The Function of Time in Marcuse's One-Dimensional World, and its Relevance in the Networked Society

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ABSTRACT: In the 1960s and 1970s Herbert Marcuse's *One-Dimensional Man* exerted a profound influence on revolutionary politics and on theories on the effects of capitalism as a system of "total administration." Its analytic power began to fade, however, as capitalism itself began to radically transform in the 1980s. Apart from its historical significance, the work is largely overlooked today. This essay, however, seeks to recover the considerable diagnostic power and political relevance that the book still has. Centrally, it is argued that through a *theory of temporality*, it is possible to see that Marcuse over-determined the power of clock-time under 1960s Fordism, and therefore over-determined the power of "total administration." However, by developing and applying the theory of *network time* for our post-Fordist age, the new "temporalized" perspective gives Marcuse's core argument new significance and gives a more positive and potential-filled dimension to his ultimately negative political and philosophical vision from the 1960s.

KEYWORDS: Marcuse; time; network society; political theory; capitalism; one-dimensionality

Introduction

Tt is not so easy, from our 21st century viewpoint, **⊥** to appreciate fully the impact and influence of Herbert Marcuse's One-Dimensional Man (hereafter ODM). The book first emerged in 1964 at the height of the post-war industrial boom, a time of "high Fordism" when that particular mode of production was at its economic and cultural zenith. It influenced a generation of radicals in the USA and beyond, through advancing its grim thesis on the anesthetizing and shallowing effects of capitalist consumer society and its outrider, technological "progress." Marcuse argued that the planned predictability of the Fordist way, with its logic of mass production for a mass society, was creating "new forms of social control" through a totalizing instrumental-rational productive mode that was expressed through the one-dimensionalizing of our ontology, of our society,

and of our very modes of thought that were being increasingly shorn of their critical capacity (Marcuse 1991:1-19). The book's influence began to wane as the decade turned, however. The last edition appeared in 1991 and Marcuse's sphere of influence has since retreated to the remoter corners of the social/political theory departments of the university - departments that are themselves a dwindling presence in our post-Fordist and neoliberal/networked age. Through the perspective of a social theory of time, this essay looks at the reasons for the decline of Marcuse's ideas and develops an argument which posits that his ideas on one-dimensionality are in fact more relevant than ever in these early decades of the networked age. More, it argues that they can and need to be revived and imbued with the agency of a new praxis with which to bring what he himself termed "the chance

of the alternative" to a point of (at least) plausibility (ODM:203-259).

It is ironic that Marcuse's relative obscurity today is a direct and proportional effect of the accuracy and profundity of his own one-dimensional thesis. Today the deepest logic of the capitalist industrial processes of social domination, of instrumental rationality and of the commodification of anything that may be sold, has entrenched itself far beyond the industrial-age Fordism that Marcuse analyzed, and far beyond the liberal-democratic West that was the orbit of his thought-world. What Marcuse termed the "closing of the universe of discourse" has become universal through neoliberal globalization; and network information technologies have allowed the cash-nexus to colonize, almost to completeness, the inner spaces of culture and society (ODM:19-56). Though not fully "total," a one-dimensional culture is certainly global in that the market logics of individuality, of consumerism and the presence of the Anglo-American derived cash-nexus in almost every sphere, is now preponderant (Sandel 2010:1-15).

A Digital Context for One-Dimensionality

As a product of critical theory, any proper appreciation of Marcuse's one-dimensional thesis must come through the application of critical thought. As I will argue in some detail below, in the 1960s there was still space and time for the growth of the intellectual habit of critical thought, and therefore a more effervescent critical culture enabled his ideas to have wider purchase. This was possible, in part, because across the West, a critically oriented New Left had been supplanting 1930s Stalinist dogma; and socialism (or its social democratic variants) appeared as vibrant and seemed to characterize the political and economic shape of the future. Liberal economist Milton Friedman famously summed up the ideological difficulty faced by conservatives in the West at the time when he said that "We're all Keynesians now." However, in our post-Fordism, the relationship with space and time as the context for reflexive thought is now characterized and shaped by their digitalization (Lash 2002:13-26). Today, information (and information technologies) are the foundation upon which capitalism is now largely constructed, and information as the basis of knowledge and critical thought is becoming both instrumentally oriented towards the needs of capital, and information re-produces itself in ever-growing volumes and at ever-quickening speeds. Again, as I will show, in this networked society, through what I term 'network time' a form of temporal experience is created that seeps into every nook and cranny of life, leaving less space and time for the critical reflection necessary for the development and implementation of critical ideas. Nevertheless, as I will also show, a critical understanding of the space-time of the network can enable people to exploit the potential of network time for more social and collectivist ends. Indeed, as I will conclude, a critical temporal analysis of time and politics in our neoliberal and networked age is perhaps our best chance for the kind of "alternative" that Marcuse has such slim hopes for.

This unfolding of a *digital one-dimensionality* – of a society of "one-dimensional thought" as Marcuse termed it – is wholly in accordance with the logic he revealed in ODM. Moreover, through the specific logic and ubiquity of computing, technologies that are designed and deployed to produce a specific orientation towards information and knowledge has an effect that "unfolds" as a kind of generalized socio-political dementia: the *more* the relationship with information and knowledge in networked time and space makes us less able to think critically on a broad social level, then the less we are aware that our capacities for critical theory and critical action are being diminished (Hassan 2012:155). At its most serious level we witness this in the realm of Left politics. It was Perry Anderson - intellectual embodiment of the 1960s New Left that Marcuse's ideas helped launch - who recognized that neoliberalism is now so dominant that "there are no longer any significant oppositions - that is, systematic rival outlooks - within the thought-world of the West" (Anderson 2000:17).

Generalised economic crises in the 1970s triggered the technological transformation of the Fordist mode of production. It created what Dan Schiller (1999) calls a "digital capitalism" – a resurgent and radical liberalism that over the 1980s and 1990s not only transformed the productive base of capitalism,

but also inflicted a historic (and arguably terminal) defeat upon the traditional Left across the world. The eclipse of Marcuse's influence was thus accompanied by the downward trajectory of a century of progressive political ideas that spanned from classical Marx to the New Left – and reaching to the reformist strands of social democracy that had made positive changes in the lives of millions in the West (Judt 2005). At the same time, of course, the arc of the ideas of Friedman, Hayek and their neoliberal political adherents, was to rise to heights of domination – the grip of which we feel today – that neither Marcuse nor anyone else could have predicted.

Much has been said and written about the rise of the neoliberal age and the technological and political transformations that came with it. However, in the large literature that has concerned itself with the network society, and with the society of speed and of instrumental capitalism, relatively little has been said about its connections with Marcuse, notwithstanding the fact that much of what he gave insight into has proven accurate. To explore and evaluate the processes of the last thirty years, in a way that would bring Marcuse's ideas once again to some salience, it is necessary to "temporalize" the analysis. That is to say, to insert a theory of time at the centre of our thinking on Marcuse's one-dimensional thesis and on the structural reasons for its demise as an explanatory framework for the logic of capitalism. Such an analysis will not only give fresh power to the continuing relevance of his work, it will also provide a key to a new understanding of his thought that will give perspective into how it may be revived as a political analysis that can have real-world applicability. Firstly, though, it is necessary to step back and to contextualize Marcuse's ideas in their original time and space.

Marcuse's One-Dimensionality and Marcuse's Capitalism

The economic context of Marcuse's thought-world is of course very different from our own. The productive forces of society in the 1960s were dominated by Fordism; a modality (and logic) that had reached a very high degree of sophistication, and in the West had achieved a very deep level of penetration into culture and society. As David Harvey noted, Fordism

as a "regime of accumulation" had become a "total way of life" that went beyond the routines of production in the factory and office, to create a "whole new aesthetic" based upon standardized rhythms of production and consumption, to produce a deeply rooted "commodification of culture" (Harvey 1989:135). This process had roots that are traceable back to the machine culture of the Victorian age - and were augmented to a much higher degree through the Taylorism that was grafted onto it in the early part of the 20th century. Not so well recognized is that this Fordist lineage, as Harvey observes, can also be linked to that early and influential computer theorist of the Victorian age, Charles Babbage (1989:135-6). This particular ancestry, as we will see, only takes on its fullest significance in our own time.

The political context was also very different. The capitalism of Marcuse's age, based directly as it was in the first industrial revolution, produced essentially the same class cleavages as its Victorian antecedent. And so even in the advanced capitalism of the 1960s, politics was still discernibly organized around fairly traditional class polarities. Marcuse saw vibrant workers struggles, but he saw in these only the circumscribing logic of rational administration, where workers irrationally fought mainly for a stake in the system that oppressed them. The fetish for consumerism and the collective alienation that Fordism and Taylorism had brought meant for Marcuse that workers were now unable to recognize or realize their own collective interests, so powerful had advanced technological society become. With the source of human liberation so deeply locked into the logic of capitalism, Marcuse saw only a 'closing of the political universe' through the mass assimilationist mechanisms of advanced industrial society (ODM:19-55).

The rationally administered society that Marcuse theorized had its origins in Max Weber, whose shadow fills the pages of *ODM*. Marcuse extends Weber's 'iron cage' thesis of rationality to incorporate the analysis of Fordism as he saw it at the peak of its productive powers; taking it also into the cultural and political context of the USA, where standardized mass production and mass consumption seemed equally at their zenith. It is my argument, however,

that the machine-based Fordism that served as the locus of the technological order that would exert such exquisite technological control over men and women in the advanced industrial age, was for Marcuse the logic of something approaching perfection: an internally coherent system of mathematical precision where technological rationality had produced both the material ideology in the guise of its pacifying commodities, as well as the illusion of human progress unfolding over time.

The notion of time - or more precisely the function of temporality - is key here, but Marcuse gives it only marginal significance in his critical theory. Time is treated in his work in a wholly conventional way, with the clock functioning as mere backdrop to the active social and economic world. It enters his narrative only as a point of reference in terms of its expropriation and commodification through the standard Marxist critique (ODM:37-8). However this unreflected-upon and taken-for-granted time permeates ODM and gives to its logic a power and inevitability that is ultimately unwarranted. It is true that the time of the clock had shaped capitalism to a degree that is only beginning to be appreciated. For example in the 1930s technology theorist Lewis Mumford observed that it was the "clock, not the steam engine, [that was] central to the Industrial Revolution" (Mumford 1967:14). And in the 1960s E.P. Thompson described the effect of clock time on society as an indispensable disciplining force over capitalism and over those who worked within it (Thompson 1991). These influential theorists viewed time as both technologically and socially produced, and as such time was thus contingent upon technological and social (political and economic) conditions. However to view clock time as a specific rhythm of modernity - which is only a short step of interpretation from the insights of Mumford, Thompson and others – is one that Marcuse didn't take. Accordingly, by implying that the clock of advanced industrial societies was somehow "timeless" he argues that its unerring rhythm would always be the time of capitalism. Marcuse's one-dimensional society therefore seemed to possess a totalizing potential, with the ineffable power of clock time as scheduler of machines and lives functioning as the mainstay of the

operation of capitalist society. It was this imputation of the unchanging rhythm of capitalism, a rhythm made even more powerful and unstinting through the growing pervasion of technological automation that gave Marcuse's one-dimensional thesis a kind of implacable force. He saw that workers were "being incorporated into the technological community of the administered population" where 'the machine seems to instill some drugging rhythm' into them - into their thought-patterns, into their political outlook, and into the administered society more broadly (ODM:26). For Marcuse, then, the unchanging clock acted as an unstoppable force that gave to capitalism a power so natural that alternatives to its rhythms (other, possible, temporal relationships) are not even contemplated.

The temporal assumptions that underlie *ODM* are a major flaw in the work. They cede too much power to the clock-rhythmed logic of total administration and therefore make his thesis ultimately too deterministic and pessimistic. Nevertheless the passage of historical time and with it the technological revolution in computers and the new relationship with time that this has brought, allow us to consider what is still relevant in the work. And there is a great deal. Marcuse saw accurately enough what technological society had become, and his thesis on one-dimensional society and the pervasion of one-dimensional thought seem to be borne out in a global condition based today upon consumption and a growing monoculture of capitalism. But for Marcuse, time, politics and economy seemed to be set upon a specific course of rationality, where the course to domination was calibrated by the unchanging temporal logic that was based upon an essentially 19th century machine-culture model of capitalism. From the perspective of any hope for what Marcuse termed the "authentic self-determination" of freedom it has to be said that politics have changed, and have done so for the worse (ODM: 251). And in terms of basic fairness and social justice, the economy has changed too, and also for the worse. However, if we continue with the frame of temporal analysis, it is possible to see that our post-Fordism has an inherent unpredictability that its predecessor did not, and within this unpredictability there exists possibilities

for political change, and for forms of change that are more attainable than Marcuse imagined.

The Eclipse of Clock Time and Fordism

Even as he wrote ODM, Marcuse's Fordist world was coming to an end. The "transition to flexible accumulation," as David Harvey termed it, was a slow-burning process that had reached crisis point by the early 1970s. The continuing profitability of a machine-based and inflexible system was increasingly problematic as capitalism became more complex and competitive across the global scale. As Harvey wrote (and Marcuse was acutely aware of this of course) Fordism had continually "been pushed to new extremes of rationalization" (Harvey 1989:32). These "extremes" were the expression of technological innovation driven by ever more ferocious competition. However, the Victorian age machine mode was reaching a point of maturity beyond which the competitive edge of innovation was more difficult to find. A perceived "solution" to this contradiction at the heart of Fordism provided an historic opportunity for the computer to come into its own.

As noted previously, Fordism has its rationalizing and efficiency-seeking roots in the influential work of Charles Babbage. Babbage was one of the first to be convinced of the efficiency-oriented connections between mathematics, the functioning of the mind, and the processes of production. A computing "engine" was for him the technology that would link and enhance all three, with the objective to "ground and organize the operations of intelligence into an efficient atemporal system of production" (Ashworth 1996:635). The ancient algebraic logic that stated that the mind is analogous to a computer, and mirrors the practical efficiency of a computer, is the basis of what Babbage held to be the central linkages in his search for the ultimate in human efficiency, which was to be nothing less than the "automation of reason" (Bullock 2008:19-39). Indeed, the human mind as representing an organic form of computer was a concept that was to find even more influence in the early theoretical and practical computer innovations in the mid-20th century through thinkers such as Alan Turing, J.C.R. Licklider and Norbert Weiner, whose ideas would eventually produce the Internet and network society.

Much of this is familiar, though not in the context of Marcuse or in the context of temporality. If the clock was the fundamental technology underlying the development of industrial age capitalism of the kind Marcuse analyzed when it was at its apogee, then today it is the computer. In 1984, J. David Bolter, writing in his *Turing's Man: Western Culture in the Computer Age*, was prescient about the importance of what was then happening. The computer, he maintained, was shaping up to be the "defining technology" and the key to understanding the stupendous changes taking place in our age. This was because computers were special in terms of their effects. He writes:

With the appearance of a truly subtle machine like the computer, the old power machines ... lose something of their prestige. Power machines are no longer agents on their own. ... now they must submit to the hegemony of the computer that coordinates their effects. [1984:8]

Computerization transformed capitalism. It made possible the transcending of the Fordist mode and placed economy, culture and society on a new organizational level. By linking Bolter back through to Babbage and his contemporaries and to the underlying logic of efficiency, we can see that by way of the information technology revolution economy, culture and society begins to transcend the clock in a way - and to an extent - that Marcuse, nor any of his own contemporaries could have imagined. And so to Bolter's list of "old power machines" we must now add the clock. Marx showed in some detail in Capital that speed of operation in production processes makes commodities cheaper and more competitive. Marx, however, like Marcuse, did not see a world beyond clock time, a world where the clock would someday be too slow for a maturing mode of hypercompetitive production. But Babbage and his associate John Herschel did. They could see the limitations as well as the possibilities of the temporal when applied to industrial processes, and they could see what "calculating engines and the factory system" could, in conjunction, achieve. Indeed, time, in the conception of the mathematician Herschel was, in

an odd metaphor, "dirt – except insofar as it is converted and worked up into opportunity by industry" (cited in Ashworth 1996:638). The working up of time toward "opportunity" could only be realized through its acceleration, or what Herschel termed "promptness"; and the acceleration of time was the desired effect of "power acting rapidly" (1996:638). What men such as Babbage and Herschel saw in the potential of linking time with industrialization, "putting time to work" (Bolter 1984:109) as Bolter terms it, was something that was largely forgotten as clock time industry and the machine-based rigidities of Fordism rose to dominance and its logic became the 'total way of life' that so influenced Marcuse's analysis of one-dimensionality.

Network Time

Computing and time working together, as Babbage and Herschel foresaw, could turbo-charge industry. The neoliberal mantra of "efficiency" in all realms of production and beyond was pursued through this nexus. Again Bolter is perceptive about what computers were seen to be best at. He writes: "The computer programmer is concerned with time because he wants to get a job done. ... All the elaborate mathematization of time comes down to the desire to put time to work." (Bolter 1984:109). Through its new application and networking up to new levels of efficiency and speed, the programmer in effect creates the basis for a new form of time; a network time. This form displaces or destabilizes the clock time context that has regularized polity, economy and society since the industrial revolution. Network time may be experienced as a temporal fragmentation of time(s) into numberless network contexts; into the time(s) that we create and spend online and in the increasingly networked forms of work and education and leisure that fill our waking hours. In the network, the zoned hour of the clock becomes increasingly irrelevant, as the whole planet is the theoretical context of our networked connections and for the experience of time. In Web 2.0 interaction, for example, it may be midnight where you are, mid-afternoon for one of your interlocutors, breakfast time for another. However, the conversation, or collaboration or communication, takes place in network time. This may be fast if the

network is running smoothly, faster if you have a top-of-the-line computer and broadband fiber-optic access - or slow and filled with drop-outs or latencies or delays, if network conditions are busy and you are using a copper-wire telephone connection and (quickly) antiquated modem connections. These fragmented and contextual times vie with "industrial time" for predominance for the duration of our stay in the virtual sphere, in our browsing of the Internet, in our conversations on a mobile phone, or through our rapidly expanding social media. The key point is that although the times of the network are infinitely fragmented, as fragmented as there are possible combination of connections, and the speed of these interactions vary greatly also, they all are governed by a network logic (a techno-logic driven by commercial competition) that orients almost all network users to an accelerated existence within network time (Hassan 2009 and 2012 for a fuller development of this idea).

The overall effect is that within the growing domain of network time, Fordist stability and the machine-based logic that drove Marcuse's total administration have become much less tenable. A Fordized centre of modernity that would hold (more or less) as a fulcrum around which one-dimensionality could radiate, begins to loosen; a society (and state) that sees planning and regulation and the projection of a political future for its citizens as a guiding raison d'être, begins to turn toward market forces for meaning and for inspiration; and the market, powered by networked technologies that produce a new form of time has as its meter an acceleration expressed in its inherent instability, with rates of acceleration that have no predictable patterns or discernible limits – apart for those imposed by the technology itself, and these are being extended every day. It is here we encounter something of a contradiction. Neoliberal post-Fordism and the network time it creates, enhances the logic of one-dimensionality. The sedative of consumerism is more powerful than ever; and the burgeoning of information of every kind through networked communication generates even more powerfully what Marcuse saw as "negative thinking," a process of "functional communication" where people are "trained to forget - to translate the negative into the positive so that [they] can continue to function" (ODM:104, 123). Today, it is through this systemgenerated "negative thinking" that we cope with information overload, and try in our individualized way to stay afloat in the rising water levels of information that envelop us in the network. The "functional" communicative context of the network and Internet, where everything is informational, trains us also "to forget" and through the resultant "negative thinking" to see the world of digital information as evidence of choice and possibility and diversity in both the epistemological and political senses. The flip side of this contradiction, though, is that the instability of the process – from the economy, to the politics, to the thought-world of the individual. Instability is the antithesis of total administration, and digital capitalism's inherent chaos offers the times and spaces from where "the chance of the alternative" politics may seed and take root. Raymond Williams has already shown us how to think about ideas or theses that offer a one-dimensional future. In his Politics and Letters, he speaks about the "indissoluble unity of individual and social experience" and then goes on to write in a wonderfully suggestive way about how we can approach Marcuse's controlled society (and my concept of network time) in a more optimistic way:

However dominant a social system may be, the very meaning of its domination involves a limitation of selection of the activities it covers, so that by definition it cannot exhaust all social experience, which therefore always potentially contains space for alternative acts and alternative intentions which are not yet articulated as a social institution or even project. [1979:252]

Strategies for the Post-Modern Struggle Against One-Dimensionality

Marcuse saw only dying embers of hope in a cold mechanical world, and he expressed these at the end of *ODM*. The totally administered world had exacted a tremendous toll upon freedom. But, for Marcuse – though much less confident than Williams – in their totality the technologies of administration were not wholly and fully comprehensive; there always existed alternatives. The central prerequisite, though, was a transformation of the instrumentalization of reason. He writes

that "as a historical totality" instrumental reason:

has developed forces and capabilities which themselves become projects beyond the established totality. They are possibilities of the advancing technological rationality and, as such, they involve the whole of society. The technological transformation is at the same time political transformation, but the political change would turn into qualitative social change only to the degree to which it would alter the direction of technological progress – that is, develop a new technology. [ODM:227]

We see in these few sentences the key to unlocking the latent power of Marcuse's analysis. So let us look at them in a little more detail. First it has to be noted that very little has been made of these words in the literature on Marcuse – possibly because their full import has been obscured by the more forthright and more aphoristic phraseology at the beginning of the book where he observes that:

essentially the power of the machine is only the stored-up and projected power of man. To the extent to which the work world is conceived of as a machine and mechanized accordingly, it becomes the *potential* basis of a new freedom for man. [ODM:3 Emphasis in the original]

And perhaps also his key lines are overlooked because he only barely perceives the "forces and capabilities" he speaks of as actual or potential processes. A few pages later, right at the end of the book, Marcuse seems to give up the quest altogether. He notes that across the whole of society the prospects for positive transformation exist, but they are "like fragments which do not connect" (ODM:253).

To conclude this essay I want to separate out and then consider what I take to be the central elements needed for a new appreciation of Marcuse's one-dimensional thesis: these are *time*, *technology*, *Reason* and *class*. What follows is simply an exploratory undertaking, but it is hoped that it will provide the theoretical basis to make possible a more promising position to promote his ideas to the forefront of the political debates that need to be had if we are to identify – and to have any hope of reversing – the logic of one-dimensionality.

Time

As stated previously, Marcuse neglected to critically interrogate the concept of time, considering it, as in the Newtonian tradition, almost a force of nature. But time within capitalism had become more than a source of commodification and exploitation. Clock-time is, we still too easily forget, a technology. Moreover, it is the technology that so powerfully drove Marcuse's overdetermining Fordist context and gave a mathematical inexorability to his trajectory of total administration. However, in the technological transformation that is the computer revolution, we see a new technology and a new experience of time - what I have called network time. This time is fluid and indeterminate; it is contextual and subjective and its technological affordances under neoliberalism have transformed how we relate to time. The most important feature of this time is that it is oriented toward instrumental acceleration, away from the predictive control that humans could wield over clock time, and into the flux and flow of "disorientation" (Virilio 1995:np). Its transformative power potential comes from the fact that time is networked – time connected through computers and with an accelerative logic that seeps into every register of economy, culture and society. The challenge for critical theory is to understand that it is from within ostensibly unpromising context that we can identify Marcuse's "potential basis for a new freedom for man."

To begin the analysis we need again to review the key line relating to his emancipatory vision: alternatives exist but they are "like fragments which do not connect." In the 1960s, McLuhan's "global village" notwithstanding, the connecting of fragmentary political alternatives was difficult: first, the "political" was heavily institutionalized around parties and settled ideologies, and as Marcuse showed, this politics almost always saw its interests in the status quo; and second, capitalist rationality was relatively global, but local and global "fragments" of resistance and alternatives could not easily connect at a time when the nation state and the national economy and the national imaginary were relatively autonomous. However, in the network society these fragmentary spheres and times and temporal contexts - what Barbara Adam terms "timescapes" - can be

connected through the networked computer and the socio-technical dimensions of networked time. But the process needs to go beyond mere connections (Adam 1998:123-227). The network society and its networked time is a technological change, but as Marcuse observed, technological change is simultaneously political change (ODM:227). What this means is that the numberless fragmentary timescapes of human interaction that make up the network society must be politicized and their forms of time be democratized to reflect that change. Otherwise we face increasing temporal repression through increasing social acceleration. However, the political alternatives, in the contexts I will describe here, go beyond the forms of institutional, party-political and revolutionary change that Marcuse theorized in the 1960s. It also goes beyond the "network politics" advocated by theorists like Clay Shirky who argues that being simply able to network will bring positive political outcomes (2011). We have the connections, but are presently unable to connect politically, through shared issues and goals in ways that can make a difference at the local and global levels.

My argument is that in the network society a politics of time can be the connective issue. Its motive force is the growing *lack of time* (Southerton 2003), the growing acceleration of time (Rosa 2013) and the growing "dispossession of time" (Crary 2014:58). These are issues that affect us all and are the political issues that can unite us all. There is a growing literature on the instrumental acceleration of time and its broadly deleterious consequences in the service of neoliberal "efficiency." A few examples must suffice here. There is the worsening "time-squeeze" that is felt as an effect of time-space compression – a scarcity of time due to the unceasing imperatives of the networked economy that is cross-class, crosscultural and suffuses almost the totality of life. There is the accelerating and volatile speed of the global economy that was a key underlying factor in the still-unresolved global financial crisis that brought capitalism, along with its votaries, as well as the vast majority who are simply tied to it (the "99%") to the threshold of catastrophe in 2008 (Hope 2011). And not least there are the widespread negative effects on the environment that have been exacerbated by

the negative short-termist timescapes of our post-modernity, the neoliberal "habits of the mind" that shape our attitudes to industry, to risk, to the future, and which continues to have their corrosive effect today (Adam 1998:21).

As things stand, the logic of economic, social and technological acceleration continues to push the Enlightenment-derived and Reason-based projects of humankind beyond the control of nations, of institutions and of individuals (Scheuerman 2004). It is logic expressed as a form of "fast capitalism" (Agger 1989) that Marcuse might not easily have anticipated because neoliberal globalization, in these time contexts at least, places *almost everyone* at the precipice. This means that almost everyone thus has a subjective interest in a positive time-focused transformation of a system that is no longer rationally administered for the benefit of even a few, but is irrational and disorganized to the extent that there is no stability for anyone or anything.

Technology

As a starting point in the politicization process, the weakening of the influence of clock time and the emergence of network time has to be seen as a positive transformation in our relationship with time. This means, fundamentally, that the logic of Babbage's dream of disciplining the human mind (and society) to correspond to an industrial age machine concept has been broken with the end of Fordism as the dominant mode. The salience of a new relationship with time, though currently broadly oppressive and in the service of neoliberal capitalism nonetheless creates opportunities for alternative ways of thinking and acting. If we take Marcuse's imprecation: "political change would turn into qualitative social change only to the degree to which it would alter the direction of technological progress – that is develop a new technology" (ODM:227) and reverse it, we can see his negative turn to a potential positive. Network time is the "new technology" that comes from the logic of hyper-rational one-dimensionality, but its fluxual and unpredictable logic in the context of the neoliberal marketplace means it contains the time-spaces for "political change" that could "alter the direction of technological progress." However, the

politicization of time would firstly require the identification of the temporal sphere as a social sphere that carries with it the rights and obligations and even the forms of *sovereignty* such as inhere to our conceptions of space (Hassan 2013). Such a politicization of the technologies of time, and of time itself, carries with it the potential to alter the direction of broader technological processes because the computer technology that makes network time possible has so much latent social power "stored-up" within it.

As environmental philosopher Arran Gare observed, a Platonist "metaphor of the machine" has since the time of Classical Greece, driven the trajectory of the broader technological processes and has been "the dominant thematic motif of Western culture" since that time (Gare 1996:155). Marcuse himself acknowledged that the "quantification of nature" or "mathematized nature" through "Pythagorean-Platonic metaphysics" is at the root of contemporary one-dimensionality (ODM:150-1). The merging of computing technology with a politicization and democratization of networked time would thus constitute an historical break with the metaphor of the machine and the rationalized world it has constructed.

If we consider further the nature of computers and how they have transformed our relationship with time, we are able to make out the dim outlines of "potential basis of a new freedom for man" that was the more optimistic tone with which Marcuse opens his book. The computer, as theorists from Babbage to Turing have observed, is much more than a classical machine. It is an enabler, transformer and sometimes destroyer of almost every other machine and process. As Bolter argues: "Computers perform no work in themselves: they direct work" (1984:8). The computer is, then, a machine like no other; it is a machine (and a logic) that has had world-historical effects. The fact that it is more than a machine means it contains more in terms of its potentialities than those largely instrumental ends to which it has been applied, and which have reinforced the ostensible power of Marcuse's one-dimensional world. But as I have tried to show, whilst the computer and its revolutionizing effects have transformed the technological, economic and cultural rigidities of a "mathematized" Fordism, the concurrent transformation from rigidity to flexibility, together with the inherent volatility of the neoliberal age, has opened up at least the promise for transformation of the kind Marcuse thought only an elusive dream.

Reason

"The totalitarian universe of technological rationality," Marcuse observed, "is the latest transmutation of the idea of Reason" (ODM:123). He went on to note that this idea was "pre-designed" for such an outcome due to the influence of the "quantification of nature" that dominated Classical Greek concepts of Reason (ODM:124). However, Marcuse wrote of "the catastrophe [for] the established direction" [of Reason] if it were possible to "transition to a higher stage of civilization" through technologies that were "designed and utilized for the pacification of the struggle for existence" (ODM:227-8). The basis for a positive "catastrophe" would be a new idea of Reason, he reckoned. His cues in this come from Alfred North Whitehead who envisioned a new form of Reason emerging from a new form of science. In his book, The Function of Reason, Whitehead argued that "science has always suffered from the vice of overstatement" (1929:27). This is the effect of its mathematized authority on the insistence on "ultimate categories of explanation" where "conclusions true within strict limitations have been generalized dogmatically into a fallacious universality" (1929:22). Drawing on this Marcuse surmises that, "Reason is still to be discovered, recognized and realized" (ODM:228). The discovery or recognition of a new form of Reason, one not dominated or "pre-designed" by rationalized science, or by what Whitehead (1929:40) termed the "dogmatic creed" of mathematics, one that is able to question the basis of Classical Platonism and its real-world machine culture is, to put it no stronger, a difficult task. But the elements for the transformation that Marcuse sought are in place if we look for them and seek to politically exploit them. I have argued that networked computers and the pragmatism they allow for in communication, in production and in understanding our biology and environment, constitutes the creation of a new machine, one unlike

any previous human-made contrivance. Moreover, this machine is only in its infancy, and still coded with the logic of Liebnizian binaries. The incessant quest for speed means that in the near horizon, completely new forms of computing will replace the silicon chip and binary code. Quantum computing, for example, has been shown experimentally to transcend the very basis of classical computing and its computational functions between states of on-off or ones and zeros. Quantum computing functions simultaneously between both states, a state called the "superposition" – and expresses a logic that overturns the many assumptions that flowed from "Laws" of Newtonian physics and upon which so much of the modern machine world is based.

The universal flux and volatility that the technologies of time and computing are unleashing do not lead in any "pre-designed" ways to deeper and more widespread logics of total administration. This particular unfolding of the Classical Greek conceptions of Reason reached their zenith, with the advent of high Fordism, the phase that shaped much of Marcuse's ODM. In our postmodernity, the acceleration of time through the acceleration of computing has not led to increasing levels of efficiency and productivity, but to their opposites - to persistent turbulence, to material and environmental waste, to massive devaluations of economic capital, and to the immense human toll in terms of stunted lives and narrowed opportunities. Alongside what might be seen as rather predictable effects of what Anthony Giddens (1991) once termed a "runaway world" these same dynamics of a radical networked driven timespace compression has taken the contradictions of capitalism to new and unexpected configurations (see Harvey 2010). This new phase of capitalism and its new configurations are characterised above all by their volatility through acceleration, thereby undermining the "rational" within the overall irrationality of the system – that dwindling part of capitalism that to some extent may still be planned and predicted and projected as expected outcomes. All now seems to be permanent flux. Irrationality confronts irrationality in the dialectical rubbing of negative against negative, to the point where each "defeats its own purpose" (ODM:46).

Class

Marcuse discards this central element of traditional Marxism in *ODM*. As he wrote elsewhere, in 1965, a class-based striving toward social revolution "is something quite different from a vital need for better working conditions, a better income, more liberty and so on" (Marcuse 1965:150-1). Marcuse's prescience here is all the more remarkable when we consider that from the perspective of today, 1960s capitalism was still a predominantly industrial mode, and its class formations strongly reflected this. It was a question of consciousness then and it continues to be so today; however "class consciousness" is an antique term that young people especially, never much reflect upon. In his classic History and Class Consciousness, Georg Lukács, quoting Marx, argued "in the study of economic categories ... it must be borne in mind that categories are but forms of being, conditions of existence" (1990:4). Our "conditions of existence" in our post-modern, post-capitalism are such that the categories of class and the conditions of class are deeply sublimated by consumption, by the availability of cheap food, cheap clothes, cheap transport, cheap communication, cheap consumer goods and cheap electronics. Moreover, our post-modern "form of being" is buttressed by the ideological pressure of individualism to the extent that many of us today think of ourselves "naturally" as individuals as opposed to members of a group or class. This process has a temporal dimension, too. Narrative theory tells us that the stories we tell ourselves and the experiences we accumulate help construct our identity and sense of self. However, our consciousness and self-consciousness are derived today to an increasing extent from an existence that (as I will discuss below) is lived in a temporal present, in the accelerated context of the here and the now, and through the individualist ideologies that shape this timescape. As Luciano Floridi argues, living in a constant present creates a hyper-identity that is centred on the self (2014:65). And so in a world dominated by consumption, consciousness moves from the category of class to that of status, and simultaneously from the category of class to that of solitary individual.

Perry Anderson's observation I mentioned at the beginning of this essay, that there are no longer any

plausible alternatives to the neoliberal worldview, has many deeply problematic effects today, for forms of consciousness and for political action. For capitalism to be overthrown, consciousness needs to be oriented once more toward class. But first consciousness needs to be primed and oriented toward the political, to become weaned from the tranquilizers of commodities and able to adopt "forms of being" that reflect new objective "conditions of existence" that would be the basis upon which class could be understood as relevant once more. And political consciousness, for it to be catalyzed must strike home first at the individual as an individual, but also one whose particular interests correspond with almost everyone else in society. In other words, to raise politicization in a general sense in the context of a dominant neoliberal individualism, we need to move beyond the material, and (in the first instance of political consciousness) beyond even capitalism. We need to develop a political consciousness that seeks change - an individual fear or anger or hope or aspiration – that is at the same time something we all feel and recognize and share; something fundamental and universal, something that can connect Marcuse's "fragments." Again, such elements are in place, as I will now try to show. Moreover we also have a global network of communication that can act as vector for concrete political ideas that have universally relevance and universal application.

The Universal Struggle

The global and convergent flux of time, of technology of Reason and of (sublimated) class presents a political opportunity. And in the reversal of Marcuse's logic cited above – in his "neglected" passage – it is possible to exploit the transformation of a technology – the computer network and its temporality – to create the basis for "qualitative social change." A prescriptive politics is always dangerous. But any kind of politics is impossible without the first principle of an idea, and as Douglas Kellner notes in his Introduction to the 1991 edition of *ODM*, "all values, aspirations and ideas which cannot be defined in terms of the operations and attitudes validated by the prevailing forms of rationality" are systemically repressed in Marcuse's "advanced industrial society" (ODM:xii).

For ideas to escape the remnants of modernist political categories of Right and Left, which Marcuse had already written off as the basis for progressive social transformation, they must be able to resonate among all of us. The politicization and democratization of the idea and the experience of time is one way forward towards positive social change. This is based on the premise that an acute human interest in the individual and collective ownership of time is an issue that transcends class or sectional or cultural or geographic divides. Globalization and timespace compression are creating what Paul Virilio has termed a universal "dictatorship" of acceleration (1995:np); oppression through an abstract logic made possible and made comprehensive through the enabling powers of computing. This "dictatorship," or what I have called network time, is not totalitarian in the Marcusian sense. It is shot-through with holes and inconsistencies – and therefore possibilities. To politicize and democratize this time through a shared understanding of its nature (subjective) and its deployment (as an individual and collective resource) would be to create a human capacity for agency. The term "capacity" is important, because it connotes the idea of space and time in the body as latent potentialities that could transcend the narrow strictures of one-dimensional thought. The consideration is that such a new perspective on time could constitute the basis for a new form of Reason. Time and its Platonic mathematization laid stress on temporal efficiency, which give rise to machine culture thinking which in turn provided the fertile ground upon which capitalism could thrive. To undermine this logic would be to begin to undermine the trajectory of Reason that took it toward domination through instrumental rationality.

Struggle is by definition something political. But the transcending of our modernity has created a postmodern context for political struggle that leaves political struggle largely bereft of the "fundamentals" that would constitute the basis for political organization. This context is expressed through new and always-shifting postmodern "constellations." Fredric Jameson describes these in a way that strongly echoes Marcuse, and his lament for the "fragments which do not connect." Postmodernity for Jameson constitutes

"a constellation [where] there can be no 'fundamental' features, no centres, no 'ultimately determining instances' or bottom lines, except for the relationship of all these contents to each other" (1990:224). Network time, as I tried to show in the context of Marcuse's "fragments," may act as the connector for political action. And so too with Jameson's "relationship" between what he terms the "fundamental features." Jameson wishes to promote the basis for new (or the revivification of old) narratives that might act as reconnectable fragments that become fundamental once more – or for the first time. Nevertheless, even the "meta-narratives" that Jean François Lyotard railed against in his The Postmodern Condition as "totalitarian," such as religion, or science, or History - or even a too narrow and prescriptive narrative of democracy - would not begin to encompass all of us, or even most of us, and so still less would they (or their ascendancy as legitimizing meta-narratives) be the positive basis of a political struggle.

And so we need to look elsewhere, somewhere where *universal* means what it says; somewhere wherein everyone has been, is, and will be implicated. And this takes us back to the human relationship with technology – especially technology as it relates to temporality. Hans Jonas and his *Imperative of Responsibility* provide a framework to think about the basis for political struggle in our postmodernity. The subtitle of his book is: *In Search of Ethics for a Technological Age.* Jonas puts his case simply:

Technological power has turned what used to be and ought to be tentative, perhaps enlightening plays of speculative reason [to promote] extremes of remote effects. The one thing we can really know of them is their extremism as such – and that they concern the total condition of nature on our globe and the very kinds of creatures that shall, or shall not, populate it. [1984:21]

One may disagree with the notion of "tentative ... enlightening plays of speculative reason" as having much to do with the largely instrumental trajectory of broad-scale technological development since at least the 18th century. But the more substantive point of the evolution of "extremes of remote effects" resonates strongly, as does his claim that these "effects" concern

us all. These "remote effects" are also temporal effects, in that technologies can project their effects into our futures. Moreover, these "cumulative dynamics of technological development" simply accelerate as capitalist competition pushes them to further extremes of complexity and effect, where they gain "an automotive momentum, by which [effects] become not only irreversible [but also] overtake the plans and wishes of the initiators" (Jonas 1984:32). Jonas sees specific effects in the environment, in the ecological system, in climate change, population growth, fossil fuel use and pollution, where "the happy-go-lucky feast of a few industrial centuries could be paid for with millennia of altered terrestrial nature" (1984:190). His thesis of remote technological effects has echoes in Marcuse's "one-dimensional thinking." The speed of technological change creates a knowledge gap; wherein we lose control of the dynamic of technological transformation that then produces unknown effects, and our "predictive knowledge falls behind the technical knowledge that nourishes our power to act" (1984:8). It is the centerpiece of Jonas' thesis that this gap between predictive and technical knowledge assumes a fundamental ethical importance.

Wisdom is necessary to bridge this gap, Jonas insists. But it is a new form of wisdom, one based upon a new form of ethics, an "ethics of responsibility" toward our technological and temporal worlds. Jonas makes the important point that since Antiquity ethical conduct has been centered on the individual in the here and now – a present-focused behaviour where "proper conduct had its immediate criteria and almost immediate consummation" (1984:8). In a context where the "total condition" of nature and humanity are implicated, then a new ethics is necessary. Responsibility is the central element of the ethics of wisdom. Traditionally, Jonas argues, responsibility had been characterised as parental - a largely nonreciprocal obligation "to the children one has brought forth" (1984:39). He argues that the sphere of this nonreciprocal obligation must now be enlarged to become a collective political responsibility, an obligation toward our children and generations of children yet to be born because we are creating the conditions in which they will have to live.

Jonas argues, as I have tried to, that for our politics to be up to the task of change and of adopting an ethic of responsibility, it has to be temporalized. He makes the revealing point that "Greek political theory is on the whole silent about the time aspect" (1984:14). The problem has been that the Greeks saw the best and most viable and enduring political system as one created in a stable present. The creation of the best possible state was thought to be also the one that would be best for the future. As Jonas characterizes it: "The foresight of the statesman ... consists in the wisdom and moderation he devotes to the present" (1984:15). The best form of politics, in other words, is the one that will be best for now and for always, "for a future still like itself" (1984:15). This reads like a conservatism, to say the least. However, and maybe ironically, a temporalized politics, one geared for managing unavoidable social transformation, would in many ways be a conservative politics. But it would be a politics of responsibility only if it were able to control and shape change and not merely to try to adapt to it or hopelessly resist it. The great conservative philosopher Edmund Burke is of help here. If read closely, his work, especially his Reflections on the Revolution in France, may be seen as deeply temporal in that it consistently urges "prudence" over "effervescence" and the need to "suspend judgment" over a too hasty "agitation." In other words, he urges reflection over reaction and slow over fast. And concerning the nature of political change in the conservative mind, he was clear: "A state without the means of some change is without the means of its conservation" (1986:90).

My advocating of elements of Burke alongside the Marxist Marcuse, and extended through the scholar of Gnosticism and existentialism, Hans Jonas, indicates that we need necessarily to think beyond old political categories. A temporalized politics would be a new form of politics, and to practice this would be to place our relationship with time and with technology at the forefront of our most pressing issues, such as our degrading environment. And so moving beyond stale political groupings to a politics grounded in universal concerns and shaped by a future-oriented ethics would mean that many current and seemingly intractable problems might

appear differently. For example, capitalism - the universal source of our postmodern troubles – along with its febrile technological dynamic, need no longer be viewed through the ideological lens: good or bad, Right or Left, socialism or barbarism, but as social claims upon the ethical frame of universal responsibility; responsibility towards ourselves, towards each other and towards our children and to future generations where "regard to them is not specified but global" (Jonas 1984:94). Seen through the prism of its remote effects upon those who have no choice, capitalism could appear in a new way, as a very often culpable and always answerable process that is the reflection of all our collective actions in the past, the present and into the future. We collectively might equip ourselves with the means of change that is simultaneously the means for conservation of those elements we still need.

Marcuse's work remains immensely valuable for insights into the kind of world that reached its high point in the 1960s. He feared that that his world was permanent and totalizing. It wasn't. Fordism and modernity and clock time have been eclipsed in terms of their importance by post-Fordism, post-modernity and network time. Domination by the system has deepened, though, and as individuals existing in our fragmented constellations of irrationality we tend to struggle not for justice or fairness or for a new society. We instead increasingly concern ourselves with the accommodation of the return of a "trampling, crushing, elbowing and treading on each others heels" that J.S. Mill saw as so destructive of economic and social life (2004:690). Such universal regression is itself a form of domination, though not of the kind Marcuse envisaged. The important lesson is that as the outward expressions of Marcuse's one-dimensionality change, this tells us that the core logic of the system is itself become decentred. It has therefore "moved beyond the established totality" that Marcuse saw as a precondition for positive change and is therefore ripe, potentially, for transformation.

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