In search of temporal loopholes: Insuring against a future that will never come

This series of reflections on the contemporary experience and consciousness of time calls for a radical rethinking to confront the present and future threat of climate-led disaster. Focusing on the pocketwatch and smartwatch, the article will consider Paul Virilio's critique of contemporary forms of alienation and the ever-increasing disjuncture between human experience and the instruments that measure and analyse time in the service of the global, financial market. Jean-Pierre Dupuy's 'enlightened catastrophism' is proposed as opening up possibilities for a politics of time which can reposition the present in the service of a future threatened by the vicissitudes of late capitalism. The paper goes on to argue that Dupuy needs to be reread alongside Virilio, taking into account the latter's notion of 'time pollution' and critique of forecasting. The conceptual framings proposed are elucidated with reference to a cinematic tradition that takes the multiple temporalities shaping human existence as its object.

Introduction.

This article is about taking time. It brings together a series of reflections on forms of experience and consciousness of time within late capitalism. While the expression 'late capitalism' was adopted by Marxists, including notably Ernest Mandel, to refer to post-war economic development and consumerism, it has more recently been more generically applied to the Neoliberal ideologies of the late twentieth and early twenty-first centuries. In particular, it is used to describe the expansion of work beyond the traditional temporal and spatial parameters of the Fordist model and the ways in which modes of capitalist production and consumption effectively appropriate attempts at critique or resistance. Moreover, the use of 'late' is also imbued with the tentative hope that capitalism is nearing an end. Such hope is, however, coupled with the increasing concern that what is actually coming to an end are the possibilities for sustained human existence on an ever-hotter planet.

In this context, the central claim the article puts forward is that a radical rethinking of time is necessary both to imagine and confront the vicissitudes of widespread climate change and related ecological stress (for example, loss of biodiversity, acidification etc.). This is a crisis which has of late come to be termed the Anthropocene, both in the present and as a future-past, a *what will have been*. The critique is framed within a wider analysis of what Robert Marzec has termed 'environmentality' – a term he develops from Michel Foucault's concept of governmentality – used to explore the military discourses which are working to define and, more significantly, limit potential responses to climate disaster and its aftermath (Marzec: 2015, 25). For Marzec, such responses have been developed according to longstanding military strategies based upon the ongoing securitization of territory and resources. Moreover, the scientific methods used to predict and understand potential climate threats are themselves based on a normative, singular time-line conception of temporality. Using the example of epigenetic memory, and specifically the ability of certain plants to 'remember' long-term environmental factors such as seasonal changes, Marzec explains how such processes are undermined or destroyed by a homogeneous understanding of time as development or speed imposed by the 'anthropocentric human':

We might, consequently, productively identify the 'anthropocentric human' (the human acting as a geological force) as the species that transcends or goes beyond the epigenetic limit of its specific environments— destroying the distinct, heterogeneous temporality of ecosystems in favor of a war-oriented 'genetic disposition.' This war- oriented 'genetics,' it should be emphasized, is only one among many possible dispositions. It owes its prevalence, as we've seen, to specific historically and politically influenced patterns of development. In turn, this image of the human also speeds up particular processes by developing a pattern that,

when normalized, transcends the distinct qualities that other organisms attempt to maintain in their epigenetic memories: the militarized human moves from heterogeneous movements to a unidirectional and accelerating rate of speed. (Marzec, 164)

Taking up Marzec's critique of a 'militarized' conception of temporality and the impact of this on different ecosystems, this article focuses specifically on personal and collective experiences of time as predicated on technology that works to maintain existing social and economic hierarchies. Consequently dependence upon time technologies precludes possibilities for alternative forms of existence and temporal multiplicity, including those necessary to survive and thrive in a world rendered increasingly hostile to certain forms of human life (as well as to other forms of organic life). Such technologies, I will argue, are embodied in the ideal forms of the time-piece, taking specifically the pocketwatch described by Marx in *Capital* Volume 1 and then its latter day equivalent, the smartwatch.

Considering first of all Marx's account of the increasingly fragmented labour involved in the production of the pocketwatch, it is possible to develop a discussion of time as being increasingly fragmented, divided into 'ever finer slicings' (Durham Peters, 2015:200). If we then consider how Paul Virilio explores the notion of the 'lag' we can get at a key element of recent thinking aimed at challenging contemporary forms of alienation that are the consequence of an ever-increasing disjuncture between human experience and technological recordings of time. In her exploration of the concept of the 'lag', Sarah Sharma (2014) considers the disjuncture produced between different 'presents' and the various forms of subjectivities produced through these multiple experiences of 'lag'. Her insistence that we think of these different 'presents' and their respective 'subjectivities' comparatively is necessary to a greater, more nuanced understanding on how the 'lag' impacts upon

the relationship of these 'presents' to a longer term past and future. The experience of the jet-lagged corporate traveller negotiating time zones is considered alongside that of the (taxi) cab-lagged service industry worker obliged to work antisocial shifts to smooth the passage through time and space of the higher paid executive at the detriment of their own temporal experience. Likewise, my analysis of the 'lag' focuses on the disjuncture produced between the representation of time and our ability to engage meaningfully with such representation. The notion of the 'lag' as defined by Virilio, in particular in his discussion of 'instant replay', will be followed by a discussion of the smartwatch as contemporary timepiece. The smartwatch redefines our experience of time not simply in its representation of temporalities but, moreover, in its ability to track, capture and re-present multiple versions of how we exist and operate within normative cyclical and linear temporal structures.

The temporal alienation caused by the lag creates a debt, the payment of which is endlessly deferred. The notion of future debt is explored in terms of the need for a revised understanding of time predicated on individual and collective ethical responsibility. Having suggested how the 'self-care' promoted in the use of smartwatches circumvents the potential for care and responsibility which fall outside the circuits of the 'quantified self', the article will look at Jean-Pierre Dupuy's 'enlightened catastrophism' as opening up the possibility for a new politics of time which places the present in the service of a future threatened by global warming. I will then suggest that Dupuy needs to be reread alongside Virilio (and Marzec), taking into account the Virilio's notion of 'time pollution' and critique of forecasting. The danger is of course that these technologies capture temporality in an increasingly militarised (Marzec 2015) and regimented way, wholly amenable to advanced corporate structures, finance capital, and deep algorithms of profit and power.

Throughout the article, I will reference a number of films whose exploration of different temporalities serves to elucidate some of the concepts discussed. In this respect, I am drawing on a methodology adopted in *The Ends of the World* (Danowski and Viveiros de Castro, 2017). More implicit perhaps in my approach is the acknowledgement of the emergence of a narrative tradition within cinema which, in the wake of Chris Marker's *La Jetée* (1962), has taken time as its subject, providing the most sustained possibility for reimagining time available to a global audience. With the exception of *Last Night* (1998), the discussion of which plays a similar function to Danowski and Viveiros de Castro's use of Lars Von Triers' *Melancholia* (2011), the films I discuss are taken up with the notion of time travel. Remaining sensitive to the inherent conservatism at work in Dupuy's reading of the future anterior and the ideological limits of the films cited, the article's use of such narratives nevertheless adopts an approach to the question of future debt which might be mapped onto Dupuy's call for storytelling and mythmaking embodied in his own use of parable.

From timepieces to time in pieces

The first task here is to challenge existing rhythms of reading and the temptation to skim and skip. This means calling on the reader to spend time, to pause and to wait. To open up and begin again, it seems apt to consider the watch, the temporal object or device, *par excellence*, identifying its production and development as intrinsically bound up with social organization of time in capitalist society. Therefore, I ask the reader to take the time to read this extract from the first volume of Karl Marx's *Capital*, a text which requires a mode of reading to match the process invoked in this

powerful cumulative account of the division of manufacture and labour in industrial society:

Formerly the individual creation of a craftsman from Nuremberg, the watch has been transformed into the social product of an immense number of specialized workers, such as mainspring makers, dial makers, spiral-spring makers, jeweled hole makers, ruby lever makers, hand makers, case makers, screw makers, gilders. Then there are numerous subdivisions, such as wheel makers (with a further division between brass and steel), pin makers, movement makers, *acheveurs de pignon* (who fix the wheels on the axles and polish the facets), pivot makers, *planteurs de finissage* (who put the wheels and springs in the works), *finisseurs de barillet* (who cut teeth for the wheels, make the holes of the right size, etc.), escapement makers, cylinder makers for cylinder escapements, escapement wheel makers, makers of the *raquette* (the apparatus for regulating the watch), *planteurs d'échappement* (escapement makers proper); then *repasseurs de barillet* (who finish the box for the spring), steel polishers, wheel polishers, screw polishers, figure painters, dial enamellers (who melt the enamel of the copper), *fabricants de pendants* (who make the ring by which the case is hung), *finisseurs de charnière* (who put the brass hinges in the cover), *graveurs, ciseleurs, polisseurs de boîte,* etc., etc., and last of all the *repasseurs*, who fit together the whole watch and hand it over in a going state. (Marx, 1976 [1867]: 461-2).

Here, Marx writes in a way that stresses repetitive separation, the words of the list of component tasks themselves perform a tick-tock multiplication of effect. He is thereby making the fundamental point about the reorganization and division of labour which fragments the manufacturing process into a series of micro-processes or tasks. Each individual involved in the process is henceforth assigned the same, repetitive activity, isolated from other processes. This is aimed at producing greater efficiency via specialization whilst actually evoking a mind-numbing monotony and systemic

form of what we now refer to as repetitive strain. However, I want to shift the focus slightly from Marx's discussion of the division of labour in order to think more specifically about his choice of object – the watch as instrument for measuring cyclical time.

With the exception of the task of the *repasseurs*, whose role is to assemble the watch, the processes at work in producing this instrument of measurement are divided until each task bears as little relation to the finished concept and product of the watch as possible. As Marx indicates, there are also even differences and specialization between *repasseurs*. In thinking about the extreme level of fragmentation involved in producing the pocket watch, can we not recognize the same thing occurring to time itself? Today instruments for measuring time, dividing it into nano as well as milliseconds, are once again implicated in varieties of interpretative affiliation to the alienation of human consciousness from the production and circulation of value. The ability to extract value from today's financial market is a matter of time and privilege, in effect the representation of access to *real time*, defined by the ability to calculate, recalculate, buy and sell inside the infinitesimal interstices which slice up trading hours, minutes and seconds.

As units of time get ever smaller, the notion of duration gives way to that of a series of instants, and/or an eternal present. Yet, since we are unable to experience and thus grasp the coming and going of each instant, there is always a lag. Embodied in this lag is a failure to keep track of the ever-smaller units of time – Marx's list of tasks, and the overall controlling consciousness – and the spaces that cross in between.

Virilio's Instant Replay

Building on his earlier critique of speed, in *The Great Accelerator* (2012) Virilio

defines the opening decades of the twenty-first century in terms of a single market

'turbocapitalism', an accelerated form of capitalism, predicated upon the operation of

a series of 'nanochronologies', most notably those calculation tools used by financial

traders but which are pervading all aspects of social and industrial life.[i] For Virilio,

such chronologies of the 'infinitely short-term' (Virilio, 2012: 3) are replacing longer

divisions of time - days, years, centuries - along with our experience of such

divisions. The inevitable outcome is what Virilio terms 'the insecurity of History.'

The clear delineation between past, present and future gives way to a privileging of

the 'instant'. Such an instant is projected towards a future yet as such precludes the

possibility of this future: 'To live every instant as though it were the last – that is the

paradox of futurism, of a futurism of the instant that had no future.' (Virilio, 2012: 1)

Instant replay embodies a further paradox of this eternal present. The

expression 'instant replay' is itself oxymoronic. Moreover, not only has it come, via

the television screen, to define our experience of the 'event' but it has also defined the

event itself. Virilio uses the example of the football stadium where the live action of

the game is accompanied by giant screens offering spectators the 'mediated'

experience they are used to watching at home (Virilio, 2001:64). The immediate

repetition of an event via instant replay negates or defers the initial experience of an

event. The effects of such a deferral might be considered via three different examples.

Firstly, the replay function allows for the possibility of going back over something at

a later moment and subsequently both reduces and paradoxically enhances the impact

and value of the initial viewing. While the replay may entail a process of revisiting

which must necessarily involve more time than the initial occurrence of the event,

clearly the ability to replay, slow down, speed up and re-present events can lead to

new forms of experience and engagement. What is at stake in Virilio's reading is the paradox in which the instant replay becomes a waste of time or engenders a paralysis in which the differences produced by repetition are either insignificant or toxic in their obsession with a single moment.

To illustrate this we might appropriate Virilio's example of Olympic Gold medallist, Usain Bolt. To fully appreciate both Bolt's speed and the minute difference between the time he takes to run 100m and that of his closest rivals, we cannot simply watch a race once in real time. Multiple slow motion replays, each with a duration extending beyond the initial sub-10 second race, are required to ascertain his exact speed, technique and the extent of his victory. We cannot experience these without the aid of both advanced timepieces, the visual prostheses of the video camera and screen, and an aesthetic appreciation, with commentary, appropriate to the medium of the race. The once classical Olympic footrace becomes subordinated to its subsequent techno-aesthetic framing and representation. Second, as a result of instant replay, our initial affective response to an event or set of images is displaced by a posthumous reading, which is frequently an over-reading. As Virilio suggests, '[W]hat is given is exactly the information but not the sensation' (Virilio, 1991a: 46). It is a reading which is always at once too late and too soon.

Shock and Awe in the Deserts of Theory
To appropriate a terminology from another sphere of alienation, the military context of accelerated neocolonial war, original shock and awe at an advance of human capacity for speed gives way increasingly to a form of shock treatment as entertainment in which we are obliged to recognize the significance of an event

through the sheer force of its repetition in the medium of montage, sound bites and infographics:

[T]he more informed man [*sic*] is the more the desert of the world expands around him, the more the repetition of information (already known) upsets the stimuli of observation, overtaking the automatically, not only in memory (interior light) but first of all in the look, to the point that from now on it's the speed of light itself which limits the reading of information and the important thing in electronic information is no longer the storage but the display (Virilio, 1991a: 46)

For Virilio, writing in the 1980s and 1990s, it was the moon landing that encapsulated this 'desert of the world'. The inertia of the moon's 'dead center' finds its double in the replaying of Armstrong's descent from the Eagle (Virilio, 1991b: 127). Yet, it was only at the start of the twenty-first century that the full force of the instant replay became burned onto collective consciousness. The moon landing defined the United States as global superpower via its televised colonisation of space symbolised in the first footprint that was later doubled with the planting of the Star-spangled banner. Two generations later, it is in the image of the collapse of the World Trade Center in Lower Manhattan, home of global finance, that we find the negative affirmation of the earlier definition. Where a flag was planted in the original footage, here an imaginary line is drawn instead between Western democracy and freedom and a totalitarian terror projected onto the East. After the initial twenty minutes or so of confusion and horror at the sight of black smoke billowing from the World Trade Centre on September 11, 2001, the world's media began its endless loop of WTC images, a loop which over almost two decades later still continues to frame the U.S. political imagination. It is here that we encounter Slavoj Žižek's take up of the quote from

Morpheus in *The Matrix* (1999), where the Christ-like Neo is welcomed to the 'desert of the real' in an apocalyptic future that is somehow consequent upon extended militaristic-machinic alienation. In Žižek's rendering the phrase is extended to the event turned non-event, the spectacular collapse of the twin towers already mediated by big budget Hollywood action movies (Žižek, 2002: 11).

The compulsion to capture and document anything and everything facilitated by instant replay, along with freeze frame, fast forward and zoom functions, results in a life lived vicariously through a viewfinder with reduced or hyper (alienated) attention paid to what is actually being recorded. An increasing imbalance or gap arises between what we are able to perceive directly and the media technologies which Virilio collectively describes as the 'squared horizon' (Virilio, 2005: 20ff). Such a gap has serious ethical implications as we shift our judgment from the things captured to the processes of capturing. Furthermore, such technologies perhaps work best when they keep us in a state of (cinematic) illusion, preventing us from fully coming to terms with this shift in our focus and the consequences of this 'generalized delirium of interpretation'. While we might insist that there is no such thing as an 'unmediated' event, what is at stake in extending Virilio's critique is how possibilities for fruitful, sustained engagement and analysis give way to endless processes of capture, storage and classification, at the same time that a rush to provide commentary on the 'here and now' reduces the critical distance required for analysis.

The replay function exists to reassure us that we can watch it all properly (again) later. Except that we can't. In Don McKellar's 1998 film, *Last Night*, the world is about to come to an end. People have known this for months and the film explores the attempts of various characters to spend the time in a meaningful way. For Patrick Wheeler whose wife died of cancer the previous year, the end of the world is

just a macrocosmic repetition of the microcosm he has already lived through. Wheeler spends the first part of the 'last night' having dinner with his family during which Grandma is still denied bacon due to her cholesterol by her overzealous daughter and old family movies play on the TV in the background. As Grandma points out whimsically, 'when did they expect to watch all this?' Thus, the film's basic premise is that it is only when there is no more time that we are forced to confront exactly how we understand or, more precisely, misunderstand time and our experience of it.

To develop a politics of time which offers the means to think the future beyond its servitude to a perpetual present embodied in the endless commercial loop of instant replay and the military-entertainment apocalyptic narrative it smuggles in alongside, we need to think more critically about the 'lag' produced as a result of this servitude. How might we start to explain this notion of 'lag' that exists and which is increasing between human experience and technological representation of time? At stake once more is the untenable accumulation of 'experience' to watch, live…experience at a later date. Here, the idea of debt will be useful.

This lag might be linked with the accrual and subsequent deferral of economic debt to a future. But a future which will never and which can never come, a secular End-time where all debts are settled. Here, further caution is required. Perhaps we need to resist a debilitating critique of instant gratification which repeats the gesture of such gratification via its own masochistic wallowing in this temporal paralysis. We might go as far as to define Virilio's attack on technological development in terms of such wallowing, not least in his apparent privileging of the hyperbolic over analysis, embodied in his capitalization of hybrid terminology (TURBOCAPITALISM; NANOCHRONOLOGIES). Creating more terms with which to name a problem does little to resolve the problem and ends up reproducing the same inertia Virilio laments.

A detailed critique of Virilio's use of capitalization and other rhetorical traits can be found in McCaffrey (2015) but his insights are important if extended into a context that thinks – slowly perhaps – the consequences of hyper-singular temporality that accelerates the collapse of those environments necessary for any life, or thinking, whatsoever, and this applies whether or not the fastest man can outrun the future. In balancing Virilio against a breathless Marx, the aim is to articulate a concern with care to be developed below. While this is perhaps not a move that would be endorsed as following either Virilio or his critics, what is there for the taking is a potential reconfiguration through time as an experiment in imaging other possible worlds as real potential.

Moreover, it is useful to take up Sharma's critique of depoliticised concepts of time and speed which via their generalisation ignore what she terms 'power-chronographies'. In order to invoke a multiple temporality with time to consider the potentials of ethical action in a longer interval than that allowed between commercial breaks, we also may want to avoid a too-easy discussion of deferred payment that lends itself to discourses aimed at criminalizing poverty via the lamentation of a society unable to think past the next pay packet, holiday or sale bargain. Instead, we might identify the lag with something else not purely financial or monetary. It is here that we might find the possibility of ethical responsibility and action. Such responsibility has become deferred and suspended to a future that will never come.

Quantified Selves: Smart Watching

If the starting point for others here is the organization of labour embodied in the plight of Marx's watchmakers, to rethink labour and production first requires us to radically reconsider our experience of time. E.P. Thompson suggested that workers' struggles

over time always took place within the parameters of a certain conception of labour-time, '[t]hey had accepted the categories of their employers and learned to fight back within them' (Thompson, 1967: 86). Sharma calls for a new more democratic form of time which in the first instance acknowledges time as 'entangled' (Sharma, 2014: 150). Both identify the need to radically contest the notion of time organised around a normative working day. To this I would add that such a contestation needs to be predicated on notions of community and care that operate outside the conventional parameters of labour and could be considered in terms of maintaining labour capacity, the reproductive health of the workforce, much discussed (for example, see Federici 2012). Conversely, the watch, marker of wealth and symbol of individual possession of time, maintains the power-chronographies identified by Sharma. The watch, once banned among factory workers (Thompson, 86), frames time as a matter of individual subjectivity, power and agency.

Our initial considerations of the pocket watch led to the measurement or calculation of time as divided into ever-smaller units. However, alongside the nanochronologies identified by Virilio as often engendering our alienation from longer-term notions of history and the responsibility demanding by both the past and future, we might consider briefly the arrival of the smartwatch and the possibilities it appears to offer for the commercialisation of both self-knowledge and self-care.

As John Durham Peters has suggested in his brilliant exposition of clocks, 'a watch is a counter, a pointer, a stargazer, a body technique, and a pet' (Durham Peters, 2015: 226). This description seems particularly apt for thinking about today's smartwatches as they measure, record, calculate and organize with ever-greater degrees of imperceptible accuracy and variegated data. The advent of the smartwatch

is linked to the 'quantified self' movement begun in 2007 by Gary Wolf and Kevin Kelly but which arguably originated with the use of self-monitoring devices in the 1970s. The ability to 'synchronise' our watches with other electronic devices – phones, computers, tablets – offers us the possibility of an increasingly 'quantified self', informing us how far and how regularly we've moved and how well we have slept. The founding logic of the movement is based on increased self-awareness of health achieved through close daily monitoring of heart rate, sleep patterns, exercise and weight. In theory personal monitoring of these provides greater agency and management of long-term health than reliance on sporadic health check-ups. However, with the clear facility of worker surveillance in mind, it is interesting to note that many of the early adopters of such devices worked in data analytics or biotechnology and were interested in the economic potential in developing such tools for a mass market. More recently, the use of smartwatches has become increasingly linked to health insurance particularly in the United States. While there are questions being raised as to accuracy of the data being generated and the possibilities of having such data hacked or shared without users full consent, it seems highly likely that wearing a device like the Fitbit will become standard fare in many companies and, perhaps also, places of study. This is also in spite of warnings about the potential for 'obsessive', unhealthy behaviour encouraged by such devices.[ii] The location of secret U.S. and other military bases around the world have recently been revealed as a result of personnel using the Strava fitness tracker which produces a 'heat map' composed of GPS points logged during a run or jog (Hern, 2018).

The disjuncture or 'lag' between affective experience of time and space and its recording and display is not simply a design by-product but fundamental to the functioning of the smartwatch. We need it to tell us something different. Moreover,

the systems of 'virtual' rewards (in the case of the Fitbit, these take the form of distance 'badges' achieved in a single day or within a user's Fitbit 'lifetime') and the recording of one's failures to achieve a given number of steps or hours of sleep within the space of a day, frames subjectivity within the parameters of a limited set of data capture and interpretation. Its suggested targets (10,000 steps, 8 hours sleep) are configured according to the normative temporalities of desk-based labour and working hours. To use a smartwatch collectively, to share your data with others, is to use it competitively. Yet in competing with others the benchmark for 'healthy' behaviour is raised ever higher and rendered more and more complicated. This is the pact, Durham Peters informs us, we have had little choice in making: '[t]he watch is a prime symbol of modernity, a time bomb marking out Faustian mortgage of ourselves to things we did not actively chose but will not give up.' (225) Thus, while a bullet to the clocks might seem in order here, the question we might pose instead would be to ask how we might reconfigure or reappropriate such devices in the service of radical politics of time taken up not with a limited, quotidian self-care but, rather, projected towards a future *as* care?

Dupuy: Reimagining *what will have been*

To begin to explore the notion of future care without prescribing what this might involve, we need to return to the idea of future debt as created via reckless production and consumption patterns themselves maintained by the perpetual availability of a globalised labour force. The notion of future debt is a key debate within the wider context of contemporary ecocriticism. There have been various attempts to argue in favour of reparations to be paid to future victims for the damage done, suffering caused by industrial modes of production over the past two hundred years (see, for

example, O'Neill, 1997). To some extent, this involves a reversal of Walter

Benjamin's claims in *On the Origin of History* (1940) where he evokes the Angel of

History thrown into the future by the pile up of wreckage in the past. Our

responsibility lies not only with the victims of history but those of the future. Yet, like

the notion of reparation for past atrocities, the possibility of such reparation ever

achieving anything like compensation for the widespread disaster and suffering

caused is moot.

Against this idea of future debt, Dupuy's '*catastrophisme éclairé*' works along

the lines of what might be termed 'insurance'. However, unlike the individual cases of

medical treatment covered by the health insurance alluded to above, here insurance

refers to the management of widespread collective disaster. In the final scene of

Twelve Monkeys, Terry Gilliam's 1995 remake of *La Jetée*, one of the scientists from

the future takes her seat on a plane next to the man in possession of the virus which

will effectively wipe out most of humanity. The scientist introduces herself as

working in 'insurance', a euphemism for her time-travelling mission to limit rather

than prevent the extent of the damage caused by the release of the virus.[iii]

Insurance involves the wager that disaster in the future is a given. In this sense

it works according to the logic of the future anterior – *what will have been*. For Dupuy

(2004), historical time, which posits the past as closed off and the future as open, is

replaced by a notion of time as a project. Instead of thinking time as linear

progression in which action is endlessly deferred and disaster just a vague possibility

in our collective consciousness or as a cycle from which we cannot break free, Dupuy

suggests we envisage time in terms of a loop in which the present aligns itself with

the aftermath of major catastrophe, the moment when disaster has already occurred.

Hence, it becomes possible to excavate the ruins of the future and subsequently

decide on the 'retrospective' action needed to circumvent a catastrophic event *before it has occurred*. According to Dupuy, it is only by fully recognizing future widespread disaster as foregone conclusion that we have any chance of acting effectively to prevent the event from ever actually occurring.

We can better explain this concept of a 'loop' with recourse to the film *Looper* (2012). In 2074, the mob carry out hits by sending people back into the past where they come face to face with a waiting 'looper' or hitman. Each looper knows there may come a time when the hit sent back is, in fact, his future self. Once this final hit is carried out, the looper receives a large payoff, retires and the loop is closed. This is what is supposed to happen. Yet, with every loop there is the potential for a loophole. To create an opening, a loophole, a doubling has to occur whereby history repeats itself allowing for the possibility of difference. When Joe, a young looper, comes face to face with his future self he hesitates, giving his older self the chance to escape. Yet, the event is replayed and this time Joe kills his future self without hesitation and retires.

Where the insurance scene in *Twelve Monkeys* provides a postscript to Marker's *La Jetée* without really altering the main narrative, in *Looper*, the endless cycle, which sees a small boy witness the death of his adult self again and again, is called to a halt. Both the viewer and Joe have to truly believe the loop has been closed, that he has killed his future self and taken his payoff. Otherwise, there will be no future self to come back and prevent this from happening. However, the subsequent confrontation of present and future selves produces a cleavage, shifting the focus from their respective quests for personal happiness to greater questions of social responsibility.

Despite eschewing an openly apocalyptic narrative, *Looper* embodies the conceptual leap of faith defined by Dupuy, resisting the inherent conservatism of much apocalyptic discourse. It achieves this by shifting common perceptions of ethical responsibility as ultimately responsibility towards ourselves, our family and those like us towards a dangerous, subversive unknown. This dangerous other takes the form of Cid, a small child whose powers of telekinesis are causing widespread terror and destruction in the future, marking him out as a target for Joe. Consequently, where *La Jetée* and *Twelve Monkeys* evoke childhood innocence as something which is always already lost, in *Looper* such innocence is presented in terms of an incomprehensible, uncontrollable threat which nevertheless requires our full protection and care. Herein lies the real conceptual leap, not simply believing the future as certainty in order to effectively change it, but accepting responsibility for a future which cannot correspond to our own way of life and its values. My reading of *Looper* here echoes Christopher Groves' (2010) attempt to define a 'future of care' (121) over against the limits of short-term risk management strategies focused on calculability (107). We might consider such strategies as embodied in the smartwatch and the notion of the 'quantified self'. As Groves points out, all ethics is about the future, a future which while not calculable so to speak, is at the same time far from empty in the possibilities it offers up (121).

If Dupuy's 'time as a project' is an interesting proposal for the management of disaster despite the conceptual acrobatics and sleights of hand it requires, it is also precisely this artificial, staged, unnatural proximity proposed here that is at stake in Virilio's vehement attack of the loss of distance and horizon framing our experience of space and time. If Dupuy identifies the difficulty of thinking the future as foregone conclusion, for Virilio this has become all too easy in a world where there is no longer

duration or distance between subject and object but instead a perpetual present.

Everything is given up to us immediately and the consequence of this immediacy is,

for Virilio, the death of history and geography. Here, Virilio shares with Marzec the

position that a future posited as foregone conclusion, as fulfilled promise, can only

ever exist in the service of this eternal present. This is a present which in thus

enslaving the future, also obliterates any sustained concept of the past and, indeed, the

ethico-moral responsibility we bear towards its victims.

Moreover the question of climate-led disaster becomes irrelevant unless we

develop a notion of ecology which incorporates a critique of what Virilio refers to as

'time pollution.' As much attention needs to be given to the effects of 'machine time'

on the environment as is given to the impact of machinery and technology on space

instead of reducing these to narrowly conceived economic and political concerns:

'Unless we treat ecology simply as public management of profits and losses in the

substances and stocks that make up the human environment, it can no longer

effectively make headway without also making sense of the temporal economy of

interactive activities and their rapid mutations.' (Virilio, 1991b: 23) Marzec takes this

a step further in identifying a drive to disaster embodied in military strategies engaged

in proving their necessity:

Even though the worst-case scenario is unlikely, it becomes the target— the smoking gun—

that confirms the need for the predominance of military modes of thought, experimentation,

and action. National security experts play on the catastrophic to criticize a more patient

science for its adherence to the most 'likely' scenario and for its failure to give us the truth of

extreme climate changes (Marzec, 2015: 43).

Responding to criticisms that his 'enlightened' catastrophism embodies this form of fatalism described by Marzec above, Dupuy has more recently countered this perception of his work with an insistence on the optimism of his position (Dupuy, 2012: 229). It is this 'optimism' alongside the 'patient science' Marzec alludes to that is necessary in the task of rethinking time within a context of care *of* and *for* the future. Thus, what we should take from Virilio and his warnings about the speed and accelerationism defining our experience or non-experience of the world is the groundwork for a non-urgent critique of urgency working alongside this notion of future as 'care'.

Conclusion. Reset

In his witty account of his obsessive use of his Fitbit in *The New Yorker*, David Sedaris (2014) describes the moment of paralysis that comes when his device stops working one day. The extensive walking previously undertaken appears pointless when it is not tracked and logged. His response once the initial shock subsides is to order a new device and, on its (next-day) delivery, catch up for lost time (and steps). Consciousness comes into play, Virilio tells us (a point Marzec takes up), at the moment of the accident, when technology breaks down (Virilio, 1990: 6, cited in Marzec, 2015: 36). Yet, the space for pause provides limited opportunity for reflection or the pursuit of alternative practices. Sedaris had to wait less than a day for his replacement Fitbit. Following Virilio, Marzec suggests that far from producing a useful rupture with technology that might draw our attention to the toxic nature of a dependence on devices like the smartwatch or health tracker, all that emerges from the accident is a call for more technology (Marzec, 2015: 37).

Yet, perhaps the potential to resist such devices or reconfigure their uses in line with more collective notions of care lies not in the failure, or indeed destruction, of their technology but in their efficacy. The banning of health trackers by the military and the recent debates about their use in and around military bases suggests ways in which such devices might be turned against the military industrial complex. One example can be found in the various forms of countermapping produced using the heatmap images generated by the Strava fitness tracker, aesthetic practices which in the first instance render covert practices of surveillance and securitization more visible and thus contestable.

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Notes

[i] Virilio opens with a reference to the speed at which new legislation is pushed through, arguing that paradoxically this produces paralysis within the legal system since each new piece of legislation is already at risk of obsolescence. (Virilio, 2012:2).

ii In a piece for the *New Yorker*, David Sedaris sends up his own 'obsessive' relationship with his Fitbit (Sedaris, 2014). More recently, teachers have spoken out about the use of health trackers by children and college students and the potential damage 'arbitrary goals' might have on mental health and well-being (Turner, 2018). In 2016, Oral Roberts University in the United States came under fire for making students wear 'grade-issuing' Fitbits (Ali, 2016).

iii I have used this example of 'insurance' elsewhere in relation to Dupuy's enlightened catastrophism. See XXXX, 2014.