GLOBAL CAPITALISM AND THE CRITIQUE OF REAL TIME

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Digital technologies globally interlink finance, production, consumption, mass communication, and cyberculture. The processes of interlinkage generate the sense that time is accelerating toward instantaneity. Promoters and critical observers of such developments have created a proliferating discourse of 'real time'. This key phrase and its associated terminology cover a diversity of referent spaces (e.g., cyberculture, financial flows, supply chain management, on-line selling, live media events). In the context of global capitalism, discursive constructions of 'real time' are interrelated with new systemic constructions of temporality. The nature of this interrelationship is obscured by the ideological features of 'real time' terminology. Here, this argument will be developed with references to popular business literature and (supposedly) critical academic writings. More specifically, I will provide a keyword analysis of a recent Economist feature on the 'real time economy'. This will be compared to a similar analysis of the temporal discourse contained within Manuel Castells’ trilogy on the Information Age. I conclude with a set of preliminary requirements for an effective critique of 'real time'.

Prologue: Globalisation and Global Capitalism

Historically, globalisation refers to those spatio-temporal processes of change that interconnect human activity across regions and continents. One standard reference work identifies four spatio-temporal processes (Held, McGrew, Goldblatt, Perraton, 1999). Extensity refers to the global reach of regional events, decisions and activities. Intensity concerns the magnitude of global interconnectedness. Occasional travel between highly disparate localities contrasts with thick patterns of long distance migration and international trade. Velocity indicates the speed at which ideas, goods, information, capital and people are globally diffused. These diffusions are contingent upon available infrastructures of worldwide transport and communication. One can also measure the impact of distant events, decisions or activities upon local circumstances. Examples of high impact include colonisation, world war, and world depression (Held et al, 1999:16-21). These spatio-temporal processes do not constitute a teleology of global integration. Rather, the structure and dynamics of globalisation are shaped by complex historical contingencies. There is much about the future of globalisation that cannot be predicted. Certainly, it can be reliably stated that globalisation is a multi-faceted phenomenon with economic, political, cultural, military, and environmental logics of development. These logics are variously interlinked, but the causal form and empirical content of such interlinkages are contestable over time. It should also be noted that the reach and density of global interconnectedness necessarily embodies the exercise of structural power. This may take the form of exploitation, polarization, colonisation, military conquest, slavery (and related tribute systems). Under these circumstances, the historical experiences of globalisation are diverse, disparate, and conflictual.

The preceding insights about globalisation shape our understandings of global capitalism. However, the terms are not synonymous. At different historical conjunctures global
capitalism has confronted worldwide networks of opposition. Examples include anti-colonial nationalism, international socialism, third world guerilla movements, radical ecology coalitions, rural farmer networks, and indigenous rights movements. With varying degrees of success, these organizational forms have projected anti-capitalist principles of globalisation. Such principles are now expressed in a specifically self-conscious way. Contemporary formulations such as ‘anti-corporate movements’, ‘World Social Forum’, and ‘globalisation from below’ indicate that capitalism does not monopolise the global imaginary. Meanwhile, global capitalism adopts the mantle of globalisation to position all opposition groups as out of place and out of time (eg as protestors, parochial interests, or Luddites).

I Global Capitalism Now: Distinctive Features

Contemporary debates concerning global capitalism revolve around the complex interplay between continuity and discontinuity. My account will emphasise the latter tendency. In specific terms, information and communication technology architectures have come to shape the reach, velocity, and supervening power of global finance.

This development can be traced back to the disintegration of the Bretton Woods currency system, a pivotal component of the post-war economic order. The key episode was America’s 1971 decision to suspend the convertibility of dollars into gold. By the late 1970s, Western Europe and Japan had become major global competitors. Their growing trade surpluses and vast dollar holdings provided potential leverage over US economic policy. Initially, the US responded to its deteriorating external position by exploiting the international pre-eminence of the dollar. Simple credit creation enabled the US to buy up foreign companies, fight the Vietnam War, and finance military-political hegemony over the rest of the world (Beeson, 1998: 83-84). After dollar convertibility ended, credit expansion was no longer tied to national currency reserves. Internationally, public control over exchange rates and capital movements could not be sustained. Consequently, private financial institutions were able to generate credit beyond state regulation (Germain, 1997: 98). Furthermore, when the US funded its deficits by pouring dollars into the international system overseas, (European) banks began to accumulate dollar denominated deposits outside of national jurisdictions. US banks did the same in order to escape Federal financial regulations (Beeson, 1999:84). The Eurodollar market that emerged became part of a vast stateless banking system. The major players offered syndicated loans, international securities, currency trades, forward exchange contracts options and futures. These were instruments of speculation for finance companies, funds managers and portfolio investors. And, the opening of national stock exchanges to foreign institutions helped to create an enormous global equities market. Financial product markets also underwrote corporate mergers and takeovers. During the 1980s, major transnational companies strove to acquire large shareholdings across different countries. Financial institutions themselves concentrated their wealth, diversified their portfolios, and established branches in cities worldwide. The likes of Citicorp, Chase Manhattan, Warburg, Nomura, Merrill Lynch, Barclays, and Credit-Suisse First Boston exemplified the new forces of globalisation (Martin, 1994:253-278).
The global transformation of finance capital necessarily depended upon computerized electronic networks. They were created out of microchip circuitry, switching technology, and digitalization. These strategic breakthroughs enabled sound, image, words, and graphics to be stored and transmitted in binary code. Associated advances in communication technology (satellite, cellular, optical fiber) extended and accelerated information transfer between computer terminals. The combination of these developments has precipitated mergers, acquisitions, strategic alliances, and commercial ‘synergies’ throughout the media-entertainment-publishing-telecom-internet personal computer sectors. Simultaneously, information-communicationinfrastructures, such as intra-net, electronic commerce, inter-enterprise networks, and just-in-time spreadsheets organize global systems of production, marketing, and commodity exchange.

Against this background, contemporary global capitalism exhibits distinctive features that can be translated into the following propositions.

*Productive Capital is Mortgaged to Finance Capital*

Different firms in different product markets are becoming locked into competition for the attention of international providers of capital and technology. To maintain access to such vital resources, the firm must produce greater profits each year in relation to other firms against which it is competing for capital to finance new growth. This means firms must out-perform the market in order to avoid takeover and/or dismemberment. Out-performance (in relation to other companies) may be measured in terms of share price, internal cost structures, access to low interest loans, or the installation of new technology. All of these factors are assessed by institutional investors, investment analysts, and credit and risk rating agencies (Leper, 1996:21). Consequently, poorly rated firms experience the constant threat of restructuring, divisional sell-offs, hostile mergers, or leveraged buy-outs. A recent comparison of Siemens group and General Electric illustrates the prevailing measure of company performance (Benoit, 2001:28). Over recent years, Siemens has experienced widespread divisional restructuring; key businesses include industrial automation, medical equipment, mobile phone networks, automobile electronics, rail equipment, IT services, and electric power. In 2000, Siemens declared a total operating margin of 3.6 percent. However, investment analysts raised concerns about modest profitability relative to ‘best in class’ competitors. Over the same period, General Electric achieved a 21.6 percent operating margin. In comparing the two figures, one analyst commented that ‘Siemens unlike GE is not a company that is being run for cash’. During 2001, Siemens sought to spin off cash while driving down costs. They reduced the capital tied up in property, manufacturing plants and equipment and cut 15,000 telecom-related jobs (Benoit, 2001).

As I have indicated, financial assessment is no longer the sole preserve of banks. The risks of investment are redistributable to anyone able to secure (short-term) margins of profit. Thus, a complex web of financial interdependence is being woven between companies and countries via the arbitrage of interest levels, exchange rates, currency values, and creditor-debtor positions (Aglietta, 1999:69). Arbitrage activities exploit time differentials across space. Money appears to generate more money without direct
involvement in production processes. Hedge funds, for example, draw upon major investment banks to exploit the speculative dynamics of top-level real estate, currency markets, and stockmarkets. Crucially, however, speculators with access to global finance determine the (high interest) lending criteria for individual enterprises, industrial sectors, and governments. Additionally, the speculative logic of high-end arbitrage destabilizes exchange rates and undermines long-term planning for production. Projected export returns cannot be reliably calculated (Altvater, 1998; Germain 1997: 131-132).

Digital technologies fuse money, information, and economic activity

As neo-liberal governments of the 1980s deregulated banking, credit flows, and exchange rates, digital technologies accelerated global monetary exchange. This was an historically new phenomenon. The rapid movement of capital blurred with the technological means of that movement (Wark, 1994:171). Increasingly, the global finance economy was mobilized by the business information network and the public news network. In times of financial crisis, such as a Wall Street/Nasdaq crash, ‘bitstreams’ of information and imagery jump unpredictably from network to network. Consequently, news flows and financial flows have become inseparable. The major vendors of financial/economic data and related news content are Reuters, Knight Ridder, AP Dow Jones, Bloomberg, AFX, and Telerate. Their application of networking technologies provides relevant and reliable data feeds to end users. Correspondingly, global trades and transactions depend upon the most accurate and recent information available. News and data vendors also promote themselves as analysts of financial data. Reports about major indicators (eg exchange rages, stock values, interest levels, commodity prices) identify salient market trends. In this context, Reuters Holdings performs a strategically central role.

Banks, multinational companies, ‘electronic brokerages’ of all kinds – traders, speculators, governments and central banks – monitor price movements via Reuters terminals, served by Reuters systems; these include trading-room facilities and related transaction products. Transactions products became a major revenue earner for Reuters Holdings plc, the company floated on the Stock Exchange in 1984. Reuters serves multinational media and non-media clients worldwide by offering real-time multi-media and online systems and services, and is itself midway between Mammon and Mercury: the latter, the winged messenger of antiquity, is patron saint of journalists and of commerce (Palmer, Boyd-Barrett, Rantanen, 1998:67).

Media representations of economic activity help to constitute that activity (Hope, 1998). Previously, under Keynesian governments, academic economists, private sector forecasting groups, and public servants provided the referent space of the national economy. In this context, news journalists relayed statistical and normative indicators of economic performance. Public debate centered around rival interpretations of growth figures, consumer price movements, trade balances, and employment levels. Once neo-liberal governments opened up national economies to global finance, bankers, currency traders, stockbrokers, and investment analysts became the primary sources of economic information. Now, the various agencies that define, index, and narrate the categories and rules of the (financially-driven) economy make the economy exist by providing the flows of information that nominate it (Wark, 1994:206). At the same time, the
commercialization and deregulation of national broadcasting systems has encouraged the spread of advertising, infomercials, and corporately-sponsored current affairs programmes. In this environment, media representations of economic activity merge with the promotion of business and consumer culture.

Capital in general is riven by contradictory temporal imperatives

Within global capitalism, the digitally-driven instantaneity of finance capital colonises the mechanical sequential time of productive capital. But this temporal imposition is neither a total or final accomplishment. Short-term profit imperatives destabilize long-term strategies of capital accumulation. This contradiction becomes publicly thematised whenever speculative markets collapse. When market volatility incorporates shares, property, equities, currencies, and whole industries, affected capitalists may favour planned growth scenarios. If these do not eventuate, the growing interdependencies of globalisation will exacerbate volatility within the international financial system. Subsequent crises will spread more rapidly with yet more damaging economic effects. Developing countries will then try to regain control over their capital and external accounts. They may also insist upon economic policies that challenge the established rules of international financial architecture (Soederberg, 2002:175-192).

During the 1980s and 1990s, this clash of temporalities was a defining feature of international economic governance. In 1996 New Zealand economist Robert Wade identified a major dispute between the World Bank’s structural adjustment paradigm and the Japanese-East Asian model of state-led development (Wade, 1996:3-37). World Bank assistance required borrower countries to cut public spending, sell off state enterprises and to open up the macro-economy. International flows of goods, services, and capital would guarantee economic efficiency. Under this scenario, a central role was provided for financial sector ‘reform’. During the late 1980s, a special World Bank taskforce argued against state-subsidised credit creation and called for the deregulation of finance and currency markets. These borrowing conditions guaranteed high lending margins for Western banks and enabled (American) transnationals to buy up newly divested energy and telecommunications infrastructures.

East Asian economic growth entailed a rejection of World Bank orthodoxy. Instead, Japan used bi-lateral aid and foreign direct investment to export its own development model. Central features included national objectives for economic development, long-term coordination between central government and major firms, and a regulated financial system that directed low interest credit to particular projects and industries. Such measures initiated Japanese post-war expansion. By the early 1990s, it was the world’s largest manufacturing economy and accounted for half the developed world’s net savings. As Taiwan, South Korea, Malaysia, and Thailand followed the Japanese blueprint, skilled export-driven workforces emerged and national growth rates soared. Of course, East Asian development also produced excesses, inefficiencies, and injustices. Indonesia’s Suharto regime re-invested private sector profit into family holdings, rather than the national economy. In South Korea, shoddy accounting practices undermined financial stability; central banks secretly wrote off non-performing loans and large corporations
(chaebols) refused to disclose their debt-equity ratios. In the late 1980s, Japanese bilateral aid to Thailand financed the construction of industrial estates reserved for Japanese companies. These companies relocated to escape domestic environmental controls and to exploit cheap Thai labour (Wade, 1996).

Nevertheless, in capitalist terms, the strength and reach of the Japanese economy challenged World Bank lending criteria. In 1984, Japan became the second biggest bank shareholder after the United States. By 1990, it was the second biggest shareholder in the International Finance Corporation, the Bank’s affiliate for private sector lending. From this vantage point, Japanese officials began to challenge World Bank orthodoxy. From 1989 to 1993, American and Japanese economists battled over the texts of key policy documents, draft by draft, page by page, line by line (Wade, 1996).

Wade’s prescient analysis reveals how the East Asian crises came to be explained according to pre-selected evidence. For American business leaders, region-wide currency collapses, capital flight, and corporate bankruptcy proved that state-led development could not work. Corrupt and profligate Asian governments had wreaked punishment upon themselves. The markets had delivered just retribution. For their own good, Asian governments must accept the IMF prescription of structural adjustment (with further financial liberalization).

A conflicting version of events emerged from the NGO and Third World development literature. Increasing deregulation of global finance markets had allowed Western speculators to destabilize Asian currencies, manipulate share price movements, and destroy trade balances. The resulting financial crisis disrupted coordinated growth plans throughout East Asia. On this reading, currency collapses occurred independently of a country’s economic position. Getting the ‘fundamentals’ right was no defense against financial destabilization (see Third World Economics Trends and Analysis, December 1997: 1-15, January 1998:1-15).

Contemporary capitalism intensifies the temporal disjunctures of structural power

The reach, density, and impact of global capitalism generates socio-economic polarization (Denny, Elliot, 2002:14). A widening gap between the extreme rich and extreme poor shrinks middle-income segments. The 1998 United Nations Human Development report identified the property, income, and consumption indicators of global polarisation. For example, the three richest people in the world had assets that exceeded the combined gross domestic product of the 48 least developed countries. The world’s 225 richest individuals had a combined wealth exceeding $1 trillion. This equaled the annual income accruing to the poorest 47 percent of the entire world’s population (cited in Sardar, 1999:193). A more recent United Nations study into the world’s 49 least developed countries calculated that 307 million people live on less than a dollar a day. This number was predicted to reach 420 million within 15 years (United Nations Least Developed Countries Report, 2002). At the same time, polarizations of wealth have become less circumscribed by territorial geography. There are no longer strict cartographical distinctions between the first, second, and third worlds. The second
world has disappeared, while first world-third world relationships take shape within regions, countries, and cities. Such relationships also stretch across territorial boundaries. Worldwide, the richest elites belong to a global culture of business, politics, diplomacy, entertainment, and information that ex-communicates the poor wherever they may be. The temporal nature of this process is succinctly described by sociologist Zygmunt Bauman.

People who come closest to the momentariness of movement are now the people who rule. And it is the people who cannot move as quickly, and more conspicuously yet, the people who cannot leave the place at all, who are ruled. Domination consists in one’s own capacity to escape and the right to decide one’s speed – while simultaneously stripping the people on the dominated side of their ability to arrest or constrain one’s own moves or slow down their velocity (Bauman, 2000:179).

Within the lifeworlds of impoverishment, wage labour, rural labour, benefit dependence, incarceration, homelessness, and migration, time is experienced as an imposition. Time is exhaustion, boredom, uncertainty, or fate. These experiences also reflect the temporal disjunctures of structural power. From within conditions of imposed temporality it is difficult to comprehend social totalities and historical processes. Under global capitalism, sites of power and exercises of power become increasingly distant from those subjects who experience the consequences. Thus electronic information systems allow transnational corporations, such as Nike and McDonalds, to decentralize operations while centralizing control. Senior executives consult updated spreadsheets to monitor factories and franchises worldwide. Global homework industries, such as Benetton ‘network computers to tie suppliers to sellers, match production to inventories, monitor dispersed workers, and check quality and speed of supply through every rung of their hierarchy’ (Dyer-Witheford, 1999:136). Under these circumstances nation states lose control of their own economic destiny. Instead, they tax citizens to fund knowledge infrastructures suitable for the investment needs of mobile corporations. If such investment doesn’t arrive, skilled knowledge workers will emigrate and bereft governments will then confront unemployment, declining social services, and fiscal blowouts.

II The Proliferation of Real Time

The interpenetration of finance capital and digital technologies has generated a vast, complex mosaic of computerized electronic networks. These networks transmit sound, information, images, and money at unprecedented speed. In this context, speed cannot be measured by the time taken to cover distance. Electronically-driven speed is immeasurably fast precisely because it transcends the obstacles and frictions of territory. This kind of speed is measured against the standard of instantaneity. Across electronic networks, efficient communication is not assessed in terms of sequential clock time. Instead, the central question is – can lengths of time be reduced or eliminated? The drive toward instantaneity has produced a discourse of real time. The term itself hosts a cluster of words and phrases:
The above terminology provides textual anchorage for disparate flows of sound and imagery. Discursive formations of real time reveal aural and visual properties. In this sense, real time has proliferated beyond the elite, arcane worlds of high finance, info-tech research and corporate governance. The material and discursive extensions of real time can be categorized as follows.

a. The incursions of finance and investment culture into the mass media domain, public institutions, and civil society.

b. The surrounding presence of global television and live global media events, scripted and unscripted.

c. The commodification of immediate experience via corporate branding and advertising. Global culture industries conjoining film, music, fashion, and sport promote the ‘now-ness’ of pleasure, desire and gratification.

d. Cyberculture generates the illusion of disembodied real time experiences eg video games, virtual communities, tele-presence, immersive virtual reality.

e. Urban, suburban, and ‘exotic’ real time experiences eg theme parks, shopping malls, moving billboards, expos, related tourism experiences.

These manifestations of real time are densely connected across space and between places. Thus, finance culture merges with global news networks and various cybernetworks of sharemarket investment. In contemporary city environments, architectures of spectacular consumption fuse with the global culture industries. Within cyberculture, multi-media software provides immediate access to the commercial mass media. And, suburban malls incorporate households within cyberworlds of interactive shopping.

Such real time environments appear omnipresent, but they don’t encompass everybody. In prisons, refugee camps, and isolated rural areas, millions of human beings are disconnected from communication networks. And, their temporal worlds are disconnected from those who consume real time experiences. Under such conditions, the proliferation of real time undermines oppositional coalitions against global capitalism. This is an ideological process inherent within the discourse of real time itself. Global television news, for example, celebrates immediacy and precludes broad considerations of historical context. When live coverage predominates, the past becomes a series of past happenings. The future is simply that which is about to happen. The relationship between past, present, and future is beyond contemplation. This makes real time a fragile construct. The eschewal of historical knowledge precludes analysis of what the future will bring. This means that about-to-happen events are likely to be unexpected (with unexpected consequences). Such unexpectedness proliferates co-terminously with real
time. For example, televised events percolate rapidly throughout other real time environments, thereby generating further live crisis events.

Although oppositional modes of communication will reject official news frames and exploit crisis situations, the promotion of instantaneity may remain intact. This marginalizes other temporal perspectives concerning politics (democratic process), economics (development futures) and culture (social and geographic memory). Yet, opposing the discursive formations of real time need not entail a rejection of high-speed networks. The problem is that the poor cannot easily shape their own temporal environments or make their own global connections. When they are able to do so a range of temporalities will be widely available.

*The real-time economy*

Increasingly, real-time terminology serves as a descriptor of economic and business activity (McKenna, 1991; Ranadive, 1999; Tapscott, 1996). A recent *Economist* feature entitled ‘How About Now?’ surveys various aspects of ‘the real time economy’. The empirical and temporal significance of the central locution is clearly stated.

… real time is more real than it appears. The start-ups in this field are leading the counter-revolution to the dot com mania. They are not about all-too-clever business models and breathless “internet time” (for which read going public as quickly as possible), but about highly complex enterprise software often based on serious mathematics that can yield real savings if deployed and used correctly.

Most important, perhaps, the concept of real time is more useful than the somewhat artificial distinction between the ‘old’ and ‘new’ economy. Real time describes the full potential of what information technologies could ultimately do, according to Andrew Odlyzko, director of the Digital Technology Centre at the University of Minnesota: drive the lags and latencies out of the economy and make it much more efficient. Real time technology might even prove as important for speeding up the information flow in business as the telegraph, invented in 1837 (Siegle, *Economist*, 2000:4).

The preceding extract from an authored introduction identifies two kinds of real-ness. The superficially apparent real-ness of real time is manifest in ‘dot com mania’ and ‘breathless internet time’. The other kind of real-ness is about ‘highly complex’ software and ‘serious mathematics’. Such qualities can potentially yield ‘real savings’. In the latter sense, real time is assumed to be an authentic, verifiable construct that delivers tangible results. The contemporary, mathematically grounded reality of savings compares more than favourably with the ‘all-too-clever’ unreality of the dot com era. The newly promoted version of real time derives from the capacities of ‘enterprise software’ and ‘information technologies’ in general. This expert assessment (from the director of a University Digital Technology Centre) is simply taken for granted. But such a view is couched within a technologically and commercially defined narrative of progress. Like the telegraph, today’s technologies are ‘speeding up the information flow in business’. This reconstruction of the past eschews the societal and normative contexts of technological development. It is assumed that technology drives history in a progressive direction. And, the benefits of progress are measured by successive accelerations in the speed of business operations.
This account of real time also makes reference to ‘the economy’. Within this abstract locution ‘the...’ implies a sense of universal being. Widespread talk about ‘the economy’ silences those representations that express the capitalist nature of that economy. If the capitalist adjective is used then the fundamental nature of such an economy is brought into sharp focus. Before the neo-liberal era ‘the economy’ was depicted as a specifiable entity requiring expert management for rational ends (eg as in the economy needs to be managed, developed, or expanded to achieve growth). Within such discourse, geographic qualifiers were common (eg as in ‘the national economy’, ‘the Australian economy’ or ‘the international economy’). Such usages became less common under neo-liberalism. Instead, a complementary deployment of the key locution prevailed. In a general sense, ‘the economy’ became dynamic and self-operating by nature. In this context, the presumed superiority of neo-liberal capitalism was revealed in phrases such as ‘the free market economy’ or ‘the market economy’. Here, the implication was that older versions of ‘the economy’ were anachronistic by definition. Now, in the extract under review, ‘the economy’ transcends all sense of historical change. This is a two step process. Firstly, against the ‘concept of real time’, the distinction between ‘the old and the new economy’, is deemed ‘somewhat artificial’. Secondly, real time (as an effect of information technologies) removes all temporal contaminants from ‘the economy’ ie real time drives out ‘the lags and latencies’. However, this cannot be a final accomplishment because real time as such is a process of becoming. Its meaning derives from what lies beyond; the tractable other (‘lags’ and ‘latencies’). In its own right real time merely describes ‘the full potential’ of what information technologies ‘could ultimately do’. In the meantime, overcoming ‘lags’ and ‘latencies’ is the prevailing indicator of progress.

The Economist feature proceeds to identify further real time environments and issues. In corporate management, General Electric is reported to be ‘setting up a digital nervous system that connects anything and everything involved in the company’s business: IT systems, factories and employees as well as suppliers, customers, and products’. The Chief Information Officer remarks that ‘GE’s’ aim is to monitor everything in real time’ (Siegele, 2002:3). In Silicon Valley, venture capital firms plus software and networking start-ups have adopted the discourse. Specific developments are recorded in a recently posted newsletter called Real Time Report (Siegele, 2002). The Economist also traces the key term back to the inaugural period of ‘batch mode’ data processing. Then, information was entered, stored, and worked on later. Now, ‘data are processed the moment they enter a computer’. This is a simultaneous multi-terminal exercise. Prematurely perhaps, readers are told that ‘modern spreadsheet software is as real time as it gets’ (p 4). Additionally, newly automated web server technologies allow firms to integrate their systems by hiring outside expertise. Web service programmes ‘publish their data feeds following a set of internet standards so that other programs can easily subscribe to them’ (unattributed: 7). Real time technologies are also central to supply chain management. As corporate manufacturing processes become ‘increasingly dispersed and global’ customers are ‘getting more and more demanding’. They are looking for a customized solution or product ‘delivered within days’ rather than weeks (unattributed: 11). The Economist feature goes on to declare that real time technologies will ‘transform the company as we know it’ (p 13). This projection is shared by Ray
Lane, a partner with Kleiner Perkins Caulfield and Byers, a Silicon Valley venture capital firm. He reportedly says that ‘in the long run real time technology will do away with all the features of a firm that were needed to assure information flow in an off-line world: hierarchies, departmental boundaries, paper shuffling employees’ (p 13). From this perspective, the entire off-line world is a barrier to the progress of real time technologies.

In a section entitled ‘Computers of the World Unite’, it is acknowledged that the real time economy ‘will raise problems of its own’ (p 15). These include the instability of automated information flows, the accuracy of information content and the multiple impact of external shocks (ie a stockmarket collapse, a terrorist bombing, or a military conflict). In the final analysis, however, such concerns are downplayed:

> Yet it would be wrong to conclude that the introduction of new information technology should be slowed down or even blocked altogether. Its drawbacks are not inherent in the technology itself, but arise from the way it is used (p 16).

The message here is unmistakable. There can be no valid criticism of real time information technology. It should be introduced with full momentum. Perceived drawbacks are restricted to the usage of technology. The application of real time technology has no fundamental drawbacks because ‘technology itself’ is unassailable. In this context, technology is synonymous with the commercial priorities of share traders, corporate executives, financial planners, supply chain managers, systems analysts, and software engineers. In my view, their rush toward real time is itself the problem. From a global capitalist perspective, the proliferation of real time magnifies the realm of unpredictability in unpredictable ways. From within real time environments, dangerous events are uncontrollable.

### III Manuel Castells’ trilogy: the problem of timeless time

Manuel Castells’ trilogy comprises *The Information Age* (1996), *the Rise of the Network Society* (1997), and *End of Millennium* (1998). The first volume outlines the global contours of a network society based upon the ‘space of flows’ in contrast to the place centered formations of industrial society (i.e. industrial capitalism and the supervening state). The new society centers upon a capitalist mode of production and an informational mode of development. According to Castells, this dual formation emanates from the global restructuring processes of the 1970s and 1980s. The collapse of Bretton Woods, Keynesian class compromises, and Fordist regimes of capital accumulation meshed with the growing centrality of information technology. With the demise of Soviet statism, capitalism worldwide became driven by electronic flows of information. For Castells, these convergent developments heralded a fundamental transformation of human society. An informational mode of development was taking shape whereby the generation of new knowledge was the key source of productivity and innovation. More profoundly, the conjoining of knowledge generation, information processing, and communication flows was, and is, producing a mosaic of networks. Generically, the network is driven by the logics of speed, spatiality, and flexibility.
Castells identifies a disjuncture between the networked space of flows and the space of places. In these circumstances, the territorial nation state can neither resist the power of networks (e.g., global communications, financial flows) or process localized political demands. Volume Two of the Information Age trilogy argues that resistances to exploitation, inequality, and domination increasingly bypass state institutions. Within and across the space of places, resistance may cohere defensively in the form of religious fundamentalism, cultural nationalism, or regional communalism. Alternatively, new social movements such as feminism and environmentalism proactively engage with the logics of network society. What transpires is a globally configured politics of identity which contests the space of flows from within. In Volume Three, Castells delineates the collapse of state industrialism and the Soviet Union. Second world demise is followed by the growth of a fourth world characterized by crime, squalor, and informational exclusion. Prime locations include Sub-Saharan Africa, urban American ghettos, and Latin American shantytowns. Meanwhile, the state-led trajectories of East Asian development are superseded by informational mega-cities linked to hub-spoke networks of industrial production. In this regard, Castells cites the emergence of Hong Kong-Shenzhen-Canton-Pearl River Delta-Macau-Zhuhai metropolitan regional system (Castells, 1998:264 and 1996:407-7).

My earlier discussion of globalisation and global capitalism identified elements of historical discontinuity. Castells’ trilogy makes a far stronger claim. History as narrative is deemed irrelevant. We are witnessing an irrevocable shift in the very nature of time. These propositions are first set out in a volume one chapter entitled ‘The edge of forever’:

But we are not just witnessing a relativisation of time according to social contexts or alternatively the return to time reversibility as if reality could become entirely captured in cyclical myths. The transformation is more profound: it is the mixing of tenses to create a forever universe, not self-expanding but self-maintaining, not cyclical but random, not recursive but incursive: timeless time, using technology to escape the contexts of its existence, and to appropriate selectively any value each context could offer to the ever-present. I argue that this is happening now not only because capitalism strives to free itself from all constraints, since this has been the capitalist system’s tendency all along, without being able fully to materialize it. Neither is it sufficient to refer to the cultural and social revolts against clock time, since they have characterized the history of the last century without actually reversing its domination, indeed furthering its logic by including clock time distribution of life in the social contract. Capital’s freedom from time and culture’s escape from the clock are decisively facilitated by new information technologies, and embedded in the structure of the network society (Castells, 1996:433).

The transformation of time as surveyed in this chapter does not concern all processes, social groupings, and territories in our societies, although it does affect the entire planet. What I call timeless time is only the emerging, dominant form of social time in the network society, as the space of flows does not negate the existence of places. It is precisely my argument that social domination is exercised through the selective inclusion and exclusion of functions and people in different temporal and spatial frames (Castells, 1996:434).

These passages reveal a central tension within Castells’ analysis. Elsewhere, he argues that the information technology revolution underpins the emergence of informational
capitalism (Castells, 1996:69-71). Yet, the suggestion here is that capitalism has transcended any kind of historical development. It is now subsumed within a ‘forever universe’ of ‘timeless time’. There are major problems with this judgement. Firstly, timeless time appears to be a final, absolute accomplishment. Other temporalities are assigned to a life of perpetual subservience. This precludes the possibility that timeless time might be subject to the principle of finitude. Is it possible to contemplate the future demise of timeless time? What would bring it about? Correspondingly, Castells appears to be saying that timeless time contains no temporal contradictions. But, the history of globalisation illustrates the opposite tendency. Colonising processes, for example, entail the imposition of temporal regimes which are vulnerable to the counter-constructions of (anti colonial) history. This is not simply a retrospective observation. Contemporary American imperialism reveals internal fissures and instabilities. Secondly, the preceding extracts refer to ‘capital’s freedom from time’. This extraordinary formulation ignores evidence that capitalism experiences recurring cycles of growth and recession. Entire sub-branches of economics investigate the geo-historical character of capitalist cycles. More specifically, financial historians trace speculative booms and busts over time. Today’s boom-bust scenarios certainly possess unique features, however, the phenomenon itself remains historically recognizable. Furthermore, it is evident that dominant fractions of capital operate against temporal limits. Thus, the extraction of monetized profit from the circulation of capital cannot be indefinitely sustained (M-C-M). Financially engineered enterprises such as hedge funds and dot com companies require guaranteed credit lines. When this requirement no longer holds such enterprises are wound up. Neither can the M-C-M pattern of investment sustain capital as a whole. Sooner or later some profit must be re-invested in raw materials, plant, machinery and human capital.

This general observation suggests that capitalism as a whole is torn between conflicting temporalities. The prevalent, hyperspeed time of finance capital is at odds with the strategic outlook of large scale production. It is therefore absurd to suggest that capital in general can escape from time. Under global capitalism temporal conflict is a defining feature of investment and business operations. Thus, pension funds can be an on-going resource for short term returns or long term social investment. Similarly, the Enron collapse reveals that strategic planners and financial engineers battle for power within corporate boardrooms. And, within manufacturing enterprises supply chain management is a contested science. Enthusiasts for real time solutions confront risk averse resource planners.

Castells’ simplistic generalizations about time and capital inform his account of global finance. In a subsection entitled ‘Time as a Source of Value: The Global Casino’ he states that

…during the 1980s the convergence of global deregulation of finance and the availability of new information technologies and new management techniques transformed the nature of capital markets. For the first time in history a unified global market working in real time has emerged. The explanation and the real issue of the phenomenal volume of transborder financial flows lies in the speed of the transactions (Castells 1996: 434 italics in original text)
Now, the interaction between finance capital and the new information technologies is, indeed, a historically significant development. But Castells’ understanding of this development lacks conceptual nuance. In the context of previous declarations about ‘timeless time’ the ‘real time’ of the ‘global capital market’ appears absolutely unassailable. In fact, however, the drive toward instantaneous financial flows inherently magnifies the instability and unpredictability of capitalism as a whole. In given circumstances this may strengthen the case for international capital controls. Castells clearly recognizes the dire consequences of unregulated finance. He refers to ‘recurrent monetary crises’ and ‘the instability of capital investment to anticipate the future.’ (Castells 1996: 436) The problem is that such insights are not conceptually grounded. Castells never acknowledges the problematic nature of real time itself. In particular, he fails to realize that real time financial flows may be restricted or threatened by other temporal logics. For example, this would be the likely consequence of a full blown global slump.

For Castells timeless time radically reorders the relationship between time and space. And, this accomplishment effectively terminates past formations of history. I.e.

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Space shapes time in our society thus reversing a historical trend, flows induce timeless time, places are time bounded. The idea of progress at the roots of our culture and society for the last two centuries was based on the movement of history under the lead of reason and with the impulse of productive forces escaping the constraints of spatially bounded societies and cultures. (Castells 1996: 466-67)
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In my view this general argument fundamentally misconstrues the idea of progress. Under Western industrial capitalism progress was the ruling myth of historical change. The advancement of capitalist interests could be obscured by the presumption that progress was universal. From this perspective history always culminated in a present which was, realistically, the best of all possible worlds. And, this process of culmination was driven by (apparently) ineluctable forces of science and technology. These forces were channeled and steered by the quality of reason. At the same time counter movements of class, gender and racial emancipation deployed human or cultural conceptions of progress against capitalist definitions of the term. From this vantage point the capacity to reason enabled human freedom.

Now, progress is disconnected from linear historical narrative. Under global capitalism the ruling myth of progress is synonymous with the ideology of real time. Thus, finance culture and info-hype celebrate the drive toward instantaneity. As I have indicated, real time proliferates outward to include ever more domains of socio-cultural activity. Each new real time application is a signifier for today’s progress myth. Instantaneity is the goal; whatever prevents it is an obstacle to progress. Simultaneously, real time tendencies are myopic and unstable. In this context the instantaneous space of flows is vulnerable to counter conceptions of reason, temporality and progress. On this analysis, the space of flows and the space of places are shaped by the inescapable problematics of time. Castells’ ideal of timeless time is mythological because it implies that this temporal realm is beyond human influence. It seems that timeless time was born to rule.
Castells also misconstrues the relationship between global capitalism and the exercise of structural power. This is evident in his discussion of polarization. Here, *End of Millennium* contains a section entitled ‘The Rise of the Fourth World: Informational Capitalism, Poverty and Social Exclusion.’ (Castells 1998: 70-165) Castells begins by discussing the quantitative and qualitative dimensions of polarization in relation to inequality, poverty, misery, social exclusion, and over-exploitation. He then examines the economic and geographic dimensions of global polarization. He concludes that

There is polarization in the distribution of wealth at a global level, differential evolution of intra-country income inequality and substantial growth of poverty and misery in the world at large and in most countries, both developed and developing. (Castells 1998: 82)

Castells also examines how global polarization is structurally generated and socially experienced. Cited examples include Sub-Saharan Africa, West Africa, urban-American ghettos, American prisons, and the worldwide exploitation of children. (Castells 1998: 82-159) Castells’ overview of global polarization reveals a major conceptual flaw. The meta-theoretical concepts which govern the trilogy are too enveloping. Consequently, the temporal disjunctures of global polarization are precluded from analysis. This is evident in the following passages.

By secluding power in the space of flows, allowing capital to escape from time and dissolving history in the culture of the ephemeral, the network society disembodies social relationships, introducing the culture of real virtuality. (1998: 349)

... by real virtuality, I mean a system in which reality itself (that is, people’s material/symbolic existence) is fully immersed in a virtual image setting, in the world of make believe, in which symbols are not just metaphors but comprise the actual experience. This is not the consequence of electronic media although they are the indispensable instruments of expression in the new culture. The material basis that explains why real virtuality is able to take over people’s imagination and systems of representation is their livelihood in the space of flows and in timeless time. (1998:350)

Here, Castells claims that timeless time, the space of flows and the culture of real virtuality envelops social consciousness. But such a perspective overrules earlier analyses of polarization. Informational capitalism cannot, simultaneously, dualize and subsume collective social experience. If Castells adopts the former view then he must explicate the temporal disjunctures of global polarization. If he emphasizes the subsuming power of his governing concepts then the theoretical significance of polarization must be clarified.

**Conclusion**

In the context of global capitalism the critique of real time should build upon the following insights –

1. Material and discursive formations of real time emerge from the historic convergence between global finance and information technologies.
2. The proliferation of real time is an ideological process which obscures the temporal contradictions of global capitalism, and the temporal disjunctures of structural power.

3. Material and discursive formations of real time are inherently unstable and unpredictable. The very pervasiveness of these formations renders them vulnerable to countervailing logics of temporality.

4. Real time applications and advancements signify the drive toward instantaneity. This represents the new supervening myth of progress. Real time appears to be an ineluctable force, outside of human intervention. In this context, Castells’ notion of timeless time serves to reify the new progress myth.

5. Opposition to real time formations is not anti-technological. Hyper fast networks of communication can be used to conjoin place centered resistances to global capitalism.
Bibliography

