communication technology. The online digital tools and platforms that have become modes of convenience in our busy lives have also made our lives increasingly busy. We have become objects of bureaucracy, outsourcing and distribution in a workforce that is little more than serial components in a merciless machine. It has been stated by a number of authors that social media and digital platforms constitute the automation of social relations (Fuchs 2014; van Dijck 2013; Steyerl 2017; Lovink 2011). Geert Lovink (2011) claims that the 'social' itself has latterly become associated with amorality and individual interest (6). Attempting to find the 'social' in social media, he questions whether the term has been emptied of its former value by automated structures that entice us with their focus on individual utility. Jose van Dijck (2013) claims that social media automate, 'engineer and manipulate connections,' tracking 'desires by coding the relationships between people, things and ideas into algorithms' (12). In this respect, she alludes to the way in which desire itself becomes encoded and presided over by automated, algorithmic decision systems. Online dating

platforms can be seen to be complicit in this shift toward forms of automation, at the level of both the social and the subject. By automation we refer to the matching, exchange, collation and circulation of human data by algorithms at the behest of other humans. We explore some of the ways in which this automation is reflected in the translation of human desire into algorithms and liquidity.

3: BROKEN DATERS

Authors such as Heino et al (2010) have attempted to define ways in which the codes and practices associated with romantic love have been radically altered by dating platforms and big data, highlighting aspects of functionality and automation. The authors explore market place metaphors used to describe online dating, highlighting the functionality of the dating website and its evocation of e-commerce sites such as Amazon (2010, 429). In the context of the Amazon warehouse, with its robotic shelving systems and low-paid operatives, we might consider dating to be a precarious form of emotional labour on zero- hours contracts, where the impetus is on packaging and dispensing as quickly as possible. Here, romantic contracts are made and broken through the slightest sign of correspondence with the predetermined calculus of each user. Recommendations are quick-fire in anticipation of pending unlikelihood. The codes of romantic literature are redeployed to ends no longer determined by a single author who wants us to return to their romantic novels. Now, we have rather become the 'servomechanism of [our] own extended or repeated image', like McLuhan's Narcissus, who adapts to his own extension of himself and becomes a closed system (McLuhan 1991: 41). The author reminds us that *narcissus* is taken from 'narcosis', or numbness. Narcissus has no understanding that he is gazing at his own reflection; as far as he is concerned, he is gazing at one who returns his loving gaze (ibid). While daters

behaviour may be gradually 'automated' by the platforms that 'use' them, the automated matching algorithms of dating platforms can be considered to engineer forms of 'homophily' that recall McLuhan's closed system, where we are increasingly grouped with those most like us (see Chun 2017). The danger with such an insistence on likeness is that difference and otherness become markers of intolerance. Alternatively, we might be –and, judging by much journalism on the topic of online dating, are- constantly surprised by the reality that others have not got the same idea of appropriate romantic behaviour in a game whose conduct has become more differentiated and self-oriented in its outcomes. Today's online ghettos of similarity reflect the limited capacities of non-human agency to assimilate the complex decision making of human subjects in equally complex social systems. Yet clearly, the digital algorithms that match us by likeness also reproduce existing human bias, ensuring that stratifications of class-based and racialized hierarchy retain their collective force. The assumed disinterest of (and in) automated decision- making masks both their human engineers and users, potentially absolving either of perpetuating intolerance and socially divisive engineering. Automation then, is evident in the 'matching algorithms' that aggregate data in order to find patterns of behaviour that indicate likeness. In this way, algorithms deploy correlational methods to find patterns in human behavior through data. Such a method is not interested in causality, but in gathering and statistically analysing quantative data to fit various hypotheses. In this respect, conditions are described in order to achieve certain predetermined outcomes without analyzing the causal determinates of these apparent facts *as* facts. For example, if I want to know whether there is a correlation between those with higher incomes and heterosexuality, I may be well aware that higher income is not a causal factor in determining whether people are heterosexual. Nevertheless, aggregating these datasets may help in establishing certain likelihoods that assist in automated matching. This kind of (il)logic is the logic of the network, which is also the illogic of neoliberal markets. As Chris

Anderson has stated in an essay about the end of scientific theory, 'This is a world where massive amounts of data and applied mathematics replace every other tool that might be brought to bear…' After all, other means of understanding human behaviour can only ever give us a partial model of otherwise complex systems:

> Forget taxonomy, ontology, and psychology. Who knows why people do what they do? The point is they do it, and we can track and measure it with unprecedented fidelity. With enough data, the numbers speak for themselves… faced with massive data, [the] approach to science — hypothesize, model, test — is becoming obsolete (2008).

While individuals may still be unaware of the ways in which their participation in online dating platforms reproduces bias, others have already made careers out of trading the personal data of online subscribers. An entire industry of data brokers exists to capitalise upon users of the information highway. For example, the data broking company USDate, is registered in the US as a 'General Dating Industry Support Service'. Their website boasts '40 million dating profiles from around the world' and claims that users have agreed on legally binding terms to feature on other dating websites (USdate 2020). Potential buyers for this data are encouraged to populate new dating sites by purchasing existing profiles. It offers bundles of members by country, ethnicity, age, gender and sexual preference. Shoppers are invited to select quantities of pictures per profile. This trade in dating profiles is one of many ways in which the potential relationship between platform members is simply a cover for more covert operations. Indeed, the relation established between daters is not *the* relationship per se. The user becomes little more than a series of constellations that help to determine certain demographics by being assimilated into large subsets of likelihoods. The actual

relationship then, is one established between the singular consumer-dater and data brokers who are being provided with assets that can be turned over and made liquid.

In 2017, the NGO *Tactical Tech* and artist Joanna Moll, purchased 1 million online dating profiles for 136 Euros from USDate (Moll 2018). The purchase included almost 5 million pictures, and personal data including usernames, e-mail addresses, nationality, gender, age, sexual orientation, physical characteristics and personality traits. By analysing the metadata of the supplied images alone, the team were able to trace them to their original online source demonstrating how insecure our data actually is. We have noted that authors object to the utilitarian qualities of online dating that reduce human subjects to a series of functions for aptly named 'users', and that these automated systems reproduce existing stratification of the status quo. That we become as throw-away as any other obsolete post-upgrade gadget can certainly be existentially terrifying. Equally disturbing is the idea that our seemingly private romantic interactions now provide the fodder for 'data brokers' who buy and sell our profiles, complete with photos and personal data. This data provides a stream of value and a resource for research that no longer belongs to us, and whose apparent mundanity is a source of information rich determinates as data points: our sexual preference, our likelihood of voting for a particular political party, our smile, the way we tilt our head in a photograph indicating bashfulness. These are no longer fond particularities recalled by the singular beloved, but data points extracted by autonomous agents, trained to aggregate further spurious correlations as 'truths'. Thus, despite our relative technical sophistication, we can still exist in a world where visual recognition software is trained to infer traces of homosexual inclination in the distance between a subjects' eyes (Tactical Tech n.d.).

Shoshana Zuboff refers to the logic of accumulation in the network as *surveillance capital* (2015). She uses the concept to describe the 'migration of everydayness' into a

'commercialization strategy' (ibid 76). Companies such as Google and Facebook are cited as the arbiters of big data aggregation and extraction, which mine data as a raw material:

> Such data are acquired, datafied, abstracted, aggregated, analyzed, packaged, sold, further analyzed and sold again. These data flows have been labelled by technologists as 'data exhaust.' Presumably, once the data are redefined as waste material, their extraction and eventual monetization are less likely to be contested (ibid).

The notion of data exhaust may well make data seem excremental rather than productive. It may also suggest a polluting dimension that attends data output, on a par with those caused by the combustion engines in cars, that adversely affect human health. After all, it is likely that online activity contributes more to CO2 emissions than cars do today. A company such as Google processes approximately 47,000 requests per second, which represents 500 kg of CO2[2]. Taken collectively digital services create about 2% of global greenhouse emissions, equivalent to the entire aviation industry (Vaughn 2015). A real-time CO2 counter named CO2GLE[3] has been created Joana Moll to highlight the physical infrastructures that constitute our online existence and their power output. Data may feel weightless in its fluidity, yet it constitutes part of the 30 trillion tons of materials we use or waste, and which is the estimated weight of the technosphere (Zalasiewicz 2018). Leaving a trail of CO2 and bearing the same weightlessness as the collective human conscience, words of love encircle the globe as data exhaust.

[2] https://www.internetlivestats.com/one-second/#google-band

[3] On average, a visit to the sites emits 0,037gr of CO2: http://www.janavirgin.com/CO2/CO2GLE_about.html.

4. ZUCKERBERGS:

2019 marks the year in which a monument was unveiled to a melted- glacier in Iceland. One hundred years ago The Okjökull glacier covered 15 square kilometres of mountainside in western Iceland: 'Once 50 metres thick, it is now approximately 1 square km of ice less than 15 metres deep and has lost its status as a glacier*'* (Henley 2019). A commemorative plaque gives a reading of the CO2 in the atmosphere at the time, making an explicit link to the planetary effects of the technosphere. While quantities of the planet's ice are reduced to water, the fluidity of data begins to congeal to make new mass. In this case, *the databerg* prevails, evoking the temporary triumph of techno-scientific application over the biosphere. Databergs are huge quantities of data that cloy the database waiting to be categorised or deleted from the non-conscious dimensions of the digital corporation. In recent years, online storage vendors like Veritas, advertise against the *databerg*- likely to cost organisations trillions of dollars. Described as 'a looming data crisis', it is estimated that '33% of data on enterprises can be considered *redundant, obsolete or trivial* [ROT data]' (Siew 2016). Companies such as *Arcplace* use the analogy of the iceberg to distinguish between different strata of data value, only a small portion of which is visible 'above the waterline', while around two thirds of a company's data is, 'hidden under the water's surface.' The submerged part of the databerg is subsequently divided into ROT and *dark* data- which may contain mission-critical information that is unknown (Arcplace 2019). A recent study shows that as much as 80 per cent of data is dark data and only 0.5 per cent is being analysed (Krisifoe 2018).

The figure of the iceberg is an interesting one in a period where ice is melting across the globe at an unprecedented speed and scale. The rate of corporate databerg growth might well

be synchronous with the rate at which the icebergs are disappearing, particularly bearing in mind the condition of CO2 that attends them. The massive databergs of companies like *Facebook*, may well be the only glaciers left to the future. While all else 'melts into air'[4] or is otherwise distributed across the globe as the West's toxic techno- debris, data will reign supreme as 'proto-substance' congealing in every pore and circumstance. In the archaeology of *OKCupid*, we may one day be exhumed: our long period on ice will perhaps see us recirculating as data-bait for a dating site that is yet to come. Or perhaps we will be turned over to the frozen databergs of dark data. This is surely the fate of all daters: the IT graveyard of the romantic technosphere. The world's love letters, several meters below the visible data-line, gathering darkness, remembering the end of human time.

[4] A reference to Marx and Engels who, in 1848, suggest that 'all fixed, fast- frozen relations… are swept away, all new- formed ones become antiquated before they can ossify. All that is solid melts into air… and man is at last compelled to face with sober senses his real conditions of life, and his relations with his kind." (2008: 6). Although they are speaking about the bourgeoisie continually revolutionizing the tools and relations of labour, the paragraph has great resonance with the climate crisis today.

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