Running To Stand Still: Late Modernity's Acceleration Fixation

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Abstract

That we live in a time of unprecedented and ever increasing change is both a shibboleth of our age and the more or less explicit justification for all manner of 'strategic' actions. The seldom, if ever, questioned assumption is that *our* now is more ephemeral, more evanescent, than any that preceded it. In this paper, we subject this assumption to some critical scrutiny, utilizing a range of empirical detail. In the face of this assay we find the assumption to be considerably wanting. We suggest that what we are actually witnessing is *mere acceleration*, which we distinguish as intensification along a pre-existing trajectory, *parading* as more substantive and radical movement away from a pre-existing trajectory. Deploying Deleuze's (2004) terms we are, we suggest, in thrall to representation of the same at the expense of repetition of difference. Our consumption by acceleration, we argue, both occludes the lack of substantive change actually occurring whilst simultaneously delimiting possibilities of thinking of and enacting the truly radical. We also consider how this set up is maintained, thus attempting to shed some light on why we are seemingly running to stand still. As the Red Queen said, 'it's necessary to run faster even to stay in the one place'

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'[C]hangeful' is the word that best describes our future. The only thing that will not change is the presence of change itself."[1]

Introduction

We live, apparently, in a world of change and the only thing that we can do to survive in this world is change ourselves, and the organizations we inhabit. Such is the underlying assertion of the endlessly proclaimed needs for investment in science and technology, for privatization, for downsizing and de-layering, for the flexibility they seek to deliver, and, indeed, for 'change management' itself (see Grey 2003). In short, the assertion of a world of change justifies the majority of the so-called 'strategic' actions governing the formal organization of our lives. The call to change in the face of change becomes even shriller when it is supplemented by the assertion that the world is now changing faster than ever before; that we, more than any previous generation, live in an age of rapid and continual change, in an age where the rate of change is inexorably accelerating. James Gleick's (1999) best-selling book *Faster: The Acceleration of Just About Everything* taps into, describes and reflects this commonly held view of the world: the world is changing, quickly *and more quickly than ever before*.

This paper critically examines this ubiquitous assertion. For rather than bow to the received wisdom that things are changing faster than ever before, our central point is that it is equally arguable to suggest that we live in a time, particularly compared to the period 1850-1950, of *relative* stasis.

At the outset we need to clarify whom we are talking about when we say that 'we' live in a time of relative stasis. A Rwandan in 1994 or an Iraqi in 2003 would

hardly accept such an assertion. Broadly speaking, we are only referring to those living in the developed western world, most specifically the United States of America. And of course, even in this region we recognize that the empirical reality of particular places and individuals will be at variance with our overall thesis.

The Consumption of Movement by Hyperbolized Speed and Acceleration

There is endless fascination with the idea that we are accelerating towards a new, different tomorrow. Glittering new digital tools are in our hands and the technologists have found the immutable laws that will drive us ever faster into the future. Moore's 'Law', for example, states that 'every two years the number of transistors on the same size chip doubles', sometimes amended to 'the power and speed of computing doubles about every two years, while the cost remains about the same'. Smaller, cheaper, better technology: the multiplying grains of rice that will finally overbalance the chessboard. James Gleick fills his book with data and anecdotes that reinforce the truism of our age: we, more than any previous generation, live in an age of rapid and continual change and, furthermore, the rate of that change is increasing. Evidence, seemingly, if often only implicitly, of a supercharging of the motor of history.

And Gleick is right. But he tells only part of the story. We live, undoubtedly in an age of increasing *acceleration* but, paradoxically, it is our contention that this acceleration is itself an occlusion of the lack of substantive *movement* in the organization of our world. Let us attempt to explain this apparent *non sequitur*. To do so we draw upon a distinction drawn by Deleuze (2004) between representation and repetition. For Deleuze, representation simply re-presents, producing a mere impression of movement, which remains, at heart, false. He opposes this to repetition, which he sees as the essence of 'real movement' (2004: 26). This valorization of

'repetition' is close to that accorded to 'becoming' in much contemporary social theorizing. Indeed, as Žižek (2004: 12) makes the comparison:

> becoming is… strictly correlative to the concept of REPETITION: far from being opposed to emergence of the New, the proper Deleuzian paradox is that SOMETHING TRULY NEW CAN ONLY EMERGE THROUGH REPETITION. What repetition repeats is not the way the past 'effectively was' but the virtuality inherent to the past and betrayed by its past actualization.

For Deleuze, reality is the dynamic relationship between the virtual and the actual, between the possible and its present limited instantiations. Repetition retains and renews the possibility of the virtual, whilst representation constrains it in the actual in which it is doomed to simply replay. The distinctions between representation and repetition are respectively rendered by Deleuze (2004: 27) thus: 'One is negative… the other affirmative… One is static, the other dynamic… One is revolving, the other evolving.'

Despite our contemporary celebration of the (faux) dynamism of hyperbolized speed and acceleration, it is *more* substantive movement, more real change, that we require. What we do *not* need is more acceleration. For acceleration is conservative, reactionary and all the more so when it presents itself cloaked in the garb of its authentically innovative other, the *movement* that *it* thus yearns to snuff out. In its playing out through extension of extant trajectories of continuing but familiar 'change', it seeks above all to smother and conceal the horror attendant upon the realization that there is nothing new, that radical change is no more. Or as Beckett bluntly put it: "The sun shone, having no alternative, on the nothing new" (Beckett 1963:5). The consumption of movement by hyperbolized speed and acceleration allows the latter to parade as the former. In this masquerade, the fundamental stasis of

the moment is occluded beneath the froth created by breathless talk of a faster tomorrow. *Plus ça change, plus ça même chose!*

It is perhaps useful to present some examples of this 'breathless talk'. Let us start with the uber-guru of management, Tom Peters, and his latest book *Re-imagine! Business excellence in a disruptive age* (2003), which repeats (and repeats) the same theme of his earlier books such as *Thriving on chaos* (1987) and *Liberation management: necessary disorganization for the nanosecond nineties* (1992): "We pursue preservation. But the old order is doomed. We value permanence. But "permanence" is the last refuge of those with shriveled imaginations. We practice change. But "change" is not enough. (Not nearly)" (Peters 2003: 30). It is not enough because we live "in a time of discontinuous change" and in this kind of world, small change (incrementalism) is insufficient; "incrementalism is *the* enemy" (p. 40, original emphasis). Thus, according to Peters, "[t]he need to embrace 'change' (in fact, to go beyond 'change'... way beyond change) is imperative" (p. 32). Bill Gates, the richest man in the world, echoes this rhetoric in his book, *Business @ the Speed of Thought: Succeeding in the Digital Economy* (Gates 2000) which is peppered with sentences like the following: "If the 1980s were about quality and the 1990s were about reengineering, then the 2000s will be about velocity. About how quickly the nature of business will change." Gates reiterates the message endlessly. In 1999, at Georgetown University School of Business, he asserted that:

> business is going to change more in the next 10 years than it has in the last 50. I believe the rules of how a business works are going to be so different that only the companies that seize the opportunity to do things a new way will be the ones that are successful in the years ahead.[2]

Seven years later he concluded his address to 100 top CEOs with the following: "So [there are] plenty of things that let us focus our $6 billion of R&D on, on moving

software to the next frontier, and a pace of change that I can say confidently will be as fast as it's been in any of these last 10 years."[3] Gates' message is repeated and repeated, especially by those in positions of power. Tony Blair at the Labour Party Conference in 2005, in his aptly titled keynote speech, *We are the change-makers*, asserts that "[t]he world is on the move again: the change in the early 21st century [is] even greater than that of the late 20th century".[4]

What is interesting about these types of claims is that they are almost always presented without a shred of evidence. One person who does marshal data to buttress the argument is the inventor and computer scientist Ray Kurzweil. In a series of publications and website (www.kurzweilAI.net), Kurzweil (1999, 2001, 2005) argues that the exponential growth that Moore's Law attributes to chip power, is an inherent feature of information-driven human technologies, including genomics:

> An analysis of the history of technology shows that technological change is exponential, contrary to the common-sense "intuitive linear" view. So we won't experience 100 years of progress in the 21st century – it will be more like 20,000 years of progress (at today's rate). The "returns," such as chip speed and cost-effectiveness, also increase exponentially. There's even exponential growth in the rate of exponential growth. Within a few decades, machine intelligence will surpass human intelligence, leading to The Singularity – technological change so rapid and profound it represents a rupture in the fabric of human history. The implications include the merger of biological and nonbiological intelligence, immortal software-based humans, and ultra-high levels of intelligence that expand outward in the universe at the speed of light (Kurzweil 2001).

Kurzweil's thesis is influential; on the cover of his latest book, Bill Gates endorses him as "the best person I know at predicting the future of artificial intelligence". This "exponential growth in the rate of exponential growth" is, according to Kurzweil, bringing us to a 'singularity', akin to astrophysical discontinuities like black holes and the Big Bang. Accelerating technology will bring us to this singularity – within about

thirty years – where "our intelligence will become increasingly nonbiological and trillions of times more powerful than it is today—the dawning of a new civilization that will enable us to transcend our biological limitations and amplify our creativity" (Kurzweil 2005: front flap). We do not wish to detain ourselves much further with Kurzweil, save to make the following points. First, systems that exhibit exponential growth do not do so without end. Stabilization, regression or collapse are more plausible future scenarios. Second, taking an energy rather than an information perspective, 'peak oil' proponents (www.peakoil.org and www.peakoil.net) argue that the exponential growth in world oil production ended in 1970 (Duncan 2005-6) and that the decline in oil supplies will cause the collapse of industrial civilization within the next 25 years. Third, as Kelly (2006) has pointed out,

> [i]f you define the singularity as the near-vertical asymptote you get when you plot an exponential progression on a linear chart, then you'll get that infinite slope at any arbitrary end point along the exponential progression. That means that the singularity is "near" at any end point along the time line – as long as you are in exponential growth.

Thus, if one plotted Kurzweil's graphs only up to 1800, one would predict, following his logic, that the 'singularity' would be reached around 1830. (See Kelly (2006) for further critiques of Kurzweil's thesis).

The argument that this generation is not seeing or producing *radical* change (radical difference) is not often articulated, partly because we seem to be overwhelmed by contrary claims of endless alteration which renders such an argument untenable, and partly because all generations like to believe that they live in the most interesting of times.[5] As we have already made clear, this superficial impression of endless alteration is seemingly signaled and immediately confirmed by all too obvious manifestations of hyperbolized speed and acceleration. And the seemingly is important. For, as should be abundantly apparent from our argument

even thus far, there is no necessary connection between speed and acceleration and any substantive movement or fundamental change. Increasingly rapid representation of a range of possibilities, extrapolated from a prior ordering concept or identity, does not result in one iota of real difference from, or in, that concept or identity. Rather, such playing out simply exemplifies perpetuation of a root of the same. Any actual evidence of change (or of the lack thereof) that exists beneath this froth, therefore, is worth presenting. But we must be careful here. We are in no sense suggesting that the evidence *we* present below is in itself utterly compelling, that it establishes once and for all the case that real movement is in abeyance. Rather what we seek to do is show that by looking at evidence that *is* available, we can muster an at least plausible case for such a view. For it seems to us that one of the most noteworthy characteristics of the breathless, hyperbolic talk of speed and acceleration is the way in which evidence supporting its narrative is either simply assumed and thus notable solely by its absence or, on the rare occasion when it is presented, simply flashes by too quickly to discern. The method we thus adopt is to compare and contrast the major changes that have occurred in this generation with those of previous generations. In particular, our assertion is that it is relatively easy to marshal evidence that suggests that the change that 'we' are experiencing is, relatively speaking, no more – and on balance less – than that experienced by those who lived during the mid 19th to mid 20th century. Now, decency demands that we hold up our hands to the accusation of cutting our historical cloth to suit our argument. Throughout the paper we compare change from both sub-periods and the totality of the years 1850 – 1950 with the present, often loosely rendered as the post 1950 period. When, on occasions, we take our most extreme liberties we are then, grossly unfairly, comparing a period of 100 years with that of merely 50. But at least we present *some* evidence to buttress the position we

argue. And if we are to believe the evangelists of the future, the heralds of ever increasing change, within and engendering ever increasing time space compression (see, particularly, Harvey 1989), then surely we should expect to witness at least as much change in a more contemporary 50 year chunk of history as we would in a slightly less contemporary hundred year chunk?

Apperception and valorization of change, indeed its very identification, is of course, extremely subjective – radical change for one person may be insignificant to someone else – which makes it difficult to 'objectively' measure change. Another difficulty is that the multi-dimensional and complex nature of change means that any measurement of change will always be partial; talk of 'social' 'world' or 'environmental' change (and indeed stasis) can only be, in the final analysis, metaphorical. In such circumstances there can be no meaningful basis for causal assertions about, for instance, the link between technological developments and wider change. Nobody could *prove* that technology A has caused more change for generation X than technology B did for generation Y. Yet since such assertions are nevertheless commonplace and influential, it is worth making some attempt, however partial, to assess them empirically. This immediately raises the issue of *what* data one might collect if one is to honestly inquiry into the question. We have sought to be honest in our work, but you might, at this point, consider what data *you* might collect in such an exercise. We well recognize that no matter what data we present, we are open to the charge of cutting our cloth to suit our argument. We are, at least, bothering to cut some cloth, in clear contradistinction to the breathless prophets of our accelerated age whose scissors remain unblunted by use.

We do not present data assessing the changing rate of change or, in other words, its acceleration. Rather we seek to puncture the largely unevidenced platitudes

of ever accelerating change with data that suggests that regardless of any change in rate of change, there is little change at all to get excited about. Keeping with convention, both in relation to the interminable arguments in the social sciences between versions of technological and social determinism (and indeed their mimesis in similar silliness in more popular press), our focus as the paper proceeds oscillates between what might commonly be called 'social' change and its evil 'technological' twin. For our claim is that the endless invocation of acceleration and the hyperbolization of speed in these domains, as index of change, is precisely what increasingly precludes the cultural political considerations and actions that the *making* (Arendt 1958; Scarry 1985) of radical movement requires.

Let's be social to begin with. Figure 1 shows that the annual rate of change in the US population over the last century has been comparatively stable for many decades now, in contrast to the first half of the twentieth century, which witnessed quite dramatic movements in the rate of population change.

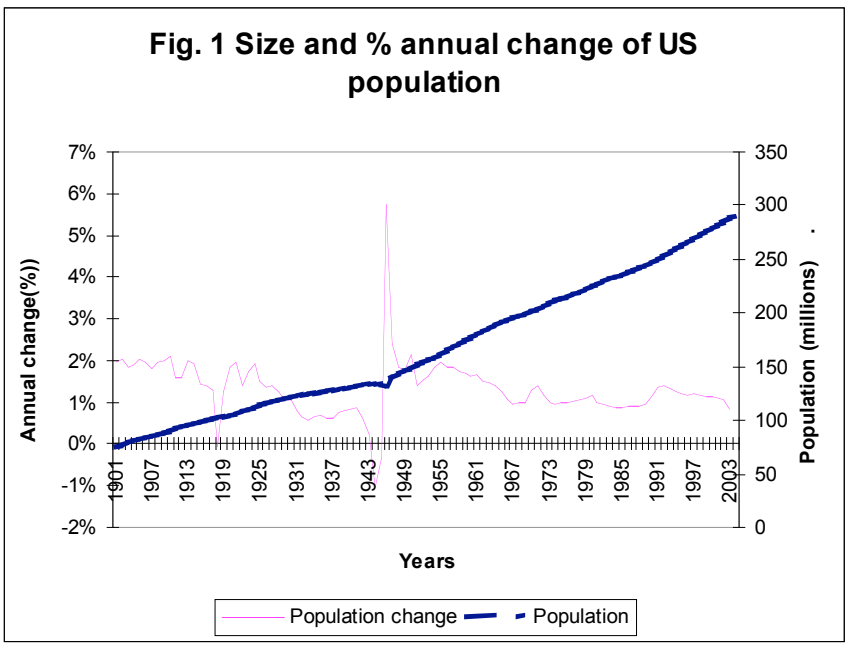

Figure 1: Annual change in population of US (Source: US Census Bureau http://www2.census.gov/)

Death and major illness, either of oneself or one's loved ones, are probably the most fundamental comparative indicator that we can rely on, since these have a profound individual and social effect. Figure 2, which plots the rate of notifiable diseases in the US over the last century, shows that a wide range of deadly diseases was rampant in the first half of the twentieth century. In contrast, the present generation has enjoyed an *extended* period of calm, with no comparable major disease threat (recognizing that we are focused on the US and the Western world).

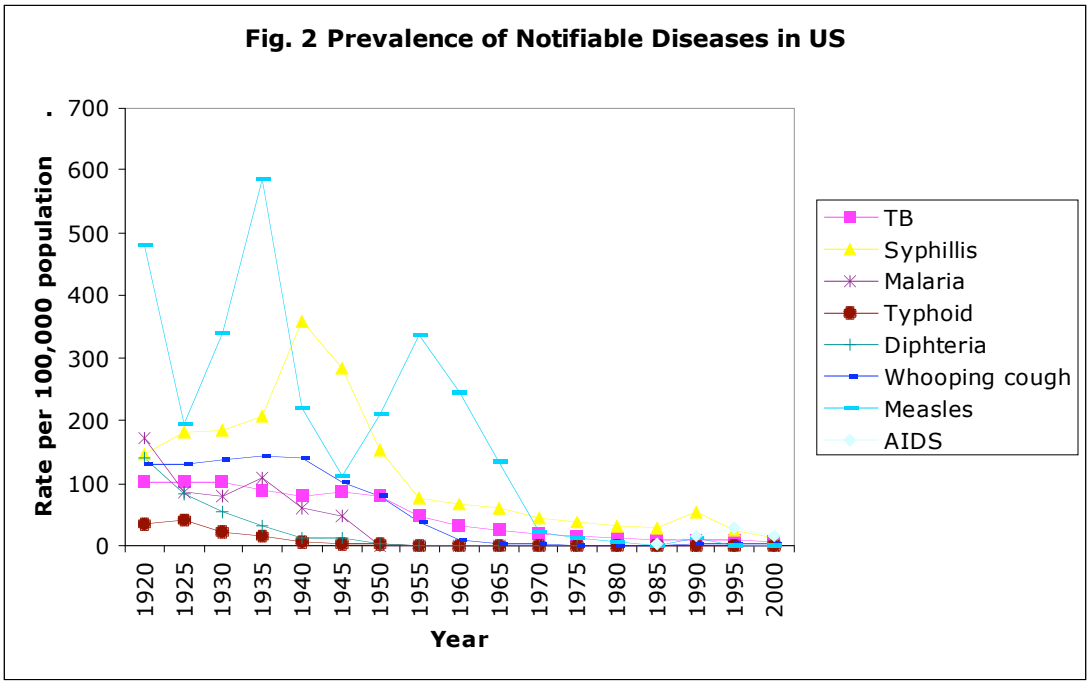

Figure 2: Prevalence of notifiable diseases in the US.

Longevity and death rate data provides another perspective on the issue. Figure 3 shows that the death rate in the US has been only marginally decreasing since 1950, after a period of significant decline in the first half of the twentieth century (there was a 38% drop in the death rate in the first half of the century compared to only a 10% drop in the second half). How, then, might we interpret this data? First, much of the increase in longevity is attributable to the improved longevity of the very young and there is now little scope for significant advances here. Second, advances in medicine –

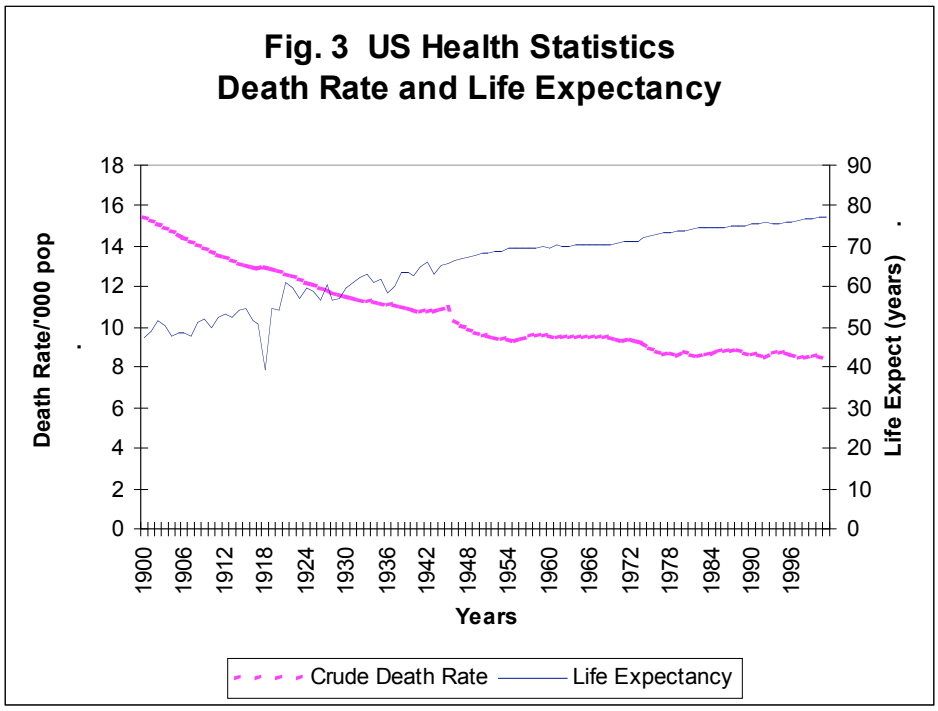

Figure 3. Death rate and Life Expectancy in the US. *Source: CDC/NCHS, National Vital Statistics System, US Census Bureau* http://www.cdc.gov/nchs/about/major/dvs/desc.htm

in which so much hope and money is currently invested – do not explain the data. For instance vaccination, while first used in the 18th century, cannot account for the massive decline in mortality in the first half of the twentieth century since vaccines only became routinely used in pediatric practice after World War II (Guyer et al. 2000). Rather, the spectacular improvement in health during the period 1900 to 1950 can be primarily attributed to State and local health departments who implemented a range of public health measures including water treatment, food safety, organized waste disposal, and public education (Centers for Disease Control and Prevention 1999). Improvements in housing and decreased crowding in cities also reduced mortality from diseases caused by person-to-person airborne transmission. Again, these are once-off changes. Overall, our essential point is that longevity and death rate, which are meaningful in terms of what is happening in society at any point in

time, have been relatively stable for many decades now after the quite radical shifts that were witnessed in the century prior to 1950.

Another surrogate measure of societal change is the rate of suicide if we accept Durkheim's (1897) assertion that 'anomic' suicide is caused by sudden changes in the social position of an individual mainly due to economic upheavals. There are, of course, multiple reasons why people commit suicide but high suicide rates and high *changes* in the suicide rate from year to year do provide *prima facie* evidence of significant social change. Again, what we mean by significant can be understood only comparatively.

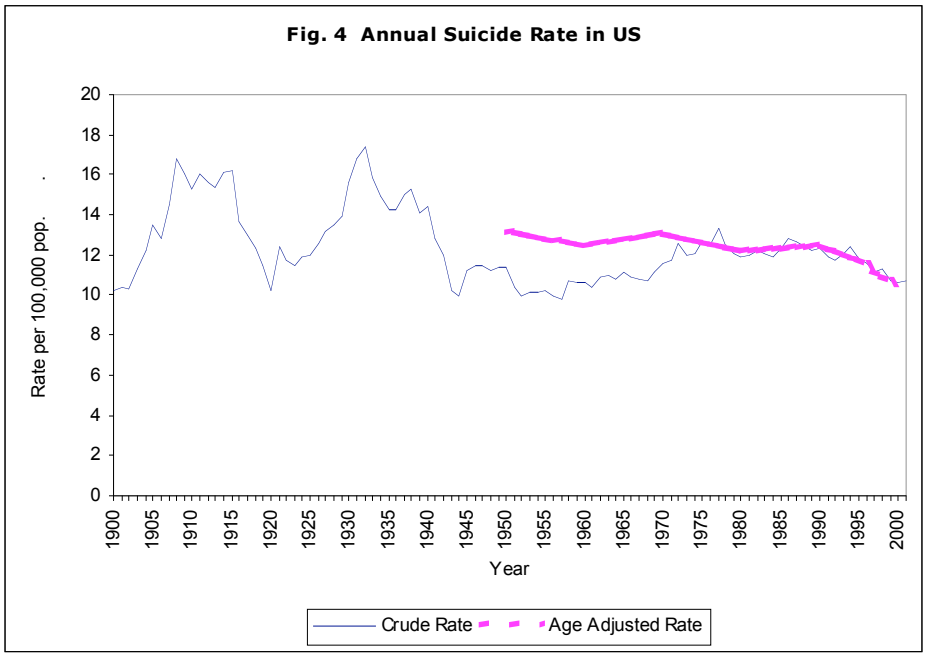

Figure 4: Suicide rate in the US (1900-2000). *Source*: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System. http://www.cdc.gov/nchs/about/major/dvs/desc.htm

Figure 4 presents the annual suicide rate in the US during the last century. This shows that the suicide rate in the US has been relatively stable since 1950 in contrast to the first half of the century.[6] Moreover, not only was the average rate higher, but the annual rate of *change* in the incidence of suicide from year to year was significantly

higher (see figure 5). Again, this evidence indicates that the period 1900-1950 witnessed considerably more social upheaval than the period 1950-2000.

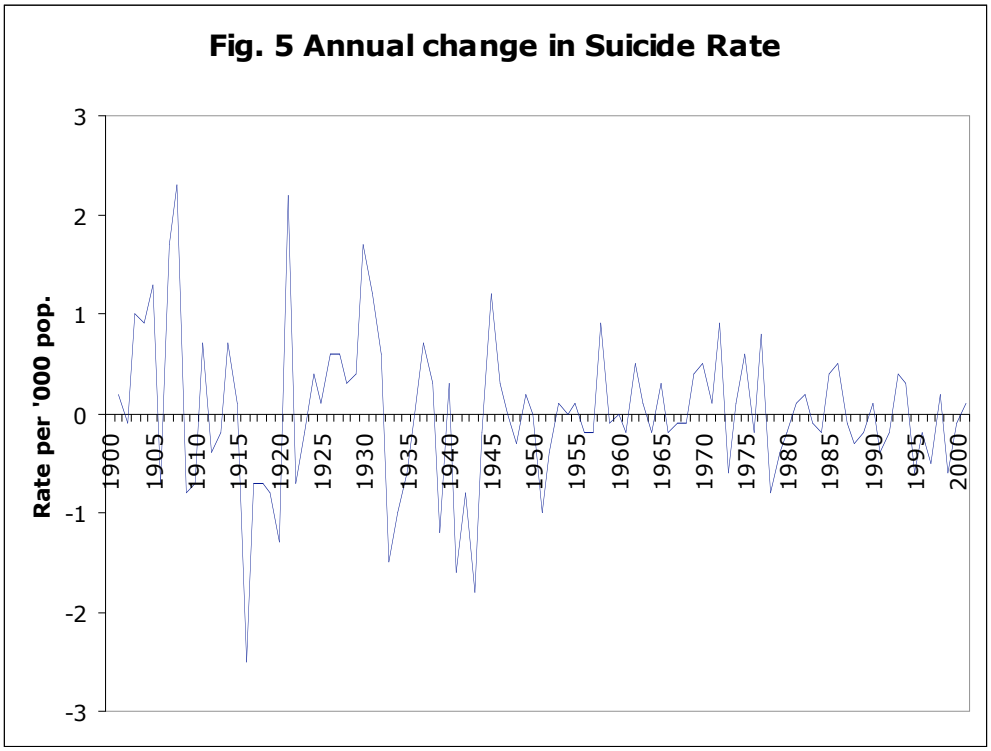

Figure 5: Annual rate of change in suicide rate (1900-2000)

Turning to things technological, the period 1850-1950 saw a veritable flood of discoveries, inventions, and new technologies that brought awesome and unprecedented changes to US society and beyond (Table 1). Gordon (2000) has usefully grouped this catalogue of innovations into 5 major clusters, each of which is centered on a primary breakthrough invention that occurred during the period 1860-1900.[7] The five clusters are: (i) electricity, including the electric light and electric motors and derivate technologies such as refrigeration, air conditioning, and mobile power machines; (ii) the internal combustion engine and its derivates such as personal autos, air transport, the suburb, highway and supermarket; (iii) materials technologies, including chemical, plastics and pharmaceuticals; (iv) entertainment, communication and information innovations including the telegraph, telephone, phonograph, popular

photography, radio, motion pictures and television; (v) urban sanitation, including running water and indoor plumbing.

refrigerator (1850)	the gasoline-powered automobile (1885)	the automobile assembly line (1913)
mild steel (1853)	radio waves (1888)	commercial radio (1920)
boolean algebra (1854)	pneumatic tyre (1888)	the diptheria vaccine (1923)
bicycle (with crank) (1861)	the punch-card computer (1889)	insulin (1923)
pasteurisation (1862)	photographic film (1889)	television (1923)
reinforced concrete (1867)	x-rays (1895)	the liquid fuel rocket (1926)
medical thermometer (1867)	wireless telegraphy (1895)	aerosols (1927)
the first transcontinental railroad (1869)	A/C current (1895)	penicillin (1928)
polyvinylchloride (PVC) (1872)	radioactivity (1896)	nuclear fission (1938)
the telephone (1876)	air conditioning (1902)	the electron microscope (1938)
the phonograph (1877)	the airplane (1903)	ball-point pen (1938)
the light bulb (1879)	the vacuum tube diode (1904)	the electronic calculator (1944)
cholera vaccine (1880)	the electron (1904)	the atomic bomb (1945)
the first electric power station (1882)	helicopter (1907)	the digital electronic computer (1946)
motorcycle (1885)	the Model T automobile (1908)	radiocarbon dating (1947)
	motion pictures with sound (1913)	the transistor (1948)

Table 1: Discoveries and inventions in the period 1850-1950.

The dates shown in Table 1 are obtained from encyclopedias and other sources and are obviously contestable since technologies and inventions evolve over a protracted period of time. Temporality is important, because if the period 1850-1950 was the period of great technological *invention*, the period 1950-2000 has essentially been a period of technological *diffusion* (Rogers 1995), as the various technologies moved from inventors' laboratories, to commercial prototypes, to mass utilization. The timeline from invention through diffusion to *saturation* – when knowledge and use of a technology is endemic – varies from technology to technology. For instance, the percentage of households owning a television (invented in 1923) increased from 9%

in 1950 to 87% in 1960 to 95% in 1970, at which point the US Census Bureau ceased recording television ownership data. In this case we can say that the saturation point was probably reached sometime in the mid-1960s (about 40 years after invention). The gasoline-powered automobile, which was invented in 1885, reached saturation point sometime in the mid-1960s as can be seen when we plot the number of automobile registrations (figure 6). Ownership peaked around 1980 and ownership in the year 2000 is comparable with that in the mid 1960s.

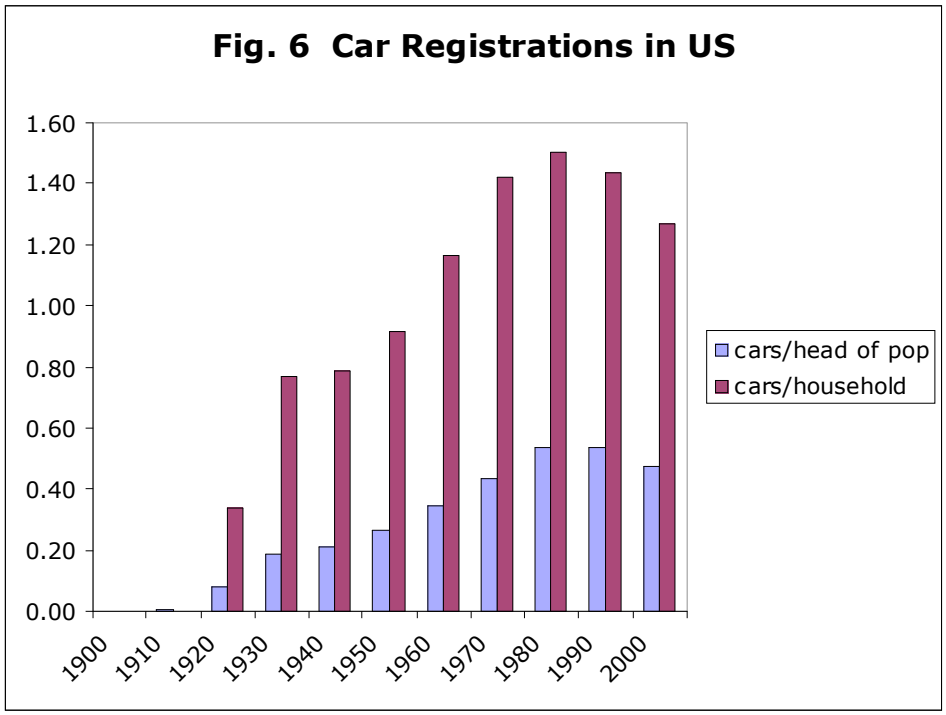

Figure 6. Historical trend in car registrations in US (source US Census Data http://www2.census.gov/ *and Federal Highway Administration Statistics:* http://www.fhwa.dot.gov/policy/ohpi/hss/index.htm)

Air traffic follows a similar path. Figure 7 plots the growth in the number of enplaned revenue passengers per thousand persons in the US since the 1920s (the birth of the technology is set at 1903). The data shows a continual, more or less linear increase in growth since 1940. In other words, the rate of change in recent years is not materially different from the rate of change experienced in any of the last 6 decades. Indeed, when one plots the annual incremental change in enplaned passengers, the resulting

graph (figure 8) indicates that the growth rate has peaked in the 1980s and that we are now well into the leveling-off period.

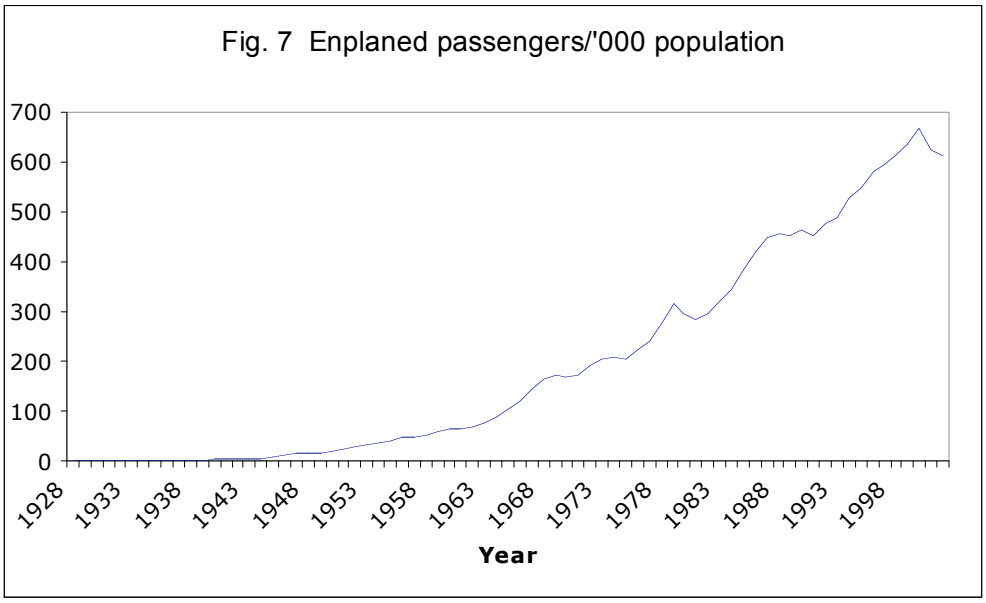

Figure 7: Annual number of enplaned revenue passengers per '000 population.

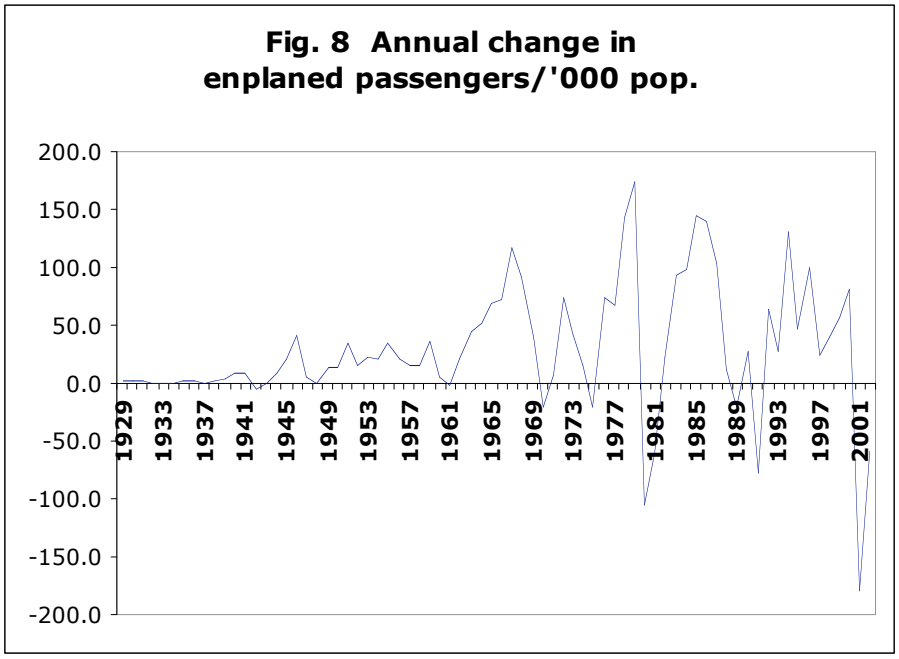

Figure 8: Annual change in number of enplaned revenue passengers per '000 population.

Space constraints mean that we will not present similar curves for other technologies listed in Table 1, but cursory knowledge of the empirical world is enough to recognize that most of the technologies have long completed their diffusion phase in the US and

Western economies. If the experience of social, economic and political change is felt during diffusion (accepting a soft or dialectical version of technologically determined social change) then the changes associated with a wide range of technologies has now ended. At the very least, we should be skeptical of claims that *we* are living in a period of *unprecedented* change. In particular, we should recognize that many of the present-day innovations are best understood as *enhancements* to original technologies developed in late 19th and early 20th centuries rather than fundamentally new innovations. For instance, the arrival of the mobile (cell) telephone and color television are in no way as profound as the arrival of the original telephone or original black-and-white television. Using our vocabulary, the phenomenon we are witnessing is the consumption of movement by hyperbolized speed and acceleration.

Now let us briefly look at technological innovations since 1950 (see Table 2).

videotape recorder (1951)	microprocessor (1971)	genetic fingerprinting (1984)
barcode (1952)	VCR (1971)	first sheep-goat chimaera created (1984)
oral contraceptives (1954)	word processor (1972)	first genetically-engineered animal patented (1988)
fibre optic (1955)	e-mail (1972)	Hubble space telescope (1990)
first artificial satellite (1957)	Skylab launched (1973)	Genome project launched (1990)
laser (1958)	Apple computer (1976)	world-wide-web (1990)
integrated circuit (1958)	spreadsheet software (1979)	first genetically-engineered tomatoes sold (1994)
audio cassette (1962)	cellular phones (1979)	DVD (1995)
fibre-tipped pen (1962)	first 'test tube' baby (1979)	first animal cloning (1997)
quasar (1964)	'hard-disk' drive (1980)	artificial liver (2001)
handheld calculator (1967)	first genetically modified mouse (1980)	first genetically modified humans? (2001)
artificial heart (1969)	MS-DOS (1981)	
moon landing (1969)	IBM-PC (1981)	
	space shuttle (1981)	

Table 2: Discoveries and inventions since 1950.

The first point to make is that many of the technologies are best understood as enhancements or derivatives, re-presentations, of original breakthrough inventions that occurred in the period 1850-1950. One measure of this is the small number of scientists and inventors that have gained iconic status since 1950 through being associated with breakthrough inventions. Who from the last 50 years can be placed shoulder-to-shoulder with Edison, Einstein, Heisenberg, Bohr, Poincare, Darwin, Pasteur, Waddington, and so on?

We can group most of the innovations listed in Table 2 into three main clusters: aerospace, information and communication technologies, and genetic engineering and we will comment on each of these briefly. Probably the most appropriate adjective that we might use to describe the aerospace industry is *stagnant*, if we think back to the excitement, anticipation and change that surrounded the industry during the 1950s and 1960s. When Armstrong spoke of a 'giant leap for mankind' the whole globe watched, listened and gasped in anticipation. Today, the workaday world of the aerospace industry is only marginally more stirring than a milk round, as the unfortunate space shuttle plonks yet another satellite in the darkness of space. The retirement of the Concorde fleet in 2003 marked a literal and symbolic return to earth for an industry that once promised wonders and advances that we daren't even imagine. In truth, there have been few radical developments in aerospace technology in recent decades, and the stark reality is that commercial aircraft flying today are little more than updated versions of aircraft originally developed in the 1950s and 1960s.

There have however, apparently been significant, recent technological developments in information and communication technologies (ICT). But taken in historical perspective, it is certainly possible to argue that the impact of technologies

like the world-wide-web is much less than the profound effect that radio achieved in the 1920s and television in the 1950s. ICT *has* undoubtedly experienced rapid growth in recent decades and it is this growth that has led many to speak in terms of a 'new' economy, a 'third' industrial revolution or a 'fifth' wave, terms that mark our age as experiencing a unique, historically significant, and qualitative change. However, when one considers the evidence, such assertions are hyperbolic at best and fanciful at worst. For instance, if we consider changes in multifactor productivity as one useful indicator, we see that while there was significant increase from 1995 to 1999, a major fraction of this occurred in the computer and durable manufacturing sectors which together comprise only about 12 percent of the private business economy (Gordon 2000). Moreover, even though US productivity grew at a continuously compounded rate of 1.14 between 1995 and 2000, this is less than half the rate of 2.31 percent per year achieved between 1929 and 1941, which Field (2003) identifies as the most technologically progressive decade of the twentieth century. Figure 9 plots the annual percentage change in multifactor productivity for the manufacturing and non-farm business sectors and again the data shows that recent decades have been relatively stable in terms of productivity changes.

More fundamentally, we might suggest that technological improvements in computing power quickly reach a point of diminishing returns for the simple reason that individuals have a limited ability to turn such improvements into productivity gains (since productivity, whilst humans are still involved, however peripherally, ultimately depends as much on invariant factors like thinking or typing speed as on computing power).

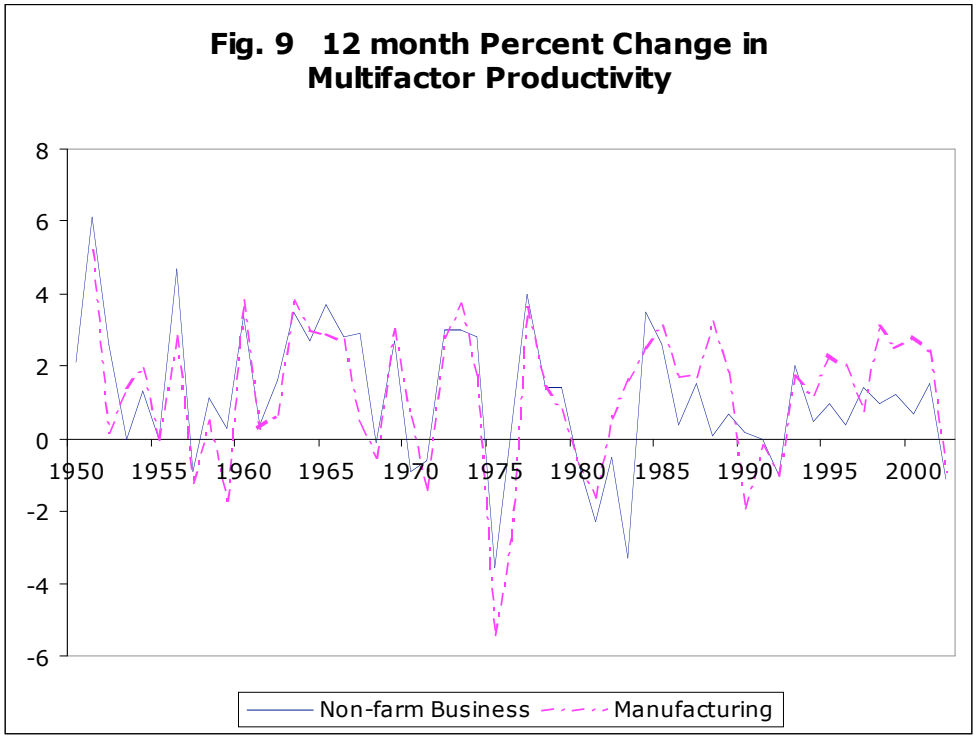

Figure 9. Annual percentage change in multifactor productivity (manufacturing and non-farm business) 1950-2001. *Source: US Department of Labor, Bureau of Labor Statistics (http://www.bls.gov/)*

Indeed, if one wanted to push the argument hard, one could date the end of truly radical innovation in the ICT field and the reduction of the fundamental activity in that field to considerably earlier: to the end of the 100-year period from 1850 to 1950. ICTs are above all technologies of administration and organization and it is no coincidence that talk of information and its revolution first rises into a deafening cacophony at just the same time that the cult of the manager begins to take hold. Consider the near simultaneity of the appearance of Burnham's (1941) *Managerial Revolution*, Drucker's (1947) *Big Business*, Shannon and Weaver's (1949) *Mathematical Theory of Communication*, Wiener's (1948) *Cybernetics*, Simon's (1947) *Administrative Behavior* as the bridge between the informational and the managerial, and the announcements of the invention of the thinking machine in Manchester and Pennsylvania (Large 1984: 36 –7), events that all occurred in the

momentous era of the 1940s. The 1940s, viewed thus, become the key period in the emergence of the set up, in the Heideggerian sense, of the so-called information revolution.[8] All that has happened since being regarded, contentiously no doubt, as the playing out of already present potential locked into, and unfolding out of, that set up. Accelerated re-presentation of the same, rather than real movement or repetition of difference.

Innovations in genetic engineering comprise the third major technological cluster. While Gregor Mendel's discoveries in the 1860s on the breeding of peas are normally identified as the foundation of modern genetics, this technological cluster has thus far remained largely in the laboratories and has only recently shown signs of diffusing into the mass market. Genetic engineering technology is extremely controversial and certainly shows no sign of being embraced with the enthusiasm that characterized earlier technological clusters.

Shifting our gaze to the world of politics and economics we recognize the same trends. The period 1850-1950 saw two world wars, mass production and consumption, the development and crash of the stock market, the Great Depression, massive industrial change and restructuring, the communist experiment, the Holocaust, and more 'isms' than you could shake a cat at. Even the apparently relatively stable period of 1950-75, from the perspective of our current presumption, witnessed, among other things, the space race, the arms race, the Cold War, the Korean and Vietnam Wars, and the feminist and civil rights movements. While there has certainly been important economic and political change in recent decades, it is implausible to suggest that these changes are either more rapid or more profound than those experienced in other periods.

For example, although there is much talk about 'globalization' as a contemporary phenomenon of late modernity, this is more a 'necessary myth' than a reality as Hirst and Thompson (1996) have compellingly argued. Their position can be summarized into a few important points. First, the present highly internationalized economy is not unprecedented and in some respects 'the current international economy is *less* open and integrated than the regime that prevailed from 1870 to 1914' (1996: 2, original emphasis). The evidence they draw on to support this point is (a) the ratio of merchandise trade to GDP and (b) capital flows relative to output. Their data 'confirms unequivocally that "openness" was greater during the Gold Standard period [1880-1914] than even in the 1980s' (1996: 28). Second, contrary to the received wisdom, both primary and secondary data on where multinational corporations conduct their business indicates that genuinely *transnational* companies are relatively rare. Instead, 'international businesses are still largely confined to their home territory in terms of their overall business activity' (1996: 98). Third, capital mobility is *not* producing a major shift of investment and employment from the advanced to the developing countries, and the Third World continues to remain marginal in terms of both investment and trade. Thus, the world economy is far from 'global' and instead 'trade, investment and financial flows are concentrated in the Triad of Europe, Japan and North America' (1996: 2).

Returning to the domain from which we began our account, Roy Jacques (1995), in a compelling historical study of management discourse, has identified much the same phenomenon in management thought. According to Jacques, the only 'revolution' here is the recycling of old ideas: management theory 'continues to revolve around the same issues and continues to present the same limited range of potential solutions' (1995: 155). The result: 'we are living through a curious moment

when a "revolution" is being announced whose *avant garde* sit at the heart of the current power elite and whose *internationale* is composed from minor variations on a nineteenth-century theme'. Likewise, René ten Bos (2000) sees management theory and practice as manifestations of cyclical fashions, while Michael Kennedy (1999) presents much the same idea, albeit applied more narrowly.

Accounting for Acceleration Parading as Movement

The empirical data, at least that which we have chosen to present, indicates that the extent of change that we are experiencing today, let alone its rate, is certainly not unprecedented. Our data has focused on the period since 1850, but rapid and profound change has been a recurring feature of American and world history. We need only think for a while about what life was like for those people who lived during the colonization of the Americas, the Reformation, the Renaissance, or the (extended) fall of the Roman Empire. It is this historical context that compels us to at least venture to take the contrarian position that *we live in a period of relative inertia*. Our argument is that the great changes we *seem* to be witnessing in the present are not in themselves particularly novel and indeed were actually seeded by the Second Industrial Revolution, which is still playing itself out. The products of these changes have now virtually saturated the market but there is little substantive innovation within this and on the horizon. Talk of a Third Industrial Revolution is simply both premature and hyperbolic. It is acceleration, not movement.

But why then does our culture feel such a need to see ours as *the* time of radical change? What politics are served by such obfuscation? In part, it is obvious when we consider the consequences of the contrary position: if all other periods of recent history can be see as times of radical change, then the contemporary appears as slow. And slowness, when viewed through any of our seemingly progressive,

contemporary managerial models, would suggest that we are approaching the plateau and inevitable decline. So we worship at the Cult of the New, trapped within a complex made of Kant's moral *character* of radical, autonomous self-making and Hegel's *teleology*.

So clearly then this cult itself is not new. We can probably trace its origins at least as far back as Michelangelo (Berman 1982, Foucault 1984, Szakolczai 2007), but we will confine ourselves to examining the cult within the discourse of management, which is so endemic and influential in contemporary western society, and which, both as a discourse and as a powerful elite, lives on and thrives on this Cult of the New. To better understand the phenomenon, it helps to look back at the emergence of management during the second half of the nineteenth century (hot on the heels of the emergence of the idea of the *avant garde* in art). As Shenhav and Weitz (2000) have documented, 'management' was invented in large part by engineers in a quasi-political process within which the idea of *uncertainty* was accorded a pivotal role. We say quasi-political because the engineers saw and depicted themselves as outside of politics, at a time when organizations and societies were engulfed in ideological conflict between labor and capital. The risks of uncertainty were propagated by (and for) engineers for (only) they would be able to provide pragmatic, 'rational' solutions, free from ideology. In this way, 'the concept of uncertainty may be regarded as socially constructed knowledge that was created in a unique historical context and enacted by organizational actors and management theorists' (Shenhav and Weitz 2000: 373). And ever-greater uncertainty requires ever-greater imposition of rational solutions and the ever more appearance of de-politicization. Thus, one way of looking at the history of management is as an ongoing game where different groups have wrestled power from the previous power

elite in organizations using essentially the same argument about uncertainty and change that the engineers first employed over a hundred years ago: 'The world is rapidly changing and unless you invest in 'X' (inserting one of following for 'X': marketing, quality, HR, project management, IT, cultural change, knowledge management, strategy, etc.) your organization will DIE'. The high point in this extended narrative probably occurred in the 1960s when 'strategic management' took center stage within management discourse. We will briefly say two things about strategy.[9] First, more than the more functional realms of administration, strategy is centrally about describing and inventing a future, which means it is necessarily abstract and ephemeral. The future is always made up. And, in line with Thomas's theorem ('situations we define as real become real in their consequences' (Thomas and Morris 1966: 301)), the ubiquitousness of the strategy discourse both reflects and *creates* an ephemeral reality, feeding off itself in a frenzy of increasing hyperbole. Second, an important strategy of economic power elites is to dominate the strategy discussion, because this is perhaps their only way of justifying the faith of others in their prescience. But critiques of strategic management over the last decade or so, such as Mintzberg's (1994) provocative analysis in *The Rise and Fall of Strategic Planning*, indicate that this faith is now being tested, not least by influential commentators on management (see also Ghoshal (2005)). Perhaps this is a sign of things to come (or perhaps not, since we frankly do not know).

Politics, since the emergence of socialist and social-democratic parties, has increasingly employed a similar rhetoric of rationality as *the* weapon of choice in engaging with an uncertain and fast-changing world – with industrial relations, economics, crime, etc. depicted as problems to be solved through rational means. This rhetoric reaches its apotheosis perhaps in the endlessly declared civilized 'Wars

upon…[add social problem of your choice]'. And, as such, with the ceaseless positioning of parties as the best placed to manage in times of such fevered (faux) change – (faux) change that has to be continually re-affirmed.

And re-affirmed is the word. Even the most minimal assay of the evidence of this (ever increasing) phenomenon is seemingly no longer required. For our culture has transformed change into what Grey (2003) refers to as a 'fetish'. We have institutionalized change to the point where its reality is unquestioned. Whitehead's 'fallacy of misplaced concreteness' (1967: particularly 51 - 52) can usefully be applied to the *idea* that things are rapidly changing. Ironically, our culture has institutionalized or 'concretized' the belief that nothing is set in concrete, that everything is forever changing. 'The world is changing at an ever-faster rate and you and your organization must change with it' is the shared, taken-for-granted assumption that has elevated the sale of books, seminars and training programs on all manner of governance, which consequently appears as management, to an unprecedented level. And social theory is far from an innocent bystander in this regard. For example, according to Ruane (2003) the emergence of that set of framing concepts generally branded as 'postmodernity' has had a key role to play. Here, the notion of 'rationality' again takes center stage. For, as Ruane (2003: 17) puts it, for those who wish to see a discontinuity, a 'transition in epochal terms'…

> …there is a move beyond the centralisation, rationality, homogeneity, universalism and 'traditionalism' of modernity to a more radically differentiated, fragmented, localised and fluid world, one that is so saturated with hyper-realities that the very nature of reality is in question.

Crucial to the perception of such a transition and also, indeed, to a (mis)recognition of ever-increasing change is a process of forgetting, forgetting that the concretized, institutionalized entity of such 'change' has been socially constructed. In a seminal

study, Latour and Woolgar (1986; Woolgar 1988) observed that once a scientific 'fact' comes to be undisputed, the constructed nature of the 'fact' is 'forgotten' through a process they refer to as 'blackboxing'. More generally, we also 'forget' the constructed nature of the technologies, facts and institutions that we have inherited, and come to believe that earlier generations were static compared with our own. In other words, changes in even relatively recent history are 'forgotten' and blended into an endless (or rather beginingless) tradition wherein *nothing* changes. And in this way contemporary changes appear quite radical and rapid since they are set against the invented stasis of 'tradition' (Hobsbawm and Ranger 1983).

This process is of course not one only perceptible in modernity and its apparent successors; there is always a trade between continuity and change, a trade in which, depending upon cultural circumstance, one side or other of the binary is privileged. For example, as Dodgshon (1998) notes, Sahlins emphasized how the South Sea islanders (a supposedly static cultural system) absorbed their initial engagement with European adventurers through their existing concepts and categories. In so far as he was perceived to be a manifestation of a real Hawaiian deity, 'Captain Cook was a tradition for Hawaiians before he was a fact' (Sahlins 1987: 148). And although the reproduction of culture through praxis invariably brings with it the possibility of its transformation, what might, to others from the outside, appear to be a major change can nevertheless be absorbed nonchalantly by the culture in question and not noticed as significant. Not surprisingly however, the inverse can also hold. Levi-Strauss (1966: 234) famously distinguished between 'hot' societies (those open to change) and 'cold' ones ('primitive' societies, seemingly resistant to change). If we inhabit a 'hot' culture, then that which might otherwise appear as relative inertia is absorbed into the socio-cultural mindset in a way that's

compatible with its extant speed paradigm. Following Sahlins then, when cold engages with hot it stays cold and merely interprets that hot as part of the cold (for example, the islanders interpreting Captain Cook as part of their pantheon), and so the cold society stays cold. And likewise, in our apparently hot contemporary circumstance, when we meet cold, relative inertia, we (mis)recognize it, interpret that cold as hot, and retain our own self-image as a hot society.

What is crucial to note here is that there is no Archimedean point from which change can objectively be judged. Whilst Levi-Strauss, we guess, sits at the warm hearth of intellectual detachment, able to perceive in a seemingly disinterested fashion the workings of the hot and the cold upon each other, he is, as much as those he comments upon, trapped within webs of meaning that must, in the final analysis, remain partially beyond him. Similarly, the proposition of 'tradition' as invented, whilst undoubtedly useful, must itself be viewed with a similar degree of skepticism in any ultimate instance. But if we do choose to run with such a distinction, and clearly we do, perhaps we can do so more subtly, with requisite humility, if we see the modern and its derivatives as eras and ways of knowing in which social theory itself is both part of invented tradition and a key constituent of our ability to assay practices and render them as traditional, invented or not. Returning to Ruane (2003: 18):

> The postmodern moment is now (more or less) past, but its impact was considerable across all domains of culture. One of its effects on social theory was to reinforce the perception of the present as a point of transition to a world where change will be a permanent and universal condition.

Finally, perhaps most fundamentally, we may favor acceleration over real movement since, following the horrors of the latter half of the period 1850-1950, we have simply become too terrified of radical change to actually really want it. This point is akin to what Hughes (1981: 298) had to say about the speechlessness of art in the face of the

twentieth century's realities. For despite our continuing longing for progress we are often willing to settle for the reactionary, for a *romanticized* radical (in the most pejorative sense of the term), because we recall only too well how the worship of *real* Romantic heroes can allow their unquestioning followers to be led into the abyss (Kavanagh and O'Leary 2004).

However, despite our fears we know that the world is always changing and we also know that precluding the possibility of change suggests an equally unacceptable utopian, stasis. For the journey to the abyss is also choreographed by the promise of a final solution. The twin rhetorics of hyperbolized speed/acceleration and utopia may thus be seen as Janus-like faces of late modernity, reflecting the continuing influences of the ideals of Romanticism and the Rationalism upon which it was built and against which it reacted. On the one hand we read, and in part want to believe, that we have reached the end[10], that we have reached utopia and that it is impossible to envisage any alternative, for this would allow us to sit back and relax in the best of all possible worlds. But such a line is unthinkable and contrary to the preceding logic (of the radical, innovative, ever-changing market) that apparently got us to this point, that delivered to us, and us to, this promised land. And so we find ourselves in the contradictory thrall of *both* rapid change *and* utopia, which (axiomatically) does not change at all.

Armitage and Roberts (2002) work this line in an intriguing way, through their invocation of the work of Virilio. They outline the existence of a form of writing and manifesto for being in the world that they characterize as *chronotopian*, with an associated discourse constituted by a curious mélange of bodies including both those of the 'prophet hypsters of the information superhighway' (Kroker and Weinstein 1994: 77), such as Bill Gates, and seemingly more disinterested observers, such as

Giddens and Castells. For despite their obvious differences, all contributors to chronotopia tend to evoke a 'new social imaginary' (Armitage and Roberts 2002: 48) that promises a better future for us all. But every silver lining has a cloud and for Armitage and Roberts, following Bauman and Virilio, this cloud is the other of chronotopia, a '"hypermodern" or "excessive" individually experienced *chronodystopia*' (2002: 43). A place (if such a term still bears meaning) in which the uncomfortable assumption is…

> …that speed is collapsing and therefore involved with the realm of acceleration and reversal, with the idea that, today, speed is a crossroads of simultaneous events … Thus the supremacy of short-term thinking over long-term thinking is established along with the social imaginary that the imperative of speed-space is an acceptable mode of individual experience in hypermodernity (Armitage and Roberts 2002: 50).

For most of us, most of the time, the paradox of the present – in which we are simultaneously deafened by endless talk of speed/acceleration and the fulfilling of the promise of utopia – is resolved, albeit chimerically, by the consumption of substantive movement by hyperbolized speed and acceleration and the substitution of the latter for the former. We inhabit *chronodystopia* but refuse to recognize our location. We feel we are moving and moving faster, evacuating our cultural politics of need, desire and instruments for substantive change. We represent the same rather than repeat difference. We are running to stand still. We are accelerating to inertia.

References

Arendt, Hannah. 1958. *The Human Condition*, Chicago: University of Chicago Press.

Armitage, John & Roberts, Joanne. 2002. Chronotopia. In *Living with Cyberspace: Technology and Society in the 21st Century*, edited by J. Armitage & J. Roberts. London: Continuum.

Baudrillard, Jean. 1988. *In the Shadow of the Silent Majorities.* New York: Semiotexte.

Beckett, Samuel. 1963. *Murphy.* London: John Clader.

Berman, Marshall 1982. *All that is solid melts into air: the experience of modernity.* New York: Simon and Schuster.

Brown, Stephen. 1993. Postmodernism ... The End of Marketing? In *Rethinking Marketing*, edited by Brownlie, D., Saren, M., Wensley, R. and Whittington, R. Coventry: Warwick Business School Research Bureau.

Burnham, James. 1941. *The managerial revolution; what is happening in the world.* New York: The John Day company.

Centers for Disease Control and Prevention. 1999. Ten great public health achievements--United States, 1900-1999. *MMWR Morb Mortal Wkly Rep.* 48: 241-242.

Deleuze, Gilles. 2004. *Difference and Repetition*, tr. Paul Patton, London: Continuum.

Dodgshon, Robert A. 1998. *Society in Time and Space: A Geographical Perspective on Change*, Cambridge: Cambridge University Press.

Drucker, Peter Ferdinand. 1947. *Big business : a study of the political problems of American capitalism.* London , Toronto: W. Heinemann ltd.

Duncan, Richard C. 2005-2006. The Olduvai Theory: Energy, Population, and Industrial Civilization. *Social Contract* 16(2): 134-144.

Durkheim, Emile. 1897. *Le suicide*. Paris: Alcan.

Field, Alexander J. 2003. The Most Technologically Progressive Decade of the Century. *The American Economic Review* 93(4): 1399-1413.

Foucault, Michel. 1984. What is Enlightenment? In *The Foucault Reader*, edited by

Rabinow, P. New York: Pantheon Books.

Fukuyama, Francis. 1989. The End of History? *The National Interest* 16(Summer): 3-19.

Gates, Bill 2000. *Business @ the Speed of Thought: Succeeding in the Digital Economy.* Warner Business Books.

Ghoshal, Sumantra 2005. Bad management theories are destroying good management practices. *Academy Of Management Learning & Education* 4: 75-91.

Gleick, James 1999. *Faster: the acceleration of just about everything.* New York: Pantheon Books.

Gordon, Robert J. 2000. Does the 'New Economy' Measure up to the Great Inventions of the Past? *Journal of Economic Perspectives* 14(4): 49-74.

Grey, Christopher. 2003. The Fetish of Change. *TAMARA: Journal of Critical Postmodern Organization Science* 2(1): 19.

Guyer, Bernard, Freedman, Mary Anne, Strobino, Donna M. & Sondik, Edward J. 2000. Annual Summary of Vital Statistics : Trends in the Health of Americans During the 20th Century. *Pediatrics* 106(6): 1307-1317.

Harvey, David. 1989. *The Condition of Postmodernity. An Enquiry into the Origins of Social Change.* Oxford: Blackwell.

Hirst, Paul & Thompson, Grahame. 1996. *Globalization in Question.* Cambridge: Polity Press.

Hobsbawm, Eric J. & Ranger, Terence O. (eds) 1983. *The invention of tradition.* Cambridge: Cambridge U.P.

Hughes, Robert 1981. *The shock of the new.* New York: Knopf: distributed by Random House.

Jacques, Roy. 1995. *Manufacturing the Employe : Management Knowledge from the 19th to 21st Centuries.* Sage: London.

Jones, Steve. 1997. *The Language of the Genes.* London: Flamingo.

Kavanagh, Donncha & O'Leary, Majella. 2004. The Legend of Cú Chulainn: Exploring Organisation Theory's Heroic Odyssey. In *Myths, Stories and*

Organizations: Premodern Narratives for Our Times, edited by Gabriel, Y. Oxford: Oxford University Press.

Kelly, Kevin 2006. The Singularity is always near. http://www.kk.org/thetechnium/archives/2006/02/the_singularity.php accessed on July 10, 2006.

Kennedy, Michael Henry. 1999. Fayol's Principles and the Rule of St Benedict: Is there anything new under the sun? *Journal of Management History* 5(5): 269-276.

Kroker, Arthur & Weinstein, Michael A. 1994. *Data trash: the theory of the virtual class*. Montreal: New World Perspectives.

Kurzweil, Ray 1999. *The age of spiritual machines: when computers exceed human intelligence.* New York: Viking.

Kurzweil, Ray 2001. The Law of Accelerating Returns. http://www.kurzweilai.net/articles/art0134.html?printable=1 accessed on July 10, 2006.

Kurzweil, Ray 2005. *The singularity is near: when humans transcend biology.* New York: Viking.

Large, Peter. 1984. *The Micro Revolution Revisited.* London: Frances Pinter.

Lash, Scott & Urry, John. 1987. *The End of Organized Capitalism.* Cambridge: Polity.

Latour, Bruno & Woolgar, Steve. 1986. *Laboratory Life: The Construction of Scientific Facts.* Beverly Hills: Sage.

Levi-Strauss, Claude. 1966. *The savage mind*. London: Weidenfeld and Nicolson.

Mintzberg, Henry 1994. *The Rise and Fall of Strategic Planning.* New York: Prentice-Hall.

Peters, Tom 1989. *Thriving on Chaos.* London: Pan Books Ltd.

Peters, Thomas J. 1992. *Liberation management: necessary disorganization for the nanosecond nineties.* New York: Knopf.

Peters, Thomas J. 2003. *Re-imagine! Business excellence in a disruptive age.* London;

New York: Dorling Kindersley.

Rifkin, Jeremy. 1995. *The End of Work : the Decline of the Global Labor Force and the Dawn of the Post-Market Era.* New York: Jeremy P. Tarcher.

Rogers, Everett M. 1995. *Diffusion of innovations.* New York: The Free Press.

Ruane, Joseph. 2003. Theorising the transition: *Longue durée* and current conjecture in centre-periphery relations in Britain, France and Spain. In *Europe's Old States in the New World Order.* Edited by J. Ruane, J. Todd and A. Mandeville. Dublin: University College Dublin.

Sahlins, Marshall. 1987. *Islands of history*. London. Tavistock.

Scarry, Elaine. 1985. *The Body in Pain: The Making and Unmaking of the World*, New York: Oxford University Press.

Shannon, Claude Elwood & Weaver, Warren. 1949. *The mathematical theory of communication.* Urbana: University of Illinois Press.

Shenhav, Yehouda & Weitz, Ely. 2000. The roots of uncertainty in organization theory: A historical constructivist analysis. *Organization* 7(3): 373-401.

Simon, Herbert Alexander. 1947. *Administrative behavior; a study of decision-making processes in administrative organization.* New York,: Macmillan Co.

Szakolczai, Arpad 2007. *Sociology, Religion and Grace.* London: Routledge.

ten Bos, René. 2000. *Fashion and utopia in management thinking.* Amsterdam; Philadelphia: John Benjamins Pub.

Thomas, W. I. & Janowitz, Morris 1966. *On social organization and social personality selected papers.* Chicago: University of Chicago Press.

Touraine, Alain. 1971. *The Post-Industrial Society.* New York: Random House.

Weber, Samuel. 1996. *Mass Mediauras: Form, Technics, Media.* Edited by Alan Choldenko, Stanford, CA: Stanford U. P.

Whitehead, Alfred North. 1967. *Science and the Modern World*. New York: The Free Press.

Wiener, Norbert. 1948. *Cybernetics; or, Control and communication in the animal and the machine.* New York: J. Wiley.

Woolgar, Steve. 1988. *Science: The Very Idea.* Chichester, Sussex: Ellis Horwood.

Žižek, Slavoj. 2004. *Organs without Bodies---On Deleuze and Consequences*. London: Routledge.

Endnotes

[1] Howard Newby, Chief Executive of the Higher Education Funding Council for England *The Times Higher Education Supplement*, August 6th, 2004: 12.

[2] See http://www.microsoft.com/billgates/speeches/03-25georgetown.asp (accessed July 7th, 2006).

[3] See http://www.microsoft.com/billgates/speeches/2006/05-17CEOSummit.asp (accessed July 7th, 2006).

[4] http://www.labour.org.uk/index.php?id=news2005&ux_news%5Bid%5D=ac05tb&cHash=d8353c3d74 (accessed July 7th, 2006). The same type of rhetoric is promulgated by organizations such as the Acceleration Studies Foundation (http://www.accelerating.org/) which, according to its website, is "a growing community of 3,100 future-oriented technologists, entrepreneurs, industry, institutional and government leaders, academics, scientists, strategists, humanists, and others interested in better understanding and guidance of accelerating planetary change."

[5] Something of a simplification perhaps, but the price of polemic! It might perhaps be better to suggest that the past is always selectively re-presented and appropriated by the present. Portions of it are no doubt simply rendered as dull, tardy, or out of date, while other images of heritage are valorized, treated as contemporarily relevant, privileged over a present which is itself thus seen as regressive in regard to them (we are grateful to the editorial review for this necessary complexification).

[6] The age adjusted suicide rate (year 2000 standard population) is only available for the years 1950, 1960, 1970, 1980, 1990, 1995, and 2000. Since the demographic distribution in the first half of the twentieth century is more akin to the year 1950 than 2000, the age adjusted suicide rate for the period 1900-1950 would be even higher than the crude rate plotted.

[7] See http://www.greatachievements.org for a chronology of these technologies.

[8] See Weber (1996, particularly chapter 3) for an enlightening discussion of the Heideggerian notion of the 'setup'.

[9] We thank a reviewer for these insights.

[10] Fukuyama's (1989) 'end of history' thesis is typical of this genre, but it is also reflected in other announcements of the end: of industrial society (Touraine 1971), of organized capitalism (Lash and Urry 1987), of the social (Baudrillard 1988), of work (Rifkin 1995), of marketing (Brown 1993) and of evolution (Jones 1997).