Architects of Time: Labouring on Digital Futures

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Drawing on critical analyses of the internet inspired by Gilles Deleuze and the Marxist autonomia movement, this paper suggests a way of understanding the impact of the internet and digital culture on identity and social forms through a consideration of the relationship between controls exercised through the internet, new subjectivities constituted through its use and new labour practices enabled by it. Following Castells, we can see that the distinction between user, consumer and producer is becoming blurred and free labour is being provided by users to corporations. The relationship between digital technologies and sense of community, through their relationship to the future, is considered for its dangers and potentials. It is proposed that the internet may be a useful tool for highlighting and enabling social connections if certain dangers can be traversed. Notably, current remedies for the lack of trust on the internet are questioned with an alternative, drawing on Zygmunt Bauman and Georg Simmel, proposed which is built on community through a vision of a 'shared network'.

Keywords
Bauman, control, future, immaterial labour, internet, Simmel, trust

Introduction

In this paper I will draw on contemporary theories of the net and labour informed by Gilles Deleuze and the Italian Marxists associated with the autonomia movement to perform an analysis of the control exerted through the net in relation to 'immaterial labour'. Reformulations of subjectivity and connectivity have been suggested by

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thinkers such as Bernard Stiegler and Alexander Galloway in which the very ways in which we think and come to conduct ourselves in the world are changing through our engagement with computer algorithms. These changes on the individual level will be situated within the attempts at control by states and corporations. Early net pioneers used the vast potential for connectivity which the net enabled to produce new working structures outside of, although inspired by, traditional capitalism to work towards utopian ideals of technological and intellectual advancement through radical openness. Latterly these productive free labouring relations have been replaced with leisure/labour ones which are quantified and monetized by corporations. It will be suggested, however, that such networked relations which have been appropriated by capital may provide potential for resistance within and through the structures of labour which they have produced. I will suggest that there is an emerging 'like economy' in which the work/leisure and programmer/user distinctions are collapsing. We are thus producing value for corporations and enabling forms of control over us through the exercising of a certain kind of digital freedom. Through drawing on the work of Zygmunt Bauman, Georg Simmel, Barbara Adam and Chris Groves, I will suggest there is potential for overcoming the individualizing and desensitizing tendencies of contemporary digital culture to produce more ethically engaged and collective social forms through the technologies which have produced such dangers.

Control societies

In recent years a small but substantial literature has built up around a Deleuzian analysis of the net most significantly influenced by his short paper 'Postscript on the Societies of Control'. In this piece he characterized contemporary societies as defined by control rather than discipline. Deleuze claims that the world of discipline and enclosure which Foucault (1991) described has been largely left behind. The freeway, rather than the panopticon, is the model of power today. This is because:

> A control is not a discipline. In making freeways, for example, you don't enclose people but instead multiply the means of control. I am not saying that this is the freeway's exclusive purpose, but that people can drive infinitely and 'freely' without being at all confined yet while still being perfectly controlled. This is our future. (Deleuze 1998: 18)

Control does not require individualization, enclosure and training; it is expansive and multiplying. The ways in which power is now exercised, he suggests, is through multiplying our freedom. Video games and other kinds of software, Galloway claims, 'fetishise control'. The gamer is not merely playing a simulation of a particular event but 'learning, internalizing, and becoming intimate with a massive, multipart, global algorithm' (Galloway 2006a: 90). Software, like any language, he claims 'wants to be overlooked' so that it can better function as a controlling system (Galloway 2006b: 320–1) through being taken for granted. The code and structure of the applications which run on the net are designed in order to make users feel like they exist in a state of total freedom and connectivity to anything in the world. But like the drivers on Deleuze's

freeway, the ability of users of the net to move through the world is free but structured. This has led some to suggest that algorithms and code are formally similar to ideology.

Wendy Hui Kyong Chun claims that software mimics ideology and ideology critique by 'conflating executable with execution, program with process, order with action' (Chun 2004: 27). This effectively disciplines programmers and users to behave and interact in a particular predetermined fashion while hiding its own tracks. Software, and particularly operating systems (OS), 'produce' users through interpellation. The OS is the way in which we access the hardware but this access is only allowed in particular ways. Imagery, text and sound also call to the user and constitute them in a certain fashion – think, for instance, of the perceived differences between users of Apple, Microsoft and Linux software (Chun 2004: 43). In his nuanced critique of Chun's assertion, Galloway (2006b) claims that in actuality the relationship between ideology and software is allegorical. He follows Kittler (1995) in suggesting that software is a 'machine' in the same sense that the computer is, only a 'higher' symbolic machine. Rather than software being a vehicle for ideology he sees it as enacting and resolving ideological contradictions within the software. Code, by encouraging users to 'overlook', can more effectively 'over look' – it can structure action while being entirely detached (Galloway 2006b: 320–1). While Chun presents software as a powerful means of ideological control she also argues that code has been fetishized in academic accounts as something magical and mysterious (Chun 2008). Alternatively, she positions computer code as a 're-source' rather than the 'source code'. It is something which is used by 'users' in certain ways which may be more or less structured or determined, but it does not have agency in itself. While the code does structure the actions of the user this is, of course, not totalizing. As Introna states in her Butlerian reading of algorithmic code, 'encoded events' do not just produce sameness but always contain difference in the form of a 'trace of the other' (Introna 2011: 118).

This other is present and experienced most commonly through citation and its dark alter ego/nemesis, plagiarism. Introna suggests that 'digital writing' presupposes 'reuse' of one's own work and that of others, whether this is in the form of citation or plagiarism. Value is not tied with individual ownership of particular commodities but with extensivity of connections. A piece of writing is no longer an individual work but situated within a network of other texts. These connections must be made explicit through links, otherwise the net community may accuse the writer of dishonesty. A new form of copyright (Creative Commons) has been developed with the purpose of allowing open distribution but maintaining intellectual ownership, although without any financial reparation. For Introna (2011) the intertextuality and citation which is built into the algorithms of the net follows the character of human agency, which is itself built on citation, and plagiarism. We appropriate the gestures, words, behaviours and practices of others in order to performatively (re)create our selves. The presence of the other is, then, always felt, regardless of their physical proximity. Whether or not this is a specific or generalized other, it necessitates a certain ethical engagement with the other. But as we increasingly create ourselves through online (inter)actions, Introna feels there is a danger present as the 'trace' of the other that is felt in our engagement with the code or algorithm is increasingly opaque. The danger she sees is in our ability to practise agency, as the codes which structure our lives online and offline become ever more complex and hidden

from most people's interactions. We are thus less able to comprehend the structures which constitute our subjectivity. It is increasingly difficult to use such structures for own ends, to cite them and reformulate them as we wish, as the encodings come to be seen as 'merely how the world is' (Introna 2011: 134). I sympathize with Introna's position but see a different danger, an ethical one highlighted by Bauman (1991) in another context. If the presence of the other is increasingly hidden it is ever more difficult to engage with them as an ethical subject. One of Bauman's greatest contributions has been to show the importance of the moral indifference which has been produced by modernity in its solid and liquid forms. Groups of people have been categorized as unworthy of moral consideration in various contexts since the birth of modernity – they have been 'adiapohorized' (Bauman 2011b). Bauman has shown how adiaphorization has occurred through forcefully placing people into particular categories. A different effect of language can be seen through Introna's work as the presence of the other in the language which we use to construct our identities becomes ever more opaque. If the resources on which we draw to performatively construct our agency are largely seen as immutable and – more importantly –inhuman, then we are both disempowered as individuals and less likely to perceive an ethical imperative towards the other.

This lack of moral engagement with the other is likely to be increased with the spread of what Cheney-Lippold (2011) refers to as 'algorithmic identities'. These are produced through the technological ability to analyse and collate digital data on individuals and collectivities. Through Cheney-Lippold's analysis we can see this as a new form of biopolitics which enables the aggregation of individuals through the collection, collation and analysis of user data to produce a picture of human subjectvity built out of searches and purchases online. Just as 18th- and 19th-century biopolitics rendered human beings manageable and predictable through the gathering of data and the disciplining of their bodies, this contemporary form uses digital data to enable management and control. Our minds and actions are being mapped online through searches, purchases, 'likes' and 'retweets' which render us predictable (anyone who has marvelled at the ability of Amazon or other online stores to predict what they will want to buy and present an advertisement for this product can attest to this). These new digital selves are not the 'deep' psyches of psychoanalysis; rather, they are like the genetic selves which Nikolas Rose (2003: 418) described as 'flattened out' and dispersed. They are comprised of digital 'traces', constructed out of purchases and searches. Those constructing such pictures from this 'transactional data' are not interested in understanding the psyche of the individual but something akin to the dispositional personality traits of social psychology. These dispositional possibilities are deemed to lie in a given object or person and can be derived from aggregated data but are attributed to individuals.

The US military is at the forefront of this technology, particularly in their one-sided 'drone war' with Pakistan, Yemen and Somalia (for detailed data see Rogers 2012). Individuals, and increasingly groups, are selected for a strike, but not on the basis of being identified as a specific threat. Rather, they are targeted through a profiling system; if their behaviour or location is deemed to fit a profile identified by the CIA, then they are deemed to be legitimate targets. These are referred to as 'signature strikes' aimed at 'target groups of men believed to be militants associated with terrorist groups, but whose identities aren't always known' (Entous et al. 2011). Determining targets is a matter

of intelligence analysis rather than intelligence collection, meaning that often the identities of the targets do not always enter the equation (Ackerman 2011). This approach has been aided by an approach to counting civilian casualties which 'in effect counts all military-age males in a strike zone as combatants . . . unless there is explicit intelligence posthumously proving them innocent' (Becker and Shane 2012). A security firm called Raytheon was recently revealed to be soliciting for defence contracts with a piece of software called Rapid Information Overlay Technology (RIOT) designed for precisely this purpose (Gallagher 2013). The software, through 'extreme-scale analytics', will be able to track online activity of where people are, when they were there and who they interact with in order to build a picture of them and decide whether they are a terrorist threat. The targets are deemed to represent a generalized threat due to their behaviour and interactions with others. It is their position within a network of actors and their movement through particular spaces which identifies them as a target. This kind of profiling is also taking place in the commercial sphere and has recently become more sophisticated as a US company, Tapad, is selling to major corporations a product they call a 'device graph'. This software uses '2 billion data points' to track and profile potential customers across devices they use to access the net, allowing marketing tactics to be even more individually tailored (Roberts 2013). As with the techniques used by the US military and the CIA, the Tapad software is making an educated guess that that the same individual is using the various devices. Google and other corporations are open about their desire to develop web search tools which will be like a 'cybernetic friend' and will know what you are looking for before you do. Human activity and interactions are increasingly being transformed into data which has vast potential for analysis and appears to be rendering our behaviour ever more predictable. The accuracy of such data analytics is perhaps not yet fully established but is being acted upon by governments and corporations nevertheless.

The philosopher Bernard Stiegler (2010) claims that with such technologies we are being governed through 'psychopolitics', or 'noopolitics', or a reprogramming of our minds. In Stiegler's assessment 'life itself' is no longer the sole object of biopolitical capture; rather, our minds are being programmed by technologies which 'capture, control and modulate' our psyches (Munster 2011: 71). There are some parallels between Stigler's account and the position of first generation Frankfurt School thinkers such as Adorno, Horkheimer and Fromm that capitalism interacts with the psyche in order to produce new kinds of selves which are more amenable to seduction. Like the Frankfurt School writers, Stiegler suggests that this reprogramming decreases our ability to be critical. Moreover, Steigler argues that the constant capturing of our imagination and associated 'neural reprogramming' means that it is made more difficult to 'care' for others and about the world in general. We are too busy 'attending' to electronic devices to care about anything or anyone else. This is, I argue, a somewhat narrow view of care which is not sensitive to some of the specific complexities of the history of digital culture. There are no passive viewers in the digital age, if such a person ever existed, as digital media requires active 'users'. But following Manuel Castells (2001: 36) we can suggest a distinction between 'producers/users' and 'consumers/users' of the net with Stiegler's critique perhaps more relevant for the latter group. What is distinctive about the users/producers is that they are actively engaged in collectively producing the structures of the net rather than merely consuming. Castells (2001: 37) also produced a

four-layered typology of the culture of the net: the 'techno-meritocratic culture', the 'hacker culture', the 'virtual communitarian culture' and the 'entrepreneurial culture'. The 'hacker culture' and 'virtual communitarian culture' at least are driven by collective rather than individual values with 'open source' programming and code central to the hacker community in particular. The iconic figures of these communities are Tim Berners-Lee (the 'inventor' of the World Wide Web) and Linus Torvald (the originator of the Linux operating system). Both men developed their innovations largely out of intellectual curiosity and a drive to produce something better, and they both openly shared it with the community in order to find improvements. As is well documented, the net was created largely by academics, although funded by the US military, who wanted to communicate and share research findings more easily. The ethos of sharing and openness, at least within a select group, was distilled into the very structures of the net partly due to the influence of the figures most influential in its creation, namely Vint Cerf and Robert Kahn (who, along with Berners-Lee, Marc Andreessen and Louis Pouzin, were awarded the first Queen Elizabeth Prize for Engineering for their work on developing the structures of the net and the web and its 'global benefit to humanity'; Arthur, 2013). While heeding Stiegler's warning, we should not conflate 'psychopolitics' with the net more generally, which has traditionally been a collective endeavour. After further addressing some of the control mechanisms of the net I will suggest that this kind of openness may itself provide potential for resistance and solidarity.

We will now turn to consider how some the kinds of analytics described above are being more directly monetized and used for more indirect forms of governing as well as being harnessed by users. Further potential impacts on subjectivity are visible when these developments are seen in relation to work and immaterial labour.

The 'like economy'

The kinds of 'transactional data' which are now being harvested by corporations, military intelligence and, increasingly, social scientists (Burrows and Savage 2007) are playing an increasingly important role in contemporary capitalism. It is clear that personal data is fast becoming the new 'virgin land' (Bauman 2011a) for capitalism with 'Big Data' emerging as one of the biggest buzz phrases of the time inside and outside of academia. While this is often referred to as 'by-product data' it is not, like exhaust fumes, a by-product of other processes; it is increasingly the target of the enterprises which produce it. People who write posts, submit photographs and 'like'[1] their friends' posts on Facebook are not working independently and autonomously and the product which they are helping to produce (e.g. Facebook as a lucrative advertising platform) is largely absent from their consideration. This is not, however, a simple case of individuals producing content that they love and care about and their labour being stolen by corporations. A significant proportion of the motivation for posting any content online, whether that is comments on newspaper articles or videos on Youtube, is to gain 'likes' or 'recommendations'. Posts are deemed to be more valuable if they are 'liked' or shared extensively. People are finding ways to monetize the like economy through websites such as Klout, which awards individuals a ranking out of one hundred based on their online influence, the level of their connections to others, how much their comments are

liked or retweeted. Their ranking is then translated into free gifts or benefits from shops and hotels. This free labour of 'users' of the net has recently been recognized by the French government who have effectively reclassified net users as unpaid labourers, thus justifying the introduction of a tax on the collection of personal data (Mahdawi 2013). This 'like economy' is a form of labour freed from the enclosures of modernity and one which is driven by seduction rather than wages. In today's world we are no longer individually drilled to produce 'marching columns' but attracted to dazzling and exciting stimulations like bees drawn to flowers (Bauman 2011c: 55). This 'government of the swarm' is perhaps the most advanced form of neo-liberal 'governing at a distance' as it is a governing that appears not to be. The constant interconnection with 'techno-linguistic automatisms', Berardi (2012: 14–15) tells us, enables networks to produce pre-determined pathways. These are not routes we are forced to take; rather, 'in the digital age, power is all about making things easy' (Berardi 2012: 15).

Similarly, the management of time through the 'like economy' is radically different to the modern, disciplinary approach to time management and division of labour. The Benedictine approach to time management which held sway for centuries in which the day is divided into different parts, signalled by the ringing of a bell, during which time workers had to engage in particular pre-prescribed tasks (Adam 1990), is no longer relevant. This enclosure of time as well as space achieved standardization of productive labour through the disciplining of bodies on an individual and group level. Labouring bodies had to act according to restrictions of movement and time. This enclosed economy restricted the actions of individuals in order to maximize collective output. The 'like economy' functions through maximizing the ways in which people can labour, and seducing them into engaging with them, all for the same output, high quantities of likes, page impression and views. Time is not restricted in the like economy, labour does not have to be conducted at particular times – ideally, it would be conducted all the time alongside any other activities. To understand the like economy it must be contextualized within the development of computer programming labour, in particular the significant shift in the division of labour signalled by the invention of the personal computer (PC).

The invention of microcomputers and later PCs enabled a new approach to computer work which would be mirrored in the wider economy. Before the invention of PCs, computing was conducted on mainframes which were comparatively huge, filling a room. A university, institution or company would likely own one, due to it being prohibitively expensive for an individual, which would be shared between all of their departments or sections. Individuals would book time on the mainframe to perform the tasks they required. The labour that could be conducted on it was fixed by the processing speed of the computer and the hours in the day. At this stage the computer is a 'monumental technology' (Sawhney 2004: 368–9) which is centrally controlled, as is the labour which is conducted on it. When PCs were introduced they were christened as such because they did not need to be shared with others. This was a dedicated machine for an individual user. The processing power of the machine was always at the user's disposal. The amount of computing that could be done was only limited to the time the individual had available, within the limits of the processing power available at that time, rather than the schedule of the machine.

Computer code is constructed in such a fashion so that individuals can work on particular modular parts of the code almost entirely independently without needing to have any understanding of the whole. Yet their collective endeavours produce the product (e.g. the piece of software). This is a working practice which is made possible by the personal computer and by 'data abstraction' which involves hiding information from the programmer or user. Data abstraction is used because it is thought dangerous to expect a programmer to understand too much of the whole system; it is better to give them an elegant interface that enables them to conduct their immediate task without worrying about the details (Chun 2004: 37–8). The kind of division of labour that 'data abstraction' enabled in programming is consistent with broader changes in labour practices and organization. Sawhney (2004) suggests that the decentralization of organizations which comes with the proliferation of a technology such as the computer brings a concomitant shift in value systems. The contemporary work ethic prioritizes flexibility and teamwork on temporary projects with long-term commitment to colleagues and attachment discarded. Power is exerted through the value system and the culture of work rather than through the centralized disciplining of individual tasks. Individuals have greater freedom within broad confines specifically: the 'new value system gives employees flexibility of action areas that enhance system efficiency and yet restrains other behaviors that would be disruptive' (Sawhney 2004: 367). It is through the freedom of individual workers that control of the system is maintained. The workers in such a system have to internalize the values of flexibility, detachment and independent expression in order for the system to function. While the individuals are free, in certain terms, their exercising of this freedom benefits the efficient, productive functioning on the level of the system and perpetuates other restraints which they are discouraged from regarding as such.

Subsequently this approach to labour time has been taken up by corporations such as Facebook and Google to enable new forms of labour and its exploitation. The users in the 'like economy' are labouring according to the same principles of software production (although de-skilled) to manufacture a product: collective, aggregated data on themselves. What is occurring in the like economy is crucial for Deleuze's 'societies of control' and consistent with the notion of 'immaterial labour' developed by Italian Marxists such as Maurizio Lazzarato (2006), Christian Marazzi (2010) and Paolo Virno (2008). Immaterial labour produces value through the 'general intellect', not just the working time of a traditional view of labour:

> but a general productivity of the social body – dispersed through technologies and human bodies, connected in new, shifting assemblages . . . In this context, the creation of wealth no longer depends on the working time narrowly defined, but coincides with the whole time of life. (Terranova 2006: 29)

This new Marxism of immaterial labour tells us that what 'modern management techniques are looking for is for ''the worker's soul to become part of the factory.'' The worker's personality and subjectivity have to be made susceptible to organization and command' (Lazzarato 2006: 133). The like economy achieves this quite effectively as users can 'work' on Facebook or Twitter alongside all of their daily activities and transform virtually every moment of their lives into valuable data. Moreover, users turn

their own personalities and subjectivities into quantified measures easily aggregated and compared. Lazzarato also stated that public opinion, in the quantified form of opinion polls and surveys, is the first institution of 'control societies' (Terranova 2007: 140) as this kind of control requires data on the population in order to govern it through its freedom. The like economy is crucial for this as it provides vast amounts of quantified 'opinion' on diverse topics. The labouring in the like economy is the deskilled version of the higher forms of immaterial labour as it is an engagement with cultural products and as a consumer/user, but nothing is produced on the individual level. When the vast quantities of likes are collated and aggregated, however, they become valuable and productive for the corporations who have the means to exploit them financially. The economy is now a 'semio-economy' almost entirely concerned with meaning and language as the connection to material labour has been broken (Berardi 2012: 19). The only productive labour left to many is to incessantly 'like' endlessly recycled ideas and images.

Digital futures

While the picture presented so far may seem somewhat cynical there is significant reason for hope in the future of digital networks and the ways in which futures can be collectively discerned through digital technologies. Adam and Groves suggest that modernity has changed the way in which the future is conceived, moving from a fixed future which could be discerned by gifted individuals such as fortune tellers to an 'open' and 'empty' future which brings with it a responsibility to intervene. They draw on Niklas Luhmann's distinction between 'present future' and 'future present'. The former is utopian and 'empty' with any potential futures lacking in reality (Adam and Groves 2007: 200). The latter sees the present and future as being situated within ongoing processes with the future as being amenable to intervention and able to be realizable. They suggest that contextuality and embeddedness are being replaced with decontextualized and disembedded relations which lead to a rise in uncertainty and indeterminacy (Adams and Groves 2007: 55). This brings a challenging situation in which people are expected to be responsible for a future which they do not, and cannot, know. This returns us to Stiegler's concern for the lack of care for others he saw as being produced through taking care of our electronic devices. It is, rather, the standardization of time and the abstraction, quantification and commoditization of labour time which has enabled all forms of capitalism up to and including that seen in the 'like economy' which should be of concern. The future is something which has been emptied of meaning and specificity and transformed into a tradeable commodity, often literally in a 'futures market'. Care, Adam and Groves (2011: 22) claim, is something which is future directed but always engaged with specific individuals; it is something concerned with the futures of others and the ways in which they are tied in with our own. It is concerned with the unfolding potential of the individual and the impact of the present on the future in relation to the 'the weaving of a common fate with others' (Adam and Groves 2011: 23). Caring for others has to be entangled with a concern for their future; this has perhaps become increasingly difficult in a context in which futures are 'empty' and standardized as well as being structured for us in advance by computer programmers largely working with the interests of maximizing their ability to harvest data which is valuable to advertisers.

It is vital to assert that this is not the only way in which the net can be used, and while it may seem to be particularly amenable to the demands of capitalism it is also a device for radical connectivity. Naughton has suggested that one of the key functions of the net is that it demonstrates social connections by giving them a visible form. This may, I propose, form the basis for a socially transformative potential for the net. The great sociologist and philosopher Georg Simmel famously proposed the inevitability of the 'tragedy of culture' – that all forms of culture tend towards becoming increasingly complex and differentiated, meaning that holistic understanding becomes increasingly difficult. Zygmunt Bauman (2000) reasserted Simmel's insight through his notion of 'liquid modernity'. The complexity of contemporary societies paradoxically, he suggested, creates a dearth of understanding. Following Naughton's assertion, we can perhaps see the net as a way of combating the 'tragedy of culture'. In this sense the net can be seen as a crucial tool for demonstrating social relations and interdependencies including our shared investment in one another's specific futures. While the net is explicitly a conglomeration of individuals with their interconnections made visible, often the circumstances, such as those described above, encourage us to not see or value the presence of the other in our digital interactions. This reduction in a moral impulse is unlikely to concern the mega corporations which dominate the net, though a particular manifestation of it has come onto their radar in the form of a lack of trust by users in others and in companies to whom they surrender their personal details or hand over their money. The answer of the corporations, however, is more data. According to Facebook's chief operating officer, Cheryl Sandberg, and director of policy in Europe, Richard Allan, people want to know that those they are engaging with online are using their 'authentic identity' (Krotoski 2012). It is therefore required that people use only their real name, or what appears to be one, when signing up. It is claimed that this is for reasons of security and trust, so that we know who we are interacting with online and whether they can be trusted. Most websites now require their users to create an account in order to use them in any meaningful way. They also increasingly suggest that we login with our Google accounts. This helps to create a situation in which all online interaction is tied together, creating a cohesive digital identity for each individual – a situation which of course is highly useful for marketing. This does not, however, create an atmosphere of trust or mutual respect. Some of the worst abuses of trust or verbal abuses are committed online by people who are not trying to hide their identity in any fashion and even know their target in person. The implication of the position on trust is that we can only trust people whom we have vast amounts of information on so that we can assess their trustworthiness. Trust is, the OED informs us, the 'firm belief in the reliability, truth, or ability of someone or something'. It is a belief in, not a knowledge of, something.

The problem of trust is a relatively new one for net users. One of the two core founding principles of the net, in the form of protocols, was that it would have no centralized control (Naughton 2012a: 66–71). To the early adopters this did not mean it was an amoral space or even one governed by consequentialist ethics or anarchy; rather, it was a community of trust. The negation of trust was not a significant issue for these early pioneers of the net because it was built, and almost exclusively used, by a group of like-minded, often idealistic researchers and 'hackers' who were part of a community

who largely trusted one another (Naughton 2013). This trust is profoundly absent from the contemporary, mainstream net. The early net users shared information with little concern for individual rights – indeed it was designed for sharing. They were driven by the collective desire to improve the applications which it enabled and would share code and ideas with one another, sometimes to find the most useful applications but often just to create the 'coolest' one. Today net users are usually tied to their real world identity much more stringently than in the past but are far less trusting of one another.

The mistake which the executives make is that they assume that trust is something that can be quantified and assessed. For Simmel, trust was extra-social, outside of the social. He stated that:

> Without the general trust that people have in each other, society itself would disintegrate, for very few relationships are based entirely upon what is known with certainty about another person, and very few relationships would endure if trust were not as strong as, or stronger than, rational proof or personal observation. (Simmel 2004: 178–9)

The implication is, then, that trust is counterfactual. Trust is a precondition for the social which could not exist without underlying, perhaps irrational, trust in others. It cannot be generated through detailed data on viewing habits or book purchasing history. Even in the relatively anonymized modern metropolis which Simmel (1997) described, this relatively blind trust was still present and necessary. Seemingly paradoxically, however, the early net, while a more trusting space, was much more anonymous. Indeed, anonymity was one of its founding principles; the cyber liberationists and hacker communities saw the net as a potential space in which their everyday, fleshy, geographically-bound identity could be transcended. Trust was achieved not because users knew precisely who they were talking to and where they were but they knew that if they were a fellow user they must be like them. Despite the distrust many people retain of the net, users are much more bound to their established identities, locations, bank accounts, addresses and employment histories than they have ever been before. Indeed while using the net we are much more tied to identifiable markers than in the 'real' world. Despite all of this data on us and all of the identifiable markers we are not terribly trusting. The online social fabric is in danger due to a lack of trust which cannot be remedied with ever greater data gathering.

Trust in the benefits of human solidarity is, for Bauman (2009: 149), the meaning of belonging, but this trust requires a sense of an 'imagined totality', a 'shared network' which enables collective solidarity. The embodiment of this in modernity was, Bauman suggests, the social state, which was tied to the everyday reality of people's lives through social rights. Trust and belonging are intimately tied and a sense of being part of a bigger whole underpins both. This is perhaps why an everyday trust seems relatively easy in many societies; we trust that the bus or the train will take us the way it usually does, that if we hand our money over to a shop attendant they will give us goods in return. The freedom born of trust that many people enjoy every day is founded upon collective solidarity, a sense of what the society is. Trust does not require extensive data on an individual but a belief in the society as a whole. The social state, which in many countries where it has existed is being systematically deconstructed, gave us a picture of society as

a whole and told us what our stake in it was. This was clear to the early net adopters too. They were scientists, 'hackers' or 'geeks'. They were united around particular interests, mostly developing better applications for the net or discussing science fiction. There is, however, no social state for the net, and decreasingly one outside of it. Perhaps one could be developed, but this does not need to be built on ever more detailed knowledge of others but on having a shared sense of identity and belonging.

Conclusion

The net is a powerful tool for the multiplication of freedom in the style of Deleuze's freeway. The cloud-based net which is coming to dominate allows users to do almost anything as long as it generates useful data for the owners of the site. Corporations and governments are trying to exert control over the net in the name of freedom and fulfilment through enabling certain kinds of expression and communication and blocking others. Both are also monitoring an increasing amount of our lives through the harvesting of digital data and in the process potentially constituting new digital selves. These digital selves of course can be resisted but are already proving seductive to many, with the previously mentioned website Klout enabling the exploitation of such data by individuals for discounts or free goods. Social movements are, however, also emerging around particular forms of data analytics. The 'Quantified Self' (QS) movement was formed by two former members of Wired magazine and provides a space for users of 'body tracking' devices to congregate. Such technologies provide individuals with data on their physical movements, sleep patterns and a variety of other 'body metrics' and other data about their everyday lives. The Quantified Self website describes the community as 'a collaboration of users and tool makers who share an interest in self knowledge through self-tracking. We exchange information about our personal projects, the tools we use, tips we've gleaned, lessons we've learned' (http://quantifiedself.com/about/). This is a group of people who are using technologies and data which have been designed largely to track and monitor them as consumers to increase their 'self knowledge' in the hope of leading healthier, happier lives. They are willing to share their data, experiences and resources with one another and are using these technologies to construct supportive communities not only on the net but through the kinds of data made possible by the connectivity we now experience.

There are significant social and ethical concerns about these kinds of technologies and the ways in which they may be used for surveillance or the potential for further individualization of health (for an overview see Lupton 2012), but seemingly a community of identification has been built up. Without further investigation it is difficult to determine whether trust is part of this but there seems to be at least a limited 'shared network'. Crucially, this is a community built on values. Whether or not these are ones we might share is another issue, but the possibility for something transformative may be present. While a movement such as QS is not explicitly political it seems to have an underlying concern with self-realization and libertarianism which would fit with certain political leanings associated with Wired magazine from which its founders emerged. Nevertheless, structures such as those established by QS could be useful to the increasing ranks of people giving all of their material and 'immaterial labour' over to employers who give

them only intermittent and insecure employment with few benefits. This 'precariat' (Standing 2011) are in such a position because of the disconnected and atomized working processes which have been enabled by contemporary technologies. The accumulation and aggregation of the activities of individual workers (paid and unpaid) is currently only visible or deemed useful to corporations and states. Due to the disjointed character of the state of precarity and those existing in it, Neilson and Rossiter (2011: 64) warn that it may not be sufficient to establish a common cause. They do, however, see potential in what Dyer-Witheford (2006) called the 'networked commons'. 'Creative collaboration' and 'shared-use' through open source and network commons, if it breaks out of the realm of only the distribution of 'immaterial goods' or 'intellectual production', could reinvigorate the commons (Dyer-Witheford 2006). He imagines 'peer to peer networks of microfabricators running on open-source software' (Dyer-Witheford 2006). This situation has already started to become a reality with the relative affordability of what are now referred to as '3d printers'. The QS movement itself is nevertheless seemingly consistent with the 'ferocious mathematization of the living body of society' (Berardi 2012: 33) on which contemporary 'financial capitalism' (Marazzi 2010) is built. If more politically motivated groups than QS were to take forward Dyer-Witheford's suggestions and to mobilize around 'data harvesting' techniques to collectively control or produce data on themselves then the demonstration of social relations could perhaps be made visible and transformative through the net. If reappropriated for other ends, technologies and practices which have helped to produce adiaphorization, mistrust and hyper-consumption could be used to generate awareness of the 'shared network' of humanity and provide practical ways through which solidarity could be maintained. In a discussion of Facebook and Twitter Bauman (2012) sagely asserted that 'one can use axes to hew wood or to cut heads. The choice does not belong to axes but to those who hold them'.

Note

1. The social networking site Facebook enables, and encourages, its users to 'like' posts, photographs, videos and any other content submitted by other users or companies. This expresses the users' interest in the content and also provides individual and aggregated data on preferences for such content. Facebook's official explanation is that 'Clicking Like under something you or a friend posts on Facebook is an easy way to let someone know that you enjoy it, without leaving a comment' (emphasis in original, http://www.facebook.com/help/452446998120360/).

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