Time, Communication and Global Capitalism

Wayne Hope

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For Bruce Jesson and Peter Lee

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Preface and Acknowledgements

The gestation of this project dates from my early research which analysed the impact of neoliberalism on New Zealand's political economy, media institutions and economic discourse during the 1980s. For Keynesian social democracy to be dismantled, it was necessary to redescribe it as an inefficient, state-dominated regulatory structure akin to the neo-Stalinist political economies of Eastern Europe. The ascendant neoliberal policy regime could then be portrayed as a progressive liberation of market forces. This major shift of temporal understanding was not fully appreciated at the time, and it obfuscated what was actually occurring – the usurpation of national sovereignty by transnational capitalism. Meanwhile, emergent ideological constructions of the economy merged with the technologies, flows and profit imperatives of finance capital. From a critical theoretical perspective, it seemed that history itself was suspended.

From the early 1990s to 2011, I gradually translated these initial concerns into a time-centred critique of global capitalism. To this end, I presented research papers at various International Association of Media Communication Research (IAMCR) conferences in the political economy section. My ideas were further refined through lectures and seminars at media-communication and social science departments at: the Universities of Westminster and Loughborough in the UK; the Universities of Carleton, McMaster and Western Ontario in Canada; and the Universities of Oregon (Eugene), Southern Illinois (Carbondale) and Colorado (Boulder) in the United States. The academic publications that resulted have been significantly reworked, updated and built upon for this book. The relevant articles which I do not cite in the text are: (2006) "Global Capitalism and the Critique of Real Time", *Time and Society*, 15 (2/3), 275–302; (2009) "Conflicting Temporalities: State, Economy and Democracy under Global Capitalism", *Time and Society*, 18 (1), 62–85; (2010) "Time, Communication and Financial Collapse", *International Journal of Communication*, 4, 649–669; (2011a) "Global Capitalism, Temporality and the Political Economy of Communication", in J. Wasko, G. Murdock and H. Sousa (eds) *The Handbook of Political Economy of Communication* (New York: Wiley-Blackwell), pp. 521–40; (2011b) "Crisis of Temporalities: Global Capitalism after the 2007–08 Financial Collapse", *Time and Society*, 20 (1), 94–118.

Getting to this vantage point would not have been possible without emotional and intellectual support from friends and colleagues. Bruce Jesson, Joce Jesson and Peter Lee gave me the grounding and self-confidence to begin this journey. Graham Murdock and Barbara Cairns provided constant support and the opportunities to present and publish my work internationally. Dwayne Winseck, Peter Thompson and Andrew Calabrese have at opportune times convinced me that this project was possible and necessary. The collegiality of many others from the political economy section of IAMCR will always be appreciated. In my own department and faculty, Alan Cocker, Desna Jury and Tony Clear have supplied the time and financial resources needed to research this work. Mark Jackson and Verica Rupar always believed in this project, as did my Australian comrade Martin Hirst. Andrew Lavery and his colleagues at Academic Consulting provided professional expertise at a crucial time. Judith Allan at Palgrave Macmillan kept me on task with warmth and encouragement. Arguments with those who hold contrary positions is a necessary requirement for critical theoretical research. Chris Trotter's contribution to these debates, usually on a Friday evening, was invaluable. Kevin Brunton's bonhomie and solidarity were welcome. I must mention, especially, those whose support was beyond the ordinary: Sarah Baker for taking me back to hospital after malfunctioning surgery; Linda Carter for always keeping me optimistic and for having the same musical tastes; and finally, Jane Scott for research assistance, preparing the manuscript and maintaining my sanity during the difficult times.

Introduction

Ancient mythologies enmeshed human life within the cosmic, galactic world of eternality and the ethereal world of deities and spirits. Within mythic narratives, time and space were not nameable categories of understanding. In contrast, philosophical distinctions between the worlds of mythology, noumena and phenomena bring the categories of time and space into focus. They are recognizable dimensions of the human and natural world and primary subjects of intellectual inquiry. In this context, time and space presuppose each other. From a philosophical perspective, being is a construct of time *and* space. Correspondingly, change invokes the idea of movement through time *and* through space. This acknowledgement need not preclude an emphasis on time or space for specific research purposes. The arguments of this book can be positioned within longstanding philosophical debates over the relationship between being and change. From the standpoint of the pre-Socratic philosopher Parmenides, being is an eternal state which is constitutive of time and space. Change, therefore, is merely a derivative of being with no independent ontological status. Conversely, one might argue that the process of becoming (or ceasing) prevails over states of being and that incessant change or flux is fundamental to reality. This latter view, originating from the pre-Socratic philosopher Heraclitus, allows us to see time as a confluence of opposing and interacting forces. These forces also produce discrepant and unstable configurations of geo-social space (Hoy, 2013, pp. 9–29). As I will demonstrate, such an outlook helps us to understand the conflictual dynamics of globalization, global capitalism and globally mediated communication.

Beyond the spatial turn

The interconnections between time, communication and global capitalism are not self-evident. The *global* is, obviously, a geo-spatial rather than a time-related construct, and global capitalism contrasts with chronological formulations such as pre-capitalist, capitalist development, advanced capitalism and late capitalism. It is also clear that information-communication technologies (ICTs) allow capital to expand, geo-spatially, across territories, oceans and continents. Alternatively, however, it can be argued that ICT-driven global capitalism is a historically distinctive cluster of power relations, internal conflicts and crisis tendencies arising from the interplay between epistemes and materializations of time. Before outlining this time-related framework, I will reconstruct and critique the "spatial turn" as a central schema across the social sciences. The genealogy of this intellectual development is presented in the writings of its most strident advocate, Edward Soja.

In *Postmodern Geographies* (1989), Soja declares that "for at least the last century time and history have occupied a privileged position in the practical and theoretical consciousness of Western Marxism and critical social science" (p. 1). Consequently, he says, one must "break out from the temporal prison house of language and the similarly carceral historicism of conventional critical theory to make room for an interpretative human geography, a spatial hermeneutic" (p. 1). For Soja, this spatial hermeneutic invokes an "epoch of space" characterized by simultaneity, juxtaposition and the skein of networks (p. 10). Alongside these polemics, Soja argues for a "flexible and balanced" critical theory which entwines the "making of history" with "the social production of space" and with "the construction and configuration of human geographies" (p. 11). Two decades later, in *Seeking Spatial Justice* (2010), Soja traces the diffusion of spatial thinking across a range of subject areas including geography, architecture, urban/regional planning, anthropology, economics, and cultural and postcolonial studies, and advances the centrality of a "social-spatial dialectic" (2010, p. 4). In this framework of understanding, the spatiality of any examinable subject is viewed as shaping social relations and societal development. Conversely, social processes configure and give meaning to the human geographies or spatialities in which we live (2010, p. 4). Soja is careful to stress that "the historical and spatial dimensions of whatever subject you are looking at take on equal and interactive significance without one being privileged over the other" (2010, p. 15). Human life is, during the time of its unfolding, "in every sense spatio-temporal, geo-historical, without time or space, history or geography being inherently privileged on its own" (p. 16). For Soja, the so-called "spatial turn" sets out to accomplish a "complementary rebalancing of historical and geographical thinking and interpretation" (p. 17). He insists that if this is to happen, there must be "some degree of foregrounding if not a strategic but temporary privileging of the spatial perspective over all others" (p. 17). Clearly, most scholars would accept the mutuality of time and space as constitutive of human experience and as a critical theoretical schema for analysing societal arrangements, including globalization. I contend, however, that Soja's case against time-related academic research is overstated and that his foregrounding of space, to compensate for the supposed intellectual hegemony of time, is misconstrued. My counter-case is that a sophisticated, differentiated understanding of time can be developed to inform critical theory generally and globalization research in particular.

Soja's complaint about the privileging of time and history within Western Marxism, critical theory and the social sciences generally, ignores a number of viewpoints. First, he conflates history with Western historicism for the purposes of polemical argument. Certainly, one can be sceptical about the (Western) "themes of development and suspension of crisis, the cycle, themes of the ever-accumulating past with its great preponderance of dead men and the menacing glaciation of the world" (Foucault, 1967 cited by Soja, 1989, p. 10). But one should also acknowledge other kinds of history and historical understandings which may clash with, or exist outside of, dominant Western narratives. In a global setting, these other histories may express their own versions of development, crisis or cycle and/or other, culturally specific epistemologies of historical process. If these observations are acknowledged, then the case for a "spatial turn" needs to be at least qualified (why not also a turn toward counter-histories?).

Second, in Soja's account history tends to subsume time, and this makes time appear as a generic construct. This excludes pluralist conceptualizations of time and rules out the idea that various conceptions of time shape our understandings of history. Recognition of these possibilities also qualifies the case for a "spatial turn". Ironically, Soja opens up his own polemic to such a qualification by claiming that the "epoch of space" has arrived. As I will later show, epochality is an episteme of time which provides a necessary, though not sufficient, basis for comprehending historical change. In this context, epochs may unfold *through* space (such that configurations, representations and imaginations of space are altered or transformed). However, Soja's idea that one can posit an epoch *of* space is misconceived. It is more accurate to say that epochality, as a subset of time and as a means for comprehending historical change, interacts with spatiality. In the context of his locution, Soja equates space with "a network that connects points and interacts with its own skein". This is counterposed to those experiences of the world akin to the idea "of a long life developing through time" (1989, p. 10). The problem here is that the contemporary network is not only a spatial construct; it is a time-related construct as well. As I will argue in subsequent chapters, the proliferation of electronic networks facilitates and standardizes the drive toward instantaneity or real-time. Further, Soja's idea of a long life experienced and developing through time is also problematic. He obscures the distinction between two different conceptions of time. These are: epochality, the sense that we position ourselves in relation to periods of history as our lives unfold; and temporality, our ongoing sense of past, present and future and their interrelatedness.

A more sophisticated case for the spatial turn can be found in David Harvey's writings. In an important theoretical article he foregrounds "space" as a keyword with multiple meanings (Harvey, 2006, pp. 270–94). Initially, a threefold understanding is proposed. Thus, *absolute* space is described as a "pre-existing and immovable grid amenable to standardized measurement and open to calculation". Socially, this kind of space might be territorially designated as private property, a city map or nation state (p. 272). The *relative* notion of space accommodates non-Euclidean geometries (involving, for example, spheres or curvatures). One's socio-geographic location within space can be variously determined according to distances measured in terms of cost, time and mode of transport. The standpoint of the observer, including their sense of locale, subjectivizes spatial configurations. Crucially, Harvey notes that under this formulation, space and time are integrally connected, such that one can speak of "space-time" or "spatio-temporality". The *relational* concept of space holds that space, time and their interconnectedness cannot exist outside of the material processes that define them. Disparate processes swirling over space in the past, present and future concentrate at given locational points, say, within a city or any other organizational setting. Those who inhabit or visit these locational points invest them with collective memories and future possibilities.

Alongside the preceding categorizations of space, Harvey draws upon Henri Lefebvre's work to construct another threefold distinction. Thus, *material space* refers to sensory experiences of matter. Examples here include the experiences associated with interior and exterior built environments, physical geography, the biosphere and other human beings. *Representations of space* occur through words, graphs, maps, diagrams, pictures, photographs and the moving image. And, *spaces of representation* concern the felt life of different spaces at different times.

Human feelings might include those of contentment, anxiety, fear, desire, reminiscences, visions or dreams. From these two tri-partite categorizations of space and space-time, Harvey constructs a three-by-three matrix for considering the combination of meanings that one might attribute to space as a keyword (p. 282). He then refocuses the matrix in order to highlight salient aspects of Marxian theory. From a Marxian perspective, the interconnection between *absolute space* and *material space*, for example, incorporates concrete labour processes, notes, coins, private property, state boundaries, fixed capital, factories and built environments (p. 283).

In Harvey's analysis, space is nuanced and internally differentiated. By contrast, time is mainly depicted in relation to space, as in "space-time" (p. 276) and "spatio-temporality" (p. 279). Taken together, these locutions also suggest that time and temporality are synonymous. This is a misconception. Temporality concerns the interaction of past, present and future as the ground for experience and understanding. This is a crucial *aspect* of time which is analytically separable from other, equally crucial aspects. Harvey does make reference to "history", "memory" and "collective memory" (pp. 285–6). However, their interrelatedness is not examined. Thus, amidst declarations of time-space mutuality, the two concepts are treated unevenly. Harvey's explicatory essay rules out the possibility that "time" might be a keyword with its own nuances and internal differentiations. As I will later explain, an apposite time-related matrix can enrich our spatial understanding of globality.

Doreen Massey advances the most sophisticated case for the so-called "spatial turn". This she has done as a longstanding researcher in the fields of cultural geography, critical theory, feminist theory and global studies. My comments here centre upon Massey's *For Space* (2005), a thematically arranged sequence of ruminations, critical interlocutions and geographic observations. Like Harvey, Massey founds her position upon the mutuality of time and space. She insists that researchers should not isolate or counterpose the two concepts; rather, "time and space must be thought together" (p. 18). In this regard, Massey is more sensitive than Harvey to the notion that time has multiple aspects. She explains how dominant Western assumptions about historical time (periodization, linearity, progress) erase and/or externalize other cultural perspectives on time. Here, Massey draws upon Johann Fabian's distinction between coevalness and its denial. Different cultural apprehensions of time may be mutually recognized or denied (via the colonial imposition of Western knowledge systems such as anthropology) (pp. 69–70). Massey also discusses various aspects of temporality: openness toward the future (pp. 56, 59), the sense of historicity (pp. 42–5) and lived duration (p. 57). References to contemporaneity in relation to historicist philosophies (p. 40), human anthropology (pp. 69–70) and globalization (p. 82) point to a recognition of epochal time. Massey's consideration of Henri Bergson's writings mentions the difference between experienced durational time and the divisibility of time. However, Massey does not develop the latter notion, even though it signifies a crucial aspect of time: its susceptibility to measurement, calculation and standardization. For Barbara Adam, these are processes of time reckoning that are enabled by mechanical devices (clocks, watches), representations of chronology (time-lines, calendars) and technological infrastructures (telegraphy, telecommunications) (Adam, 2004, pp. 103–21). As I will later argue, reckonings of time are constitutive of institutional power, cultural domination, profit generation and class exploitation on a global scale.

Massey's acknowledgements of time and time-space mutuality underpin the advancement of space as a heuristic of understanding. In this context, space is said to be "constituted through interactions, from the immensity of the global to the intimately tiny". Space is a sphere of plurality and "coexisting heterogeneity" that is never finished or closed. The interactions and co-existences of space are embedded in material practices that are "always in the process of being made" (Massey, 2005, p. 9). The qualities of space that Massey emphasizes can also be construed as qualities of time. The schema of time that this book proposes conjoins globality with felt life in ways that are pluralistic, multi-perspectival, materially embedded and forever unfolding. Such a schema, I will later argue, also affords a unique insight into the workings of global capitalism.

Chapter overview and conceptual framework

This book is divided into five parts. Part I explores the theoretical and material connections between time, globality and capitalism. Chapter 1 identifies four interrelated epistemes of time – epochality, time reckoning, temporality and coevalness – and places them in a global context. The purpose here is to explain how understandings of globality are indivisibly connected to how one views time. Chapter 2 identifies four materializations of time – hegemony, conflict, crisis and rupture – and explains how each reflects the different epistemes of time in given global settings. This schema will inform my standpoints concerning globalization and global modernity in relation to the primary subject of inquiry – global capitalism. Part II examines the hegemony of global capitalism from various time-epistemic perspectives. Chapter 3 traces the epochal features of global capitalism. The precursors of this kind of capitalism originated in the late nineteenth century with the development of telegraph networks, modern transport systems and world time zones. From about 1980, a confluence of epochal events and processes brought a fully-fledged global capitalism into being. These included: the collapse of Fordist-Keynesianism and national Keynesianism; Soviet communism along with First, Second and Third World demarcations; the international proliferation of neoliberal policy regimes; and the growth of transnational corporations in all economic sectors. This chapter highlights the globalization of financial institutions, financial flows and financial instruments along with the financialization of corporate governance (especially in the West). These developments entirely depended upon digital convergences across mass media and ICTs. Additionally, media-ICT corporations became a major sector of capital accumulation. Other epochal trends to be considered include transnational ruling class formation, transnational state formation and the addition of China into the global capitalist system. In summary, I will evaluate "strong" and "weak" versions of the argument that global capitalism is an epochal construct.

In Chapter 4, epistemes of time are employed to examine the symbiosis between global capitalism and global communication. In so doing, certain ideological aspects of global capitalist hegemony will be identified. I first consider real-time, a form of time reckoning that encapsulates the ICT-enabled drive toward instantaneity and simultaneity. The prevalence of real-time generates ever-present-ness and de-temporalization as a state of human affairs which is both ideological and unsustainable. Manifestations of real-time pervade communication frameworks, architectures and lifeworlds: for example, global television news, internet platforms, cyberculture and the built environments of spectacular consumption. Real-time is globally mediated through vectors, spectacles, kinetic formations of power and reflexive feedback loops which have inherent volatilities and affectivities. Next, I employ the episteme of coevalness (and its denial) to critique prevailing depictions of the global. One important theme here relates to the depictions of banal cosmopolitanism within corporate branding and televised genres of infotainment. These depictions obscure the structure and processes of global capitalism. From here I consider how real-time communication has been deployed as a political resource by alter-globalization groups.

Part III identifies and examines the conflicts of time which are inherent in global capitalism. To this end, Chapter 5 outlines the time conflicts between capital realization and financial speculation. In the former process, money capital is realized through the production process, productive capital is realized in the form of commodities and commodities are realized as money in market exchange. Money surpluses throughout the capitalist economy are, potentially, reinvested in production. This general schema, M-P_ _ _ C-M, cannot be guaranteed; the employment of money to generate speculative profit (M-M) circumvents and disrupts the capital realization process.

The disruptions of capital realization within global capitalism are theorized here as conflicts of time. From a time-reckoning perspective, digital technologies allow finance capitalists to exploit the drive toward instantaneity-simultaneity (real-time). Sequential lags of time are eliminated, reduced and arbitraged to generate speculative profit. This conflicts with the realization of capital *over* time. Business-related knowledge, such as registries, clearing houses, titles, balance sheets, account statements and audits, is inherently sequential and chronological. This conflict also has a temporal aspect: the availability of reliable, business-related knowledge ensures commercial and public memory. Documentations of past and present business activity must be reconciled if businesses are to make soundly based, future-oriented decisions. These temporal requirements conflict with the real-time imperatives of M-M speculation (e.g. off-balance sheet "shadow" banking). Similarly, conflicting temporalities of corporate governance will be identified. The financialized corporation, with its short-termist profit calculations and share price indications, conflicts with the longer-term profit horizons and strategic planning outlooks of institutionally embedded corporations (e.g. in China and East Asia).

Chapter 6 argues that the relationship of exploitation between global capitalism and global workforces can be explicated as a set of conflicts over time and about time. Within transnational corporations, senior executives monitor and compare updating spreadsheets revealing the productivity of franchises, supply chains and labour pools. These real-time comparisons contribute to a system of global labour arbitrage across and between time zones. This increases the severity of clock time-based worker exploitation. The social lifeworlds of workers are thereby disrupted through the extension and contraction of work hours, the flexibilization of shifts and the expectation of round-the-clock readiness. Synchronized global labour arbitrage disrupts the lived temporalities and temporal autonomy of workers, families and surrounding communities. Within Fordist-Keynesian political economies, there was an inbuilt coeval tension between capitalists and workers. Class conflict and class compromise across workplaces reflected the mutual contestation of class histories and outlooks. Global capitalism, I will argue, requires the erasure of this coeval tension. Workforces are treated as a collateral, subcontracted component rather than as a fixture internal to capital–labour relations. This and other denials of coevalness are inherent in global systems of social exclusion and the creation of "surplus humanity". Finally, I discuss, with examples, how conflicts of time involving global capitalism, global workforces, and the unwaged poor can be collectively challenged.

Chapter 7 argues that within global capitalism, the general congruence between intra- and extra-economic time reckonings and temporalities tends to erode or disintegrate. Governments thus lose influence over conditions of production whereby taxable profits and incomes fund macroeconomic and public policy. The fiscal basis for income distribution is undermined, and state institutions themselves may not be fiscally sustainable. The second part of the chapter theorizes the erosion or disintegration of political-economic time congruities by examining the problematic interrelationships conjoining state, nation, economy and democracy. Certain key conflictual tendencies are examined. The first concerns the nation state versus global capital for the power to set the tempo of decision making and the temporalities of macroeconomic management. The second concerns the conflicts between transnational and national configurations of the state. In this context, the imposition of neoliberal policy regimes upon given political economies serves to damage institutional memory and rewrite the national economic past. As is indicated in Chapter 3, the transnational state comprises supra-national organizations and associated think tanks, international summit gatherings and the upper executive reaches of the national state. This chapter explains how the fast decision making of these bodies comports with the needs of transnational capital, but conflicts with the deliberative workings of national polities (e.g. representative institutions, judicial processes, legal systems, electoral cycles and public opinion formation). Against this background, the proliferation of transnational activist groups and forums will be seen as a past-oriented defence of national economic sovereignties and as a future-oriented prefiguration of counter-hegemonic transnational institutions.

Part IV argues that the inbuilt time conflicts of financialized capitalism became the indicators of a multi-faceted global crisis which still defies resolution. Thus, Chapter 8 explains how the time conflicts between the realization of capital (M-P_ _ _ C-M) and financial speculation broke through to the surface during 2007 and 2008. Here, I detail the growing imminence of financial crisis associated with the market power of leveraged investment banks, the securitization of household debt and the spread of mortgage derivatives. Within mainstream business-financial media, these developments were not initially thematized. Instead, amnesia about the history of financial instability co-existed with myopia concerning the accumulation of systemic financial risk. I then trace the actual unfolding of the 2007–2008 financial crisis with regard to the confluence of news media coverage, ICTs and the reflexivity of panic.

In Chapter 9, global financial contagion, the spread of recession and the Anglo-American bank bailouts are critically outlined. I then discuss competing interpretations of the crisis which publicly emerged, and argue that the nature of this crisis was its irresolvability. The new ideas, institutions and policy directions that might have stabilized the global capitalist system were not ready at hand. Thus, the Anglo-American bank bailouts, the creation of bank holding companies and half-hearted financial regulation reproduced the time conflicts between M-M circuits of financial speculation and the realization of capital (M-P_ _ _ _ C-M). This, in turn, re-established the preconditions for the next financial crisis. The subsequent development of austerity policy packages at national, international and supra-national levels to (supposedly) ameliorate national economic difficulties favours capital over the nation state for the power to shape the time reckonings and temporalities of economic management. I argue that China's neo-Keynesian stimulus package diverged from this structural tendency, but that such a response cannot be guaranteed in future. China's growing integration with the global economy and financialized capitalism is helping to establish the preconditions for a larger and less manageable financial crisis. Beyond China, the impact of financial crisis, the renewal of M-M profit circuits and the imposition of austerity programmes also exacerbated the time conflicts of class exploitation and social exclusion. This process will be explored and evaluated.

Part V examines the history, contemporaneity and prospects of collective action against global capitalism from various time-epistemic perspectives. Chapter 10 recalls the recurring nature of global economic crisis and the crises of crisis management. The oppositional agencies, movements and coalitions which might rupture this pattern of events are then identified. I refer here to transnational worker militancy, alliances between unions and informal workers, ICT-connected protests and occupation movements, and anti-austerity politicians, parties and governments. I then consider the extent to which social media platforms advance the scale and density of inter-activist communication, the synchronicities of political action, the solidarities of "now-ness" and the availability of new temporal understandings. The necessary components of a counter-power coalition against global capitalism are then specified. Chapter 11 identifies the calls for action that should underpin transnational collective actions designed to rupture global capitalist hegemony. All activists are enjoined to advance global epochal consciousness, reclaim tempo, re-temporalize real-time and thematize coeval recognition.

Part I

Time, Globality, Capitalism

1
Epistemes of Time in Global Context

Time should not be understood as a unitary phenomenon. Rather, as this chapter will explain, it is comprised of four epistemes or ways of knowing: epochality, time reckoning, temporality and coevalness. These epistemes are integrally related, both conceptually and in practice. Each of them contains multiple and conflicting standpoints of intellectual debate. Individually and in combination, they help us to understand events and processes within global history. From this perspective, I will show, in Chapter 2, how the different epistemes of time materially combine to produce particular configurations of hegemony, conflict, crisis and rupture. The resulting matrix will become the ground for developing a structural critique of contemporary global capitalism.

Epochality

According to one dictionary definition, an epoch is "the beginning of an era in science, history etc." or "a period in history or life marked by special events" (*Oxford Illustrated Dictionary*, 1979). From a natural-scientific viewpoint, human beings are enmeshed within long-term patterns of galactic, ecological and bio-social evolution. Evolutionary eras are demarcated within established scientific disciplines, such as cosmology, astronomy, geology, climatology, biology and geography. Within each discipline (and sub-discipline), epochal markers and periodizations are contingent upon new scientific discoveries and new technologies of investigation and experimentation. Natural-scientific conceptions of evolutionary change can be distinguished from views of history associated with the idea that epochs are brought into being by manifestations of collective self-consciousness (Hunt, 2013, p. 213). Human beings in different cultural settings have the reflexive capacity to shape historical change and epochal understandings of historical time. For historians, this proposition immediately raises two vital questions: When do epochs begin and end? Is the unfolding of history expressive of continuity or discontinuity? Our answers will partly depend upon the field of inquiry. Economic, political, military and social historians address different categories of periodization and epochality. Great battles, dynastic takeovers and demographic shifts are each positioned within particular chronologies of history. For macro-historians who operate across disciplinary boundaries, the question of epochality is a fundamental source of dispute. Such historians, from within the same academic terrain, may have conflicting views about the nature of historical change. The comparative outlooks of Fernand Braudel and Georges Gurvitch within French intellectual culture illustrate the point. For Braudel, there were just two major breaks in human history: the Neolithic and Industrial Revolutions. All other manifestations of historical change occurred over extended time spans or *longues durées*. Deep, enduring patterns of cultural demography, economic production, trade and institutional authority were privileged over conventional periodizations and event-centred chronicles of history in the making. Braudel's perspective, as exemplified in the Annales School of historical inquiry, was influenced by sociologists associated with Emile Durkheim. However, George Gurvitch, who held Durkheim's chair of sociology at the Sorbonne, based his social theory upon the principle of discontinuity (Harris, 2004, p. 163). Historian Olivia Harris succinctly outlines this perspective: "the outer surface of social reality is manifested in institutions, infrastructures, and organizations, while the hidden depths are dynamic, effervescent, the source of creativity and revolution" (p. 164). Braudel regarded the intellectual preference for discontinuity as an arbitrary and artificial reconstruction of historical process. Conversely, Gurvitch argued that intellectual schemas of continuity should not be imposed upon the historical reality of breaks and contingencies. On this account, societies in history are constructed through the will of social actors. Major conflicts within society express opposing manifestations of collective agency. How such conflicts transpire will shape and reshape the periodizations of history. The opposite view holds that the will of social actors is borne by historical processes (p. 165). These countervailing perceptions of history and epochality are of global importance. Braudel regarded the *longue durée* as a formulation of world history. He drew from the locution of "world time" proposed by German sociologist and China historian, Wolfram Eberhard. With this concept, Eberhard was able to incorporate Chinese history into world history. For

Braudel, world time supervened and flowed through regional, national and pan-regional histories (Brook, 2009, p. 381). The opposing perspective emphasizes the punctuations of world history in order to capture the multiplicity and interrelatedness of historical narratives. This is the standpoint of global historian Timothy Brook:

> rather than bundle ever more local timelines into an unmanageably thick cable of interwoven historical narratives, I want to consider what happens when we cut across this cable in a way that touches all timelines but declines to reproduce any of them, by narrating global history in terms of moments.
>
> (Brook, 2009, p. 381)

The determination of such moments, their significance and regularity, and the role of human agency are subjects of debate among historians. The epochalities of global history are thus essentially contested.

Historical awareness is not possible without a sense of epochal orientation. Equally, however, the naming and demarcation of epochs may serve to obfuscate understandings of historical change. In the European context, Kathleen Davis asks: "what does the regulatory principle of medieval/modern periodization hold in place, and what does it help to obscure?" Her argument is that Europe produced a narrative of secularization whereby a "feudal", religious "Middle Ages" centred upon salvation presaged the evolution of Renaissance sensibilities, Enlightenment values and modern political ideologies. The associated emergence of mercantile and industrial capitalism reinforced the idea that the past could be re-periodized in hindsight. The secularization narrative was constructed, retrospectively, in different national settings, by historians of theology/philosophy, dynastic rule, law, science and medicine. For Davis, tacit acceptance of this narrative, and the periodizations therein, legitimizes a reductive, misleading account of European history. Within the so-called "Middle Ages", for example, Augustine and the Venerable Bede proposed discrepant understandings of historical time that were as much political as theological (Davis, 2008, p. 5). Furthermore, Davis argues, the secularization narrative became the historiographical basis for writing global history. Pejorative assumptions about the "medieval" past validate the global application of narrowly defined political forms, such as secular government and modern democracy. More specifically, Davis states that "the sixteenth and seventeenth century writing of a 'feudal' past for Europe mediated the theorization of sovereignty and subjection at crucial moments of empire, slavery, and colonialism"

(Davis, 2008, p. 7). On this reading, the construction of epochs serves the interests of institutionalized power. As I will later explain, this is never a final accomplishment; counter-constructions of epochality are always in prospect.

Epochality and the periodization of history are not just matters of external judgment. They are also invoked within locally lived experience. Matt Hodges' study of Monadiéres within the Norbonne area of south coastal France revealed a unique epochal framework. Villagers contrasted a traditional, stable past with present uncertainties arising from the loss of the local language (Occita), reduced viticulture work, declining fishing stocks, outward migration and the incursions of tourism. This before/after construction of epochality was mythic, yet rooted within objective historical processes involving the village (Hodges, 2010). From a global-anthropological perspective, Hodges concludes that invocations of epoch vary across cultures and that periodizations of history are multiple and co-existent.

Time reckoning

This episteme refers to the numbering, measurement and standardization of time independently of intimate, socially lived time and of inbuilt natural processes within geology, biology, the biosphere and the solar system. Of course, the reckoning of time cannot be entirely divorced from natural or social settings. Calendars, for example, reflect the diurnal cycle, solar cycles, seasonal changes of climate, and the human passage of birth, life and death. Yet, associated public ceremonies, such as religious observances, marriages, funerals and feasts, may be dated within specified units of calendric time (years, months, weeks, days). In these circumstances, the calendar represents a standardization of time reckoning. By contrast, the earliest time-keeping devices, such as water clocks, sundials and sand glasses, depended upon natural elements and their vicissitudes. Water clocks and sundials required non-freezing temperatures and fine weather, respectively. Devices using sand could only measure non-calibrated durations of time (West-Pavlov, 2013, p. 14).

Advancing precision in the devices and measures of time reckoning increased the degree of abstraction from natural processes. The development of mechanical clocks and time pieces illustrates the process. In late 1200s Europe, the construction of escapement mechanisms made the mechanical clock possible. Initially, a horizontal bar with a weight at each end was pivoted to a vertical rod, on which were two pallets.

These engaged with a toothed wheel which pushed the rod first one way and then the other. This caused the horizontal bar to oscillate and the wheel to advance, tooth by tooth. The rate of oscillation could be adjusted by altering the weights and their distance from the vertical rod (Whitrow, 1988, p. 103). These oscillations could be relayed to bells or to the movement of hands on a dial to give a measurement of time. Over the centuries, technical advancements, such as the pendulum and the anchor escapement, increased the accuracy and precision of time keeping. On clock faces, hands were supplemented by minute and second hands (West-Pavlov, 2013, p. 15).

The eighteenth-century marine chronometer enabled precise navigational time keeping and the global measurement of longitude. This increased the sophistication of clock making and expanded the standardization of time reckoning. Correspondingly, as time-keeping devices became smaller and more portable, numbered units of time reckoning pervaded everyday life. Public clocks were complemented by domestic clocks, personal time pieces and wristwatches (Landes, 2000, pp. 85–103). During the twentieth century, electrical, quartz and atomic clocks reinforced the fact that time keeping was a scientific exercise.

The precise time reckonings enabled by the calendric system and the mechanical clock became standardized within commercial enterprises, trading networks, oceanic navigation and the early-modern state. The growth of industrial capitalism after 1850 positioned clock time as the absolute indicator of productivity, costs and profit. Disciplined workers and their families were expected to internalize these principles of time use. Factory owners, bankers, accountants and retailers instinctively equated clock time and monetary value (Thompson, 1967). Meanwhile, modern transport and communication networks worked to universalize the standardization of clock time. Thus, nationwide railway systems needed a supervening grid of time zones to synchronize regional timetables amidst a plethora of local times (Zerubavel, 1982, pp. 5–9). Shipping companies, imperial navies and imperial powers required global time uniformity. Meeting this objective was a fractious and protracted exercise. The 25 delegates who attended the 1884 International Meridian Conference in Washington DC were not authorized to commit their countries to resolutions; other assemblies with the power to do so would be required (Bartky, 2007, pp. 94–9). Subsequent negotiations eventually established a world meridian grid, a prime meridian (Greenwich Mean Time) and an international dateline. Confirmation of these and related technical matters occurred at the 1912 and 1913 International Conferences on Time in Paris (pp. 146–8).

The growing standardization of clock time coincided with the arrivals of the telegraph, telephony and wireless telegraphy. These innovations presaged radio transmission, terrestrial television, satellite television, networked computers and the internet. As Barbara Adam explains, such developments represent a historically new kind of time reckoning.

> The physical constraints of bodies in space are transcended. Movement across space is dematerialized. This means that space has not been merely rearranged but rendered irrelevant and time has been reconstituted: instantaneity and simultaneity have replaced sequence and duration.
>
> (Adam, 2004, p. 120)

Within everyday life, this transition is less clear cut. Bodily movements through space are still set by physical ability, and the different kinds of time reckoning are, to some extent, integrated within daily routines. At a global-historical level, though, the evolving relationship between the time reckonings of sequence-duration and simultaneity-instantaneity is more apparent. Thus, early real-time technologies contributed to the standardization and universalization of clock time. The telegraphic transmission of news content gave public authority to the daily newspaper, and the radio transmission of time signals affirmed the taken-for-grantedness of meridian time zones. Subsequent advances in real-time communications technology challenged the ascendancy of clock time and the partitionings of world time. Live, 24/7 global television, for example, decentred the daily clock time schedules of national television broadcasting and the sequential ordering of time zones. The increasing availability of internet communication has, arguably, ensured the ascendancy of real-time over clock time. The nature and extent of this ascendancy require elaboration. As I will later argue, instantaneity and simultaneity have become the new precepts for time standardization. Real-time has, in many respects, superimposed itself upon the sequential measurement of time. Although calendars, clocks and time zones remain indispensable, they are no longer synonymous with time reckoning per se.

Standardizations of time reckoning are, necessarily, artificial and convenient approximations of natural processes. At the 1884 International Meridian Conference, delegates had to artificially impose meridian breaks upon the world-encircling continuum of solar times. Delegates initially proposed to set these breaks at 10-minute intervals from one another so that mean standard time, at any given point on earth, could be closely approximated with actual solar time. This would have created the unwanted inconvenience of 144 time zones. Delegates instead agreed that the world would be divided into 24 one-hour time zones (Zerubavel, 1982, pp. 14–15). Standardizing the day presented another difficulty. Civil days were then reckoned from one midnight to the next, whereas astronomers and navigators counted days from one noon to the next. The Conference conveniently resolved this discrepancy by establishing a "universal day" beginning at midnight. Delegates also had to fix an international dateline so that every point on earth could be positioned in chronological sequence. The dateline was not scientifically determined or drawn. As Eviatar Zerubavel notes, "for the sake of convenience it was fixed on the 180th meridian – both east and west of Greenwich – which happens to run across an almost entirely uninhabited area" (Zerubavel, 1982, p. 16). From north to south, the line was bent eastward and westward to avoid cutting across geographic territories. The cartographic details were periodically altered after the International Meridian Conference. Standardizations of real-time are also artificial and inherently imprecise. The speed at which electronic networks transmit information, sound and imagery cannot simply be measured by the time taken to cover geographic distance. Across networks, electronically driven speed is measured against the standard of instantaneity. Efficient transmission requires lengths or lags of time to be eliminated. In practice this is not possible. Within all electronic networks, there will always be tiny ineliminable lengths of time (Hassan, 2003, pp. 231–3). The standardization of real-time is thus an idealized process of becoming rather than an empirical accomplishment. Pure, networked instantaneity is not realizable, but the process of trying to reach this objective magnifies the instability and uncertainty of real-time-oriented formations. This tendency can, in principle, play out on a world scale as global interconnectivity increases. The very notion of full instantaneity means that the past cannot act upon the present. And, whenever attempted instantiations of real-time unfold, the future cannot be planned for. These evaluations bring us to an important realization: critical understandings of time reckoning draw upon other epistemes of time.

Temporality

This commonplace word, across the various subfields of time research, has no consistent pattern of usage. In philosophy, humanities and the social sciences, "temporality" can be seen either as a signifier for time in general or as a specific category of time-related understanding. In the former context, Russell West-Pavlov's book *Temporalities* (2013) incorporates time keeping, philosophies of time, gender relations, history, hermeneutics, language and discourse, modernity and post-modernity, and colonialism and post-colonialism. By contrast, David Couzens Hoy's *The Time of Our Lives: A Critical History of Temporality* (2009) focuses upon the evolving philosophies of time consciousness. For Hoy, "temporality" manifests itself in human existence, whereas "time", broadly conceived, can refer to "universal time, clock time or objective time" (Hoy, 2009, p. xiii). Both authors provide incisive explications of time, but Hoy's understanding of temporality is more clearly articulated. My own discussion further develops the idea of time consciousness without forgetting its connection to phenomenological traditions of philosophy.

Clearly, temporality is not about the dissecting, dividing, counting or measuring of time. Rather, it is the ground for thinking about the relationalities that connect past, present and future.[1] Temporality thus involves memory, expectation and attention to the present. These are manifestations of lived time that have no necessary connection to any supervening conception of time deriving from religion or science (Munn, 1992, pp. 94–5; Adam, 2004, pp. 53–60, 64–70). Temporality can be observed or experienced in the intersecting domains of self, intersubjectivity, social identification, bureaucratic institutions and society at large. Temporal orientations are also built into the operations of nation states, economies, polities, legal systems and transnational organizations. From these observations, more nuanced appreciations of past, present and future can be advanced. As one proceeds from the self to the transnational, temporal orientations become more complex, multitudinous and conflictual. They are also, simultaneously, intrinsic to the subjectivities of human experience, the objective structures of society, and those collective actions that may precipitate structural change. Lived temporality is integrally connected to the rhythms and cycles of biological nature, climate and the cosmos, including the moon, the sun and the solar system. This connection is mediated through our senses, emotions, bodies and intellect. Thus, the scent, sight, sound and physical awareness of seasonal change may, on given occasions, trigger memory, expectation and various associated emotions (loss, hope, fear, joy). Calling upon our senses to note our breathing, the circulation of blood, beatings of the heart, movement of limbs and delivery of speech invokes the present-ness of lived temporality (a disposition that is also intimately associated with the diurnal cycle). Sensory, emotional, physical and intellectual interactions among people, underscored by natural rhythms and cycles, generate specific socio-cultural temporalities through craft, music, art, story-telling, mediated texts and mythic belief structures. Naturally embedded temporal practices also intermesh with economic systems, especially those that depend upon agricultural production and exchange.

Further examination reveals different kinds of temporal orientation. Past-oriented temporality, for example, invokes the subject of memory within popular culture and scholarly discourse. Relevant key words and phrases include "social memory", "collective remembrance", "national memory", "public memory", "counter-memory", "popular history making" and "lived history" (Connerton, 2006, p. 315).

The interdisciplinary field of memory studies draws together insights from psychology, sociology, anthropology, history, literary studies and media-communication studies (Zelizer, 1995, pp. 215–18). Within this field, Barbara Zelizer makes a central distinction between personal recall and constitutions of collective memory. The latter concept overlaps with the idea of "history with a purpose, whether it be devised, interpreted or fabricated" (Zelizer, 1995, p. 216). The purpose of collective memory can be institutionalized, oppositionally expressed and fundamentally contested on the grounds of religion, culture or political ideology. Orientations toward the past and memories of the past could not occur if they did not co-exist within the present. The complexities and paradoxes of this co-existence have been explored by Henry Bergson, Gilles Deleuze and their many interlocutors. Aside from the intricacies of such literature, it is sufficient here to note that an equally problematic relation between present and future underpins the idea of futurity. Barbara Adam's and Chris Groves' writings on this subject broaden our understanding of temporality and provide a valuable resource for temporally informed critical inquiry. Subsequent discussion will briefly identify futurity's most important aspects.

To the extent that natural and social worlds are amenable to scientific analysis, predictions can be made on the basis of previous observations. This can be termed an abstract future. Habits of mind that are subsumed by present interests and imperatives regard the future as a void to be filled by unfolding events as time passes. Such events will simply reflect the modus operandi that prevails in the present. By way of example, Adam and Groves refer to the "blind" belief in unrestricted economic growth (Adam and Groves, 2007, pp. 193, 195). One should add that neoliberal precepts of market equilibrium, which underpin deregulation and privatization, are especially myopic. By contrast, scenario planning describes possible futures according to internally consistent assumptions about key relationships and the driving forces within a social totality. Obvious examples include macroeconomic and intra-sectoral planning, along with technological research and development (Adam and Groves, 2007, p. 200). Scenario planning may also be articulated or undertaken by institutions and groups within civil society. A related concept, futures-in-the-making, refers to future-oriented actions that are progressing within an unfolding present. The futures that do, in fact, transpire are neither pre-determined nor fully open. There are general parameters of future-oriented change, but the content of this change cannot be fully established in advance. The full temporal context of futurity is exemplified by memories of the future. In this formulation, the past contains plans, visions and ambitions concerning the future, which were (in retrospect) either realized or unrealized (Adam and Groves, 2007, p. 198). In the latter case, the recovery of potential futures from the past may facilitate or inspire contemporary orientations toward the future.

Adam and Groves' conception of "timeprint" points to the global dimension of futurity. Certain knowledge practices in the present may undermine the future prospects of successor generations (Adam and Groves, 2007, p. 203). The temporal ramifications of the "ecological footprint", for example, mean that the "human consumption of natural resources in the present damages the earth's capacity to sustain the future conditions of life" (Adam and Groves, 2007, p. 26). The extension and intensification of this timeprint suggests an inability to learn from past courses of action and their consequences. Saulo Cwerner's concept of chronopolitanism furthers our understanding of global temporality. His argument begins with a critique of cosmopolitanism as a multi-faceted theme within global studies. According to Cwerner, such literature invariably emphasizes "the spatial extension of the cosmos as *the* fundamental feature of cosmopolitanism" (Cwerner, 2000, p. 334, emphasis in original). Academic discourses about citizenship, the extended polis and transnational politics are framed as an "extension of loyalties, identities, responsibilities and rights across *space*" (p. 335, emphasis in original). Cwerner suggests that articulations of cosmopolitanism should be complemented by the "chronopolitan ideal", whereby "the reconstruction of citizenship, sovereignty and democracy at the global level" allows "the extension of rights and responsibilities in the polis across time as well as space" (p. 335). Cwerner's chronopolitanism also represents a critique of what he calls "the metaphysics of the present": a theoretical presupposition whereby “reality exists in a moving present (more or less ‘thick’), which continuously recasts past and future events in terms of present interests and circumstances” (p. 335). Although the past and future are necessary horizons for understanding and action, “it is the present that ascribes meanings to past and future events” (p. 335). This theoretical presupposition underpins the sense of a “global present where rights and responsibilities are extended only to living generations” (p. 336). By contrast, from a temporalized, chronopolitan perspective, the global present should be the basis for opening up alternative pasts and futures. The rights of future generations should be “inscribed in the actions and thoughts of the living” (p. 337). It is equally important to facilitate dialogue between past and present generations, such that memories of past injustices and suffering are publicly recovered and acted upon (p. 338). The chronopolitan ideal recognizes that the world is comprised of local, socio-cultural temporalities that are multiple and co-extensive. In my view, chronopolitan sensibilities also require that one distinguishes between the standpoint of a de-temporalized global present and that of a global contemporaneity which appreciates temporal and epochal pluralities (Osborne, 2013, pp. 69–86).

Coevalness

The co-extensiveness of various epochal and temporal viewpoints brings us to coevalness. This episteme concerns intersubjective and reciprocal communication in regard to different awarenesses of time. These qualities of communication are not pre-given; narrow, univocal assumptions about time may predominate and thus damage communication among individuals, groups, institutions and cultures with disparate historico-temporal experiences. Johannes Fabian’s critique of Western anthropology, *Time and the Other* (1983), argues that such research constructed its object in a way that erased the historical and temporal perspectives of the cultures under investigation. This was a process of obfuscation whereby investigated cultures were externalized as “other” to the assumed centrality of “our” time (i.e. the “other” was chronologically and temporally distanced by the anthropological lens as backward, traditional, savage, tribal, peasant, etc.). Consequently, the centrality of “our” time, naturalized by the academic anthropologist, was beyond critical scrutiny. The net result, according to Fabian, was the “denial of coevalness” or “allochronism” (Fabian, 1983, pp. 31–2).

The growth of anthropology as an allochronistic discipline (in contradistinction to the coeval potentialities of ethnographic fieldwork) was facilitated by the rise of capitalism and its imperial-colonial expansion into non-Western regions of the world. The same can be said of all other disciplines and sub-disciplines imbued with Western conceptions about "the Orient". In Edward Said's famous study of this development, "Orientalism is a formal academic designation, a style of thought about the world premised upon an East-West distinction and a supervening discourse created by Western institutions actively dealing with the Orient, militarily, economically, politically, socially, ideologically, scientifically and imaginatively" (Said, 1995, pp. 2–3). These aspects of Orientalism are interdependent elements of Western cultural imperialism, a historic project which can be directly equated with Fabian's denial of coevalness.

Coeval research practices arrange or reorganize historical and epochal time in a way that gives identity to the other (in relation to oneself).[2] Such practices advance the possibility of co-temporal understanding (with regard to otherwise disparate ways of life) and appreciate that temporal relations are embedded within global-social totalities. Andre Gunder Frank's *ReOrient* can be seen as a coevally grounded explication of global economic history and as an exemplary critique of allochronistic research in this field (Frank, 1998). Substantively, he argues that in an interconnected world economy from 1400 to 1800, Asia predominated (mainly through Ming and Quing China and Mughal India). Europe was then only a marginal player in global trade and production. Once the global economy moved in an industrial direction, the position of the West became more central. Historically, this development is understood to be contingent rather than pre-determined, and temporary rather than permanent. Here, Frank seeks to confront a Eurocentric knowledge system which attributes to itself a sense of historical destiny manifested in the advances of science, technology, industrialism and economic institutions. This perspective envisions the world from a privileged European vantage point, such that the West is temporally separated from, and rendered superior to, non-Western others. Frank maintains that all macro-historical changes in the world, such as the rise/decline of Asia and the West, must be understood from a truly global perspective. Researchers must be able to reconcile different economic, geo-political and geo-cultural perspectives on world history. Frank insists, however, that, in themselves, all such perspectives – Eurocentric, Sino-centric, Afro-centric or Islamo-centric – are rooted in "exceptionalism" and thus "doomed to blindness". Global economic understanding is "possible only with a telescopic perspective capable of encompassing the whole world and all its parts, even if the details of the latter may remain unclear from afar" (p. 338). This "telescopic perspective", I would emphasize, must be untainted by allochronistic perceptions.

With the decolonization of European empires and the proliferation of post-colonial scholarship across the disciplines, it might appear that Fabian's argument has been overtaken by events. The Eurocentrist preconditions for the denial of coevalness no longer hold. Fabian himself has acknowledged that "it is now possible to argue that evolutionary/historical categories that once served to place the societies we research in the researchers' past have eroded to the point where they no longer serve their distinctive allochronic functions" (Fabian, 2007, pp. 106–7). In these circumstances, "Western anthropologists studying the non-West, Western anthropologists studying the West and non-Western anthropologists studying the non-West, all work on the assumption that the practices (call them cultures, societies) that they investigate are contemporary with their own practices of investigation" (p. 107). However, the general decline of Western allochronism within academic disciplines and popular culture does not make coevalness a less applicable critical concept. As later chapters will explain, the denial of coevalness became re-expressed within global configurations of capitalism after decolonization and the Cold War. Such is evident in discourses of the global which rely upon undifferentiated spatial metaphors, such as "the network society", "space of flows" (Castells, 1996), and the nomenclature of "ethnoscapes", "mediascapes", "technoscapes", "financescapes" and "ideoscapes" (Appadurai, 1996). Such formulations acknowledged the unprecedented scale, speed and density of human interactions across geographic boundaries. However, they also deflected attention away from the temporal disjunctures of social experience inherent in the global capitalism that was then taking shape.

The epistemes of time which I have identified are interconnected in thought and co-extensive in practice. Thus, the connection between epochality and time reckoning is exemplified in the various histories of time measurement and time-keeping devices. Epochality and temporality come together in disquisitions on modernity, post-modernity and histories of time consciousness. As I have indicated, different regimes of time reckoning cannot be understood apart from their temporal ramifications; impositions of calendar and clock time regulate memories of the past and outlooks on futurity. The prevalence of instantaneity/simultaneity, or real-time, entails the de-temporalization of the present. Denials of coevalness cannot be explained without reference to the dominant orthodoxies associated with epochality, time reckoning and temporality. From the perspective of Eurocentrism and its critics, for example, these orthodoxies are constructed as progress, destiny and cultural exceptionalism. The pre-requisites and components of everyday life also bring together the different epistemes of time awareness. Human cognition and language, human intimacy, basic material subsistence, sexual reproduction, and familial and socio-cultural experience are all inseparable from epochal consciousness, time-reckoning routines, temporal orientation and outlooks of coevalness (or allochronism). Most importantly, for our purposes, epistemes of time are infused within global-social totalities of hegemony, conflict, crisis and rupture. I will now consider these in turn.

2
Materializations of Time in Global Context

Interrelated epistemes of time are indivisible from their manifestations within institutional structures, communication networks, societal processes and everyday life. This chapter identifies four materializations of time (hegemony, conflict, crisis and rupture) and considers their time-epistemic properties (epochality, time reckoning, temporality, coevalness/allochronism). The discussion will also reflect upon the time-related dimensions of globalization, global modernity and global capitalism.

Hegemony

Hegemony incorporates the ways in which a governing power or power structure coerces people and wins consent from them. Coercion and consent operate together in different combinatory forms depending on context. Ruling elites may employ language, imagery and symbolic constructs to legitimize or naturalize their power. If these ideological practices succeed, then prevailing structures of discrimination, inequality and exploitation will not be publicly debated. In this regard, ideological practices are not simply imposed from above; they pervade civil institutions and social lifeworlds. The general result is a habitual "structure of feeling" which comports with the outlooks and priorities of hegemonic power (Williams, 1977). Civil institutions and lifeworlds are, at the same time, affected by agencies of coercion and political authority as well as the pressures of economic circumstance.

This brief synopsis of hegemony accords with the specific analyses of Italian Marxist Antonio Gramsci. In his view, capitalist class hegemony, incorporating the working class and other subaltern groups, is generated through bourgeois institutions and culture. Fully-fledged capitalist societies, as opposed to those which are unevenly developed, reproduce themselves through consent more than through coercion (Eagleton, 1991, pp. 115–16). More broadly, if hegemony is expressive of a power structure, this may take the form of a ruling dynasty, an imperial system (involving territorial expansion, colonialism and client regimes) or an ascendant national state within a world economy, and a framework of international relations. Such hegemonies are not confined to local, regional or national jurisdictions; they also help to shape world history.

Epochality is a constitutive feature of all hegemonic formations. For researchers, it is important to determine when a period of hegemony begins and when it ends. Such determinations must distinguish between hegemonic and non-hegemonic forms of dominance and acknowledge that some epochs do not have a dominant ruling structure. Ruling elites themselves seek hegemonic authority by advancing their own epochal significance and sense of historic mission. This occurs, for example, when a growing national consciousness, among various groups and classes, enables ruling elites to build a national state. Forces opposing this hegemonic formation may, of course, challenge such epochal authority economically, militarily, politically and intellectually. At the same time, ruling elites and classes across different national states may build an inter-hegemonic alliance, perhaps on a global scale. Epochal markers of hegemonic rule, in whatever form, may be exemplified by historic battles, convocations and documents of foundation. Associated monuments, ceremonies and symbolic constructions may shape popular beliefs and sentiments. Under capitalism, political leaders, intellectuals and civil institutions may periodize national economic history in terms of developmental progress (rather than class exploitation).

Regimes of time reckoning are embedded within hegemonic rule. As mentioned previously, standardized clock time within early industrial capitalism disciplined factory workers and their families. Employers correlated hours of work with measurements of output and profitability. The standard demarcations of clock time were also constitutive of government, legal and educational institutions. Correspondingly, senior public figures, locally and nationally, advocated the need for punctuality, time thrift and efficient time management. From an anthropological perspective, Nancy Munn argues that authority over the chronological definition, timing and sequence of daily and seasonal activities, via calendars and clocks, connects the everyday lives of persons to comprehensive orders of governance. The potential scale of this process is strongly emphasized.

> The importance of calendric and related time shifts connected with socio-political changes is more than political in the narrow pragmatic sense. It has to do with the construction of cultural governance through reaching into the body time of persons and coordinating it with values embedded in the "world time" of a wider constructed universe of power.
>
> (Munn, 1992, p. 109)

Munn's observations reflect ethnographic research into the impact of Western missionaries on Solomon Islanders in the South West Pacific. The introduction of the abstract numerical Gregorian calendar and the seven-day-week cycle became the template for regular religious instruction and church services (Munn, 1992, p. 110; see also Nanni, 2012, p. 3).

The epochal and time-reckoning aspects of hegemony also implicate temporality. Thus, ruling class elites often employ strategies and rituals of memorialization to engineer consent. When they succeed, the populace conforms to a worldview in which official representations of the past chronologically fit with the present as it unfolds. Conversely, future-oriented temporality may infuse hegemonic worldviews, as in cases where myths of civilizational progress advance colonial projects. Within modern capitalist hegemonies, future orientation takes disparate forms. State-led planning and developmentalism (futures-in-the-making) differs markedly from the techno-futurist vistas propagated by ICT corporations.

Hegemonies of imperialism and colonization necessarily require the denial of coevalness. This occurs when a dominating, univocal discourse of historical time overrules or silences the history of those who have been written out of history. With regard to nineteenth-century Western imperialism, Frederic Jameson writes that

> the epistemological separation of colony from metropolis, the systematic occultation of the colonial labour on which imperial prosperity is based, results in a situation in which the truth of metropolitan experience is not visible in the daily life of the metropolis itself; it lies outside the immediate space of Europe, in the "colonies".
>
> (Jameson, 2003, p. 701)

The crucial issue here is not that metropolitan citizens lack knowledge about imperial and world capitalist expansion; it is that the knowledge available is not constructed by marginalized populations themselves.

Their particular experiences of capitalist imperialism could not be easily communicated between colonial outposts or articulated within the metropole.

Conflict

Epistemes of time not only take the material form of hegemony; they may also be constitutive of conflict within and between hegemonic formations. My use of the term "conflict" in this context concerns situations in which opposed, contradictory or incompatible principles are at play. Constructs of conflict pertaining to systemic instability, war or revolution are set aside here, to be considered later as manifestations of crisis and rupture. Gramsci's analysis of Italian unification from the late nineteenth century illustrates how conflicts of time can materialize. The new state was based on an alliance between the northern industrial bourgeoisie and southern landowners (Cox, 1983, p. 166). They embodied quite discrepant epochal sensibilities. The historical discontinuity of industrial, technological and urban modernity contrasted with the historical continuities of landed privilege ordained by religious authority. Petit bourgeois constituents from diverse local backgrounds populated the new state bureaucracy. An embryonic northern working class confronted the industrial bourgeoisie on modern terrain, as peasant communities in Sardinia, Corsica and southern Italy inherited the epochal and temporal traditions of peripheral, medieval principalities. By the early twentieth century, worker and peasant occupations of factories and land had generated collective solidarities within Italian capitalism, disparate cultural memories notwithstanding. Confronted with these threatening developments, Italian capitalism's ruling coalition of northern industrialists, the petit bourgeoisie, rural landowners and the Catholic Church forged a common class interest, although their different epochal sensibilities remained. In this historical example, unfolding conflicts of epochal significance were intertwined with conflicting experiences of temporality and measured chronological time. Denials of coevalness would have characterized the attitude of the industrial bourgeoisie toward the peasantry. Class conflict between the industrial bourgeoisie and an organizing working class was premised upon a coeval recognition of incompatible temporal outlooks. The apparent inevitability of capitalist growth and development confronted a collectively constructed worldview committed to socialism as a future-in-the-making.

Conflicts of time are also inherent within world-scale formations of imperialism and colonialism. Here, Giordano Nanni, in *The Colonisation* *of Time* (2012), points out that the global expansion of Western time was contingent upon "the interruption, elimination and reform of 'other' cultures of time" (Nanni, 2012, p. 5). This conflictual encounter had diverse manifestations. In the white settler societies of New Zealand, Australia and South Africa, British understandings of time operated "simultaneously as a category for establishing the cultural and racial inferiority of local populations and as a channel for reforming the latter into so-called modern, civilized and Christian subjects" (p. 13). This was not a seamless process. In the case of eastern South Africa, dispossession of the Xhosa people and their integration into the colonial labour economy had unforeseen repercussions. Local attempts to reform indigenous temporalities in missionary-run schools and industrial enterprises indirectly helped to nurture and empower a later generation of anti-colonial intellectuals and political leaders (pp. 15–16). After being taught to think in terms of epoch, time schedules and temporal sequentiality, they used these epistemic categories to ground articulations of anti-colonial class consciousness, indigenous black consciousness and national liberation.

Western hegemony over Asia was fundamentally contested from the outset by a disparate group of intellectuals, activists and journalists. In this regard, Pankaj Mishra, in *From the Ruins of Empire* (2013), discusses the writings, activism and legacy of Jamal-al-Din al-Afghani, an Afghan-born Muslim who opposed British imperial rule throughout South Asia and the Middle East. He exhorted local nationalist currents during the Indian mutiny, the Anglo-Afghan wars, the Persian Shi'ite resistance against the Shah and the emergence of Turkish nationalism. Mishra also considers the impact of Liang Qichao (1873–1929), a Chinese intellectual who forged a modern conception of Chinese and Asian nationalism against Western imperial intrusions. Jamal's and Qichao's ideas influenced later and more prominent leaders such as Ho Chi Minh, Mao Tze Dong and Mohandas Ghandhi. For Mishra, the contributions of these earlier figures pointed back to "a time when the West merely denoted a geographic region and other peoples unselfconsciously assumed a universal order centred in *their* values" (Mishra, 2013, p. 9). Mishra's reconstructive critique of epochal time accords with the remaking of Asia in the late twentieth and early twenty-first centuries.

For my purposes, Mishra's account reveals that the epochal, temporal and allochronistic presumptions of European civilization were always in conflict with worldviews which had originated independently of "the West". The multiple epochalities and temporalities of Arabic, Islamic, Ottoman, Indian, Persian, Chinese and Japanese cultural traditions could be drawn upon to counter the encroachment of Western imperialism.

Crisis

Time-related conflicts may generate a crisis of hegemony. The conception of crisis referred to here derives from Roy Bhaskar's notion of internal contradiction. This occurs when a system rule or course of action generates an opposing system rule or course of action (Bhaskar, 1991, p. 109). These countervailing tendencies may proceed to a point of crisis such that system reproducibility is no longer guaranteed. Ruling attempts to remedy the crisis at hand may serve to reproduce the preconditions of the original crisis. When crisis tendencies publicly re-emerge, top-down palliative measures may be reintroduced. A cycle of crisis recurrence will then have been established. Alternatively, popular awareness of the system's uncertain future may disrupt the cycle and elicit opportunities for collective action which open up the prospect of the new. This eventuality, I will suggest, points to the potential rupture of hegemonic rule and the materializations of time upon which it depends. For the moment, it is the former scenario of crisis and crisis recurrence which will be examined.

Peter Osborne provides us with an important Marxian excursus on the time-related materializations of crisis (Osborne, 2010, pp. 19–26). He identifies in Marx's writings a general-historical or epochal perspective whereby a crisis of the capitalist system as a whole is a condition of transition to a new mode of production (just as the crisis of feudalism as a whole precipitated the formation of capitalism). Osborne also points to a more restricted political-economic theory of crisis as a periodic cyclical phenomenon, which may also reflect structural distortions of capital accumulation. Thus, Part III, volume three of *Capital*, reconstructed by Engels, posits "the Law of Tendency of the Rate of Profit to Fall". And, certain passages from the Grundrisse and Theories of Surplus Value describe overproduction as a central and regular driver of capitalist crisis. These crisis patterns can, arguably, be tempered by counteracting economic tendencies (subject to their political management). After the 1930s depression, for example, the interrelated crisis tendencies of financial volatility, chronic unemployment and underconsumption were relieved by Keynesian strategies of public credit creation and counter-cyclical demand management.

In general, capitalist crises bring to the surface intra-economic structural contradictions. As I will detail in subsequent chapters, these contradictions can be interpreted as conflicts of time reckoning and temporal orientation between capitalists, between capitalists and workers, and between different components of the capitalist state. These contradictions and time conflicts must be ameliorated if the general conditions of capital accumulation are to be restored. However, the restoration of these conditions may simply reconstruct the contradictions and time conflicts which initially generated the crisis. In this respect, Osborne notes that the temporality of crisis "tends to instil less a sense of possibility than of *repetition*" (Osborne, 2010, p. 24, emphasis in original). Time-related dimensions of crisis can also unfold on a global scale. Thus, the worldwide decolonization of Western European empires after 1945 foregrounded the epochality of anti-colonial independence struggles. For Stuart Hall, each of these struggles, across Africa, South Asia and South East Asia, was an attempt "to recover an alternative set of cultural origins not contaminated by the colonizing experience" (Hall, 1996b, p. 246). This effectively delegitimized Western demarcations of epochal progress associated with imperial hegemonization of the non-Western world after Columbus's voyage to the Americas. Decolonization, however, was a culturally differentiated, historically uneven process whose general outcome was not preordained. Nineteenth-century anti-colonial nationalists, for example, could not have envisaged the trans-continental, inter-imperial wars of 1914–1918 and 1939–1945 or the geo-political impact of the 1917 Bolshevik Revolution. For our purposes, one must also remember that each Western European colonial system experienced different permeations of a time-related crisis which was exacerbated by official attempts to ameliorate it.

Historian Mark Thomas's depiction of French colonial rule in Africa during the early twentieth century makes this clear.

> This was the attempt to reconcile the universalist values of French republicanism with the racial hierarchy and social inequalities embedded in the colonial order. The belief that the French empire was more than a racially ordered hierarchy enabled interwar imperialists to argue that colonialism could be a progressive force, capable of nurturing indigenous civil society and supporting individual advancement while maintaining overall French supremacy.
>
> (Thomas, 2008, pp. 145–6)

If one equates "overall French supremacy" with the denial of coevalness to colonized others and "nurturing indigenous civil society" with the emergent recognition of that coevalness, the terms of the crisis become evident. Attempts at colonial reform will legitimize the anti-colonial apprehension of epochal time and futurity. But, putting limits on such reforms will, inevitably, undermine their purpose and rationale. Thomas notes that in France, during the 1920s and 1930s, liberal opinion among academics, the school teachers' union, early feminists and pacifist organizations "occasionally criticized acts of colonial oppression but stopped short of condemning the empire itself" (Thomas, 2008, p. 128). Across Francophone black Africa, colonial governments promoted "associationalism", an attempt to combine the French administrative system with traditional tribal hierarchies. Yet, educated, urban, young Africans acculturated to French values were excluded from colonial-local governments and the public service. They directly opposed the associationist project and fostered radical anti-colonial consciousness in each colony. Meanwhile, within Paris, black African and Antillean students, writers and political activists advanced the distinctiveness of African culture through the concept of "negritude".

In French Indo-China, as well, associationist colonial reforms alienated local French-educated, politically active administrators. After 1945, they vehemently rejected their privileged yet subordinate role within the French colonial system and advanced the cause of decolonization regionally and internationally. Crucially, their sense of a future-in-the-making could not be accommodated within the futurity of associationist colonial rule or the exigencies of crisis management (once colonial regimes themselves became existentially threatened, as in Vietnam).

The empty prospects of late-colonial reform meant that imperial elites could not orchestrate a timetable of withdrawal from their long-held territories. Ultimately, it was the proponents of decolonization in each region who shaped the chronology of events. Historian L.G. Butler outlines how Britain's 1947 decision to withdraw from India was forced by the growing strength of Jinnah's Muslim League and Ghandi's Congress (Butler, 2008, pp. 50–3). They had blocked Britain's 1946 proposal for a three-tier federation to preserve Indian unity. Local Hindu support for the Congress and the Muslim League's failure to secure a half share of seats in Nehru's new interim government prompted Jinnah to launch a "Direct Action" campaign. The resulting inter-community violence compelled Viceroy Lord Mountbatten to accept the partition of India and Pakistan and to rapidly withdraw. This course of events was officially portrayed as "pre-planned and deliberate and not the chaotic prelude to wider imperial collapse" (Butler, 2008, p. 51). In an imperial context, Britain's failure to implement a timetabled transfer of power can be understood as a crisis of time reckoning which highlighted deeper crises of epochality, temporality and coevalness.

Rupture

Thus far, we have seen how epistemes of time can materialize, objectively and subjectively, as hegemony, conflict and crisis. Before considering the distinctiveness of rupture in this context, the word itself requires broader examination. Standard dictionaries define rupture spatially, as a break or breach of a body, structure or some other harmonious whole. Alternatively, though, ruptures can be seen as singular temporalities of action which break open prevailing orthodoxies of epochal time and objective measurable time. Such experiences may be political, cultural, intellectual, aesthetic or a combination thereof. This invokes the opposition in Greek philosophy between *Chronos* (the durational, irreversible force of time) and *Cairos* (the youngest son of Zeus and the personification of opportunity and the right time for action).

From a contemporary standpoint, Kia Lindroos describes the Cairological approach as that which "emphasizes breaks, ruptures, non-synchronized moments and multiple temporal dimensions" (Lindroos, 1998, p. 12). Cairotic time may be constitutive of war, imperialism, revolution or decolonization. In the former category, Francois Hartog argues that within Europe, World War One disrupted a modern, progressivist regime of historicity whereby the prospective future framed understandings of the past. This regime reflected bourgeois receptions of the American and French Revolutions and the unfolding momentum of industrialization and economic development. The Great War, however, precipitated "many profound questionings of the relation of man to time" (Hartog, 2013, p. 128). In 1919 France, Paul Valery stated that "the abyss of history" made it as difficult to "reconstitute" the past as to "construct" the future (Valery cited in Hartog, p. 128). From 1920, sociologist Maurice Halbwachs rejected the credence of a single universal time in favour of the testimonies and reconstructions of collective memory. The sociology of memory thus became the wellspring of history (p. 129). Walter Benjamin's critique of homogeneous linear time, the Dadaist art movement's exposure of bourgeois culture's absurdity, and surrealist explorations of temporality and the unconscious all reflect the Cairotic effects of the Great War upon teleological conceptions of time. For German historian Lucian Holscher, "acceptance of the idea that historical time is discontinuous was a necessary consequence of the historical experiences that changed the European understanding of history before and after the First World War" (Holscher, 2013, p. 138). This observation also has relevance for the repercussions of World War Two and all other major human conflagrations.

Within the category of imperialism, one can argue that Christopher Columbus' discovery of the so-called "new world" was a ruptural, world-historical event. It signalled an entire, internally differentiated process of expansion, exploration, conquest and colonization of non-Western cultures. Their cosmologies of time consciousness were ruptured and marginalized by a European time-hegemony of epochality, time reckoning, temporality and allochronism. The intra- and inter-epistemic components of this time-hegemony were themselves evolving according to the "before–after" binary of feudalism and secularization. The imposition of this binary upon indigenous peoples precluded reflection upon how those cultures would have developed otherwise. What happened instead has been succinctly described by cultural theorist Stuart Hall. He remarks that from "the closing decades of the fifteenth century forwards" previously disparate non-Western cultures have been "rupturally convened *in relation to,* and must mark their 'difference' in terms of, the overdetermining effects of Eurocentric temporalities, systems of representation and power" (Hall, 1996b, p. 251, emphasis in original).

Let us now consider rupture in relation to revolution. When the moment of crisis for a hegemonic system is accompanied, and then succeeded by, collective expressions of the new, a rupture of time materializes. The dynamics of this process can be described generically with reference to our epistemes of time.

Temporally speaking, the crisis and rupture of a hegemonic system generates a "now" time which appears and feels fundamentally different from what has gone before. This new consciousness of the present also contains the sense that a new future is in the making and that its substantive content will materialize as revolutionary events unfold. The ruptural moment also de-reifies those widely held conceptions of the past which had legitimized the hegemonic system. Simultaneously, oppositional forces carry and advance a conception of the past which highlights previous instances of future-oriented struggles against the then-established order. When the established order falls, these remembered instances of past futures culminate in the "now" time of the revolution. Ruptures of temporal consciousness also rupture the taken-for-grantedness of epochal time. Overturning a hegemonic system demarcates the end of its epoch and the beginnings of a new history (which is now in the making). Transformational ruptures of temporality and epochality impact upon the reckoning of time. The omnipresence of the revolutionary event constitutes a Cairotic break in the everyday experience of chronological time. With the popular accession to power, revolutionary calendars date the remembrances of rebellion, resistance and related accomplishments for future commemoration. Our fourth episteme of time is also pertinent here. To the extent that hegemonic elites deny coevalness with subordinated others, ruptural transformations bring repressed memories, histories and temporalities to light. The coeval recognition of formerly excluded others is thus forced into public existence.

The preceding template is flexible rather than absolute. In practice, transformative ruptures of time may differ in scale and across the various epistemes. Erik Olin Wright's analysis of the transition from capitalism to socialism, for example, distinguishes between "the possibility of system-wide ruptural strategies" and "more limited forms of rupture in particular institutional settings" (Wright, 2010, p. 308). The latter scenario, which Wright equates with "the goal of democratic egalitarian socialism", may radically deepen the democratic capacity of the state without transforming the form of the state itself. In these circumstances, Cairotic experiences of the new may entail a major expansion of official democratic traditions rather than an irrevocable break with them. Whether or not this constitutes a rupture of hegemonic time can be evaluated and disputed according to given cases. The Marxian case for "system-wide ruptural strategies" is articulated in the writings of Antonio Negri. In *Kairos, Alma Venus, Multitudes*, he contends that "the capitalist process has subsumed the world, turning it into a dead creature and that, on the contrary, living labour is Kairos. The restless creator of the *to-come*" (Negri, 2003, p. 176, emphasis in original). For "living labour" the time "to come" is not only forged out of proletarian workplace struggles; it incorporates the linguistic and bio-political consciousness of multitudinous others. Consequently, Antonio Negri, with Michael Hardt, gave these formulations a global figuration, that of multitude versus Empire (2001). Their analysis presupposed a system-wide transformative rupture of time. However, as later chapters will argue, the epistemic categories involved are not specified.

Revolutionary ruptures of time may appear more totalistic in practice than in retrospect. Such differences of interpretation point to the unending tension between continuity and discontinuity as descriptors of historical change. The French Revolutionary Calendar of 24 November 1793 illustrates the point. Upon inception, the existing systems of dating, time reckoning and time units were obliterated. The traditional Christian era was replaced by the Republican era.

A new annual cycle was inaugurated, beginning on 22 September rather than 1 January. Under the new calendar, each month consisted of 30 days; 10-day *decades* replaced seven-day weeks, and days were divided into 10 hours and decimal minutes. The purpose of these changes, argues Eviatar Zerubavel, was to impose a "new rhythm of collective life" and "to bring about a *total symbolic transformation* of the standard temporal reference framework". Consequently, "the beginning of the new Republican Era marked the *total discontinuity* between past and present" (Zerubavel, 1977, pp. 870–1, emphasis in original).

On 1 January 1806, Napoleon restored the Gregorian calendar. The revolutionaries had under-estimated the social resilience of traditional dating and time-reckoning frameworks. Furthermore, the two calendars could not be synchronized internationally; France's 10-day *decade* was incompatible with the seven-day week of neighbouring countries. According to Zerubavel, the revolutionaries would have achieved more "had they incorporated parts of the old socio-temporal order into the new one". The resulting "symbolic continuity between the two . . . would probably have contributed to further the legitimacy of the new system" (p. 875). From all revolutionary perspectives, discontinuities of time are difficult to specify, let alone interpret. French scholar Sanja Perovic notes that 14 July 1799 had been popularly hailed as Year 1 of Liberty. Yet, the fall of the Bastille and the abolition of feudal privileges occurred later, on 4 August 1789. The overthrow of the king occurred in Year 1 of Equality, 10 August 1792. But the "new time" of the Revolutionary Calendar did not begin until the following month of September, and its actual institution was delayed until 1793. The problem of ascertaining the relative time-salience of revolutionary events reveals an inherent gap between "event time and chronological time" (Perovic, 2013, pp. 95–6).

Twentieth-century decolonization exemplifies both a transformative rupture of time and the associated tensions between discontinuity and continuity, event time and chronological time. As Neil Lazarus observes, the worldwide mobilizations of popular will connected with anti-colonial and national liberation campaigns after World War Two "were (and remain) of huge significance" (Lazarus, 2011, p. 3). The irreversible collapse of old European empires across Asia and Africa generated a sense of "now time" which precipitated plans for a more favourable future and a new history-in-the-making. Lazarus encapsulates the scale of this transformative rupture and the critical events involved:

> The Vietnamese army's defeat of the French at Dien Bien Phu in 1954; the staging of the Bandung conference itself in 1955; Nasser's stand on Suez in 1956; the acquisition of independence in Ghana in 1957 – these were all events that fired the imaginations of millions of people worldwide, in the global "North" as well as the "South"; placing on the world stage, perhaps for the first time, the principles and resolute figure of "Third World" self-determination.
>
> (Lazarus, 2011, p. 4)

Subsequently, imperial political geography and the Western cultural imprint remained partially intact. And, economic "self-determination" was compromised by the neo-colonial intrusions of Western banks, corporations and Western-controlled development agencies, namely, the World Bank and the International Monetary Fund (IMF). It is nonetheless important to acknowledge that the crisis of Western imperialism and its inbuilt time-hegemony was ruptured by the forces of decolonization and self-determination. To this end, the key events that Lazarus identifies were of world-historical significance, their disparate chronological positionings notwithstanding.

Globalization, global modernity, global capitalism

It is my contention that the cross-relations between epistemes of time (epochality, time reckoning, temporality, coevalness/allochronism) and materializations of time (hegemony, conflict, crisis, rupture) present a new way of understanding global-social totalities, especially that of global capitalism. Before advancing the latter case, however, the nomenclature of the global as such must be considered and a standpoint established.

Let us begin with a preliminary description of globalization. According to one standard reference, the word refers to processes of change, in time and space, which interconnect human activity worldwide (Held et al., 1999). Four such processes are identified. *Extensity* refers to the global reach of regional events, decisions and activities. *Density* concerns the magnitude and complexity of global interconnectedness. Occasional travel between extremely 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 transport and communication. One can also measure the *impact* of distant events, decisions or activities upon local circumstances. Examples of high impact include colonization, world war and world depression (pp. 16–21). On this basis, one could argue either that globalization is synonymous with the entire history of human migration and trade or that globalization has co-evolved with a world-spanning capitalist economic system since about 1500 (when human activities associated with Western imperialism connected the Americas to Africa and Eurasia). One other position, proposed by Frederic Jameson and others, is that we have recently entered a new epoch of capitalism, of which globalization is an intrinsic feature (Jameson, 2010, p. 435). The following pages will develop and refine this latter position from a time-related perspective.

My own perspective on globalization builds upon the insights of Alf Dirlik. He identifies a distinctive contemporary form of globalization called "global modernity". This contrasts with an older, Eurocentric modernity associated with Western imperialism, colonialism and the presumption of civilizational progress. Global modernity is marked by a plurality of modernities arising from internally differentiated cultural histories (e.g. Confucian, Arabic, Islamic, African, Japanese and Western). The disappearance of First, Second and Third World spatialities after 1989 enabled various modernities to intermingle across different geographic scales. Such developments also led to the invigoration of previously suppressed religious and ethnic identities (Dirlik, 2003, 2004, 2007). Dirlik's analysis accords with my schema of time-centred epistemes. Thus, each non-Western trajectory of modernity is comprised of socio-cultural temporalities which have been forged in opposition to Eurocentric time-hegemonies. With decolonization, the plural intermingling of cultural modernities also signalled the efflorescence of coeval communication and the erasure of allochronism as a taken-for-granted worldview. Polymorphic expressions of global modernity were enabled by the mass-mediated transformation of print, speech, data and audiovisual materials, and the exponential growth of internet infrastructures. Interpersonal, international, transnational, global-local and trans-local networks of communication were underscored by real-time principles of time reckoning.

From these general, time-centred observations, the epochal features of global modernity can be specified. The first of these, post-colonial coevalness, is aptly described, in the British context, by Catherine Hall:

> The post-colonial movement in Britain is the moment after Empire, when British identities have to be imagined anew when "we" could

> come to terms with the myth of homogeneity, when "we" could recognize the inequalities associated with the different raced and gendered ways of belonging to the British nation-state, when "we" could build a different kind of future which was inclusive rather than exclusive, when whiteness would not become a condition of belonging.
>
> (Hall, 1996a, p. 76)

Such sentiments have been articulated in other contexts: by indigenous peoples in white settler societies (Australia, New Zealand, Canada, South Africa), by Caribbean descendants of African slaves, indentured South Asian labourers and colonial elites, and through the contemporary intermingling of diasporic identities from Africa, the Middle East, China and South East Asia. From an array of geographic locations, post-colonial theories and literatures reshaped understandings of world history and advanced the discourses of globalization. These manifestations of post-colonial coevalness intermesh with a second feature of global modernity: multi-temporal contemporaneity. This is a form of cosmopolitanism which supersedes earlier versions of the concept associated with a world polity or universalistic culture. As Gerard Delanty explains,

> The global is not outside the social world but is inside it in numerous ways. The aspect of this, decisive for cosmopolitanism, that needs to be emphasized is the notion of the global public. By this is not meant a specific public but the global context in which communication is filtered. The global public is the always ever-present sphere of discourse that contextualizes political communication and public discourse today.
>
> (Delanty, 2006, p. 36)

Within this "ever-present sphere" of global cosmopolitanism, co-extensive transnational temporalities of communication continuously unfold. This brings us to the third feature of global modernity: the extensity and density of real-time electronic networks. They facilitate forms of consciousness which span across disparate localities and create complex cross-border flows of fashion, music, dress and lifestyle. Such networks also underpin everyday socio-economic connections within and between diasporic communities. Their fluidity and contingency have been encapsulated by French social theorist Jean Francois Bayart. He notes that from the 1990s in Marseilles, Moroccan small traders worked "hand-in-hand with Turks from Brussels and Frankfurt, Pakistanis and Indians from London, Senegalese, Italians, Catalan and Andalusian gypsies and Tunisians, who open up new doors to them that enable them to make other connections with Libyans, Lebanese or sub-Saharans" (Bayart, 2007, pp. 120–1).

These epochal features of global modernity can also be read, alternatively, as indicators of an emergent global capitalism. What I call post-colonial coevalness is an instructive case in point and deserves special consideration. Initially, the concept of the post-colonial was expressive of a particular political-economic configuration of capitalism. Once this configuration changed, the post-colonial lost its political incisiveness and epochal resonance. New configurations of capitalism created structures of social exclusion, which were co-existent with global modernity. Initially, though, after decolonization, in the Cold War context, post-colonial regimes and populations imagined themselves as part of a self-determining "Third World". As Neil Lazarus explains, the term itself "was used banner-like to announce a consolidated platform of resistance to imperialism – one term among many in a distinctive lexicon of keywords: liberation, revolution, decolonization, non-alignment, Pan-Arabism, Pan-Africanism, African socialism and so on" (Lazarus, 2011, pp. 6–7). The accomplishments of post-colonial Third World regimes – literacy and adult education programmes, the construction of hospitals, the building of roads, sewage facilities, irrigation schemes, land redistribution, the extension of voting rights and the establishment of constitutions reflected favourable economic conditions. In core capitalist countries, class compromise between capital and labour enabled the establishment of Keynesian demand management, full employment and the welfare state. Between the early 1950s and early 1970s, world trade and industrial growth increased exponentially (pp. 2–4). Disparities between rich and poor regions of the world were partly alleviated by Western lending policies whereby Third World countries obtained bank loans for state-led, import-substituting strategies of industrial and agricultural development (p. 9). During the 1970s, however, Western Keynesianism become afflicted by inflation, declining growth and increasing unemployment. Neoliberal policy prescriptions thereby gained credence within the UK, the US, Western Europe and transnational lending institutions such as the IMF and the World Bank. Consequently, the Third World developmental state was assailed by Structural Adjustment Programmes (SAPs). The standard package of currency devaluation, privatization, tariff reduction, public sector contraction, removal of food subsidies and user-pays health and education systematically favoured foreign corporations and national elites at the expense of local populations. In Africa, for example, SAPs accelerated capital flight while collapsing home market agriculture and local manufacturing. This, in turn, precipitated rapid increases in national unemployment, rural–urban migration, urban growth and urban slums (Davis, 2006, pp. 151–73).

Amidst these material developments, Lazarus argues, the "post-colonial" ceased to be a period concept and became a contested signifier throughout Western and non-Western intellectual cultures (Lazarus, 2011, pp. 11–14). Later manifestations of post-colonial intercultural coevalness can be seen as intrinsic to a reconfiguration of capitalism which must be acknowledged. Thus, Catherine Hall's depiction of the post-imperial moment in Britain requires a complementary account of how the neoliberal restructuring of British capitalism affected immigrant communities. One must also consider how such communities were affected by SAPs in their countries of origin (especially in Africa and the Caribbean). Similarly, in white settler capitalist societies, articulations of indigenous nationalism intermeshed with the polarizing impact of neoliberal policy regimes (especially in New Zealand, Australia and Canada). As worldwide configurations of capitalism structurally excluded the poor, new denials of coevalness set in. Later chapters will flesh out this general insight.

Our second manifestation of global modernity, an ever-present global cosmopolitanism based upon multicultural and multi-temporal perspectives, can be seen as a privileged worldview. Within global capitalism, internationally mobile elites in business, politics and the culture industries appropriate cosmopolitan values for themselves while consigning ordinary people to the margins of territorial locality. Global cosmopolitanism thus becomes a marker of class privilege, rather than public inclusion, and banal consumerism, rather than multicultural understanding.

Although the cosmopolitan motifs of transnational communication and transnationality exemplify global modernity, they are also fundamental to global capitalism. As Chapter 3 will argue, the world's wealthiest individuals belong to a transnational ruling class with a cosmopolitan outlook, and the largest corporations are transnationally organized and interlinked across different cultures. Similarly, I will point out that our third feature of global modernity, real-time electronic networks, are also double-edged; they facilitate transnational and trans-local forums of coeval communication just as they globalize capitalist systems of management, financial exchange, production and distribution.

Materializations of Time

		Hegemony	Conflict	Crisis	Rupture
Epistemes of Time	Epochality				
	Time reckoning				
	Temporality				
	Coevalness/ allochronism				

Figure 2.1 Epistemes and materializations of time in global context

The preceding discussion of time and globality, schematized in Figure 2.1, brings us to the central research question of this book: How have the time-epistemic properties of global capitalism materialized in terms of hegemony, conflicts, crisis tendencies and the susceptibility to rupture from oppositional forces?

Part II

Time, Hegemony and Global Capitalism

3
Epochal Shift

This part explains how the various epistemes of time together constituted the hegemony of global capitalism. The purpose of this chapter is to outline the epochal features of global capitalism and to consider different interpretations of the general epochal shift that has occurred. In doing so, I will advance the view that there are some continuities as well as sharp discontinuities between earlier and later forms of capitalism. Chapter 4 will outline how global mediations of time effected and reproduced the hegemony of global capitalism by obfuscating its historicity. This discussion in both chapters centres upon the emergence of global capitalism from about 1980 to 2006; subsequent manifestations of the 2007–2008 financial crisis and its aftermath will be examined in Parts IV and V.

Antecedents

One cannot appreciate the epochality of global capitalism without a sense of its historical antecedents. This lesson can be drawn from Dwayne Winseck and Robert Pikes' account of global communications expansion between 1860 and 1930 (Winseck and Pike, 2007). The first four decades of this period witnessed the consolidation and cartelization of telegraph industries in Britain, Europe and North America, the inauguration of long-distance cable systems resulting from cooperation between European and Anglo-American commercial interests, and the growing interaction between cable promoters and speculators in developing countries of the Middle and Far East (Winseck and Pike, 2007, pp. 16–17). In Western capitalist countries and the largest urban regions of the developing world, railway and telegraph networks proliferated. These networks interlinked with steamship routes to interconnect major cities such as London, Paris, New York, Berlin, Vienna, Istanbul, Cairo, Bombay, Peking, Singapore, Tokyo, Mexico City, Buenos Aires and Rio de Janeiro. At the same time, an international system of news gathering and dissemination became coordinated by commercial news agencies (e.g. Reuters, Agence France Press, Havas, Associated Press). From 1900, global communications expansion intermeshed with the emergent construction of electricity grids, lighting systems and, eventually, wireless networks. Within this general overview, one must also include the establishment and gradual implementation of world time zones, meridians and the international dateline. Without this infrastructure of time reckoning, it would have been impossible to internationally synchronize land and oceanic transport schedules or news flows.

All of these developments combine to support Winseck and Pike's judgment that "there was an integrated world economy for the first time between 1870 and 1914, in particular among the leading commercial countries" (p. 43). This economic integration was, of course, coterminous with the economic imperialism of West European nations generally, and Great Britain in particular. In the former case, Winseck and Pike point out that total foreign investment by Britain, France and Germany grew dramatically from US$10.7 billion in 1885 to over US$36 billion by 1910. Britain's contribution to this trend was the most significant by far; outward foreign investment went from approximately US$6.5 billion in 1885 to US$19 billion in 1914 (Winseck and Pike, 2007, p. 44; see also O'Rourke and Williamson, 1999, p. 209). Mike Davis details a "late Victorian world economy" centred around financial supremacy and a favourable balance of trade framework which disguised Britain's industrial decline (relative to Germany and the US) (Davis, 2001, p. 296). Huge annual surpluses in transactions with India and China allowed Britain to sustain major deficits with the US, Germany and the white settler Dominions. These deficits were part of a wider system of exploitation whereby India and China were effectively deindustrialized. Davis writes that "India was force-marched into the world market" by landholding, revenue and irrigation policies which "compelled farmers to produce for foreign consumption at the price of their own food security" (p. 299). Agricultural production included opium production in Bengal and new export monocultures of indigo, cotton, wheat and rice. Between 1875 and 1900, as India experienced famines, "annual grain exports increased from three million to ten million tons" (p. 299). India's permanent trade and current account imbalances with Britain were financed by trade surpluses of opium, rice and cotton with China and other Asian countries. As China's deficits grew, Britain forced the Qing regime to lower tariffs and accept increasing volumes of British exports at the expense of local producers. Furthermore, Chinese tea and silk exports were undercut in the world market by Indian and Japanese production, respectively (p. 301). Davis' political-economic analysis fits with an adjacent corpus of scholarship on Western cultural imperialism and Orientalism. The prosperity of Britain and other imperial powers depended upon the dispossession, exploitation and marginalization of non-Western cultures. Yet, one must acknowledge that the early-modern communications, transport and time-reckoning infrastructures that facilitated political-economic and cultural imperialism were also the preconditions for the later emergence of global economic arrangements.

The eclipse of globalism, rather than its prospective development, would have been more apparent to world leaders or scholars of world history, say in 1940. Memories of a catastrophic inter-imperial war from 1914 to 1918 and the likelihood of another such conflict would have been omnipresent. In political-economic terms, the world realities of depression, economic protectionism and authoritarian/totalitarian rule occluded the global potentialities of world communication infrastructures. On these matters, Winseck and Pike remark that "rapid communications and voluminous flows of information simultaneously furthered interdependence while diffusing economic instability" (pp. 339–40). Here, they note the incidence of global financial crises in 1873, 1890 and 1929, as well as their political-economic ramifications (pp. 44–5, 339–40). Winseck and Pike surmise that there was "a backlash against globalism beginning in 1914 which was somewhat reversed in the early 1920s but which ultimately led to globalism's collapse altogether around 1930" (p. 340). From a retrospective vantage point, in 2006, they claim that "we are in the midst of a second phase of globalism" and foreground the continuities between the two phases (p. 344). My own argument is markedly different. The first phase of globalism should be seen as the antecedent for a global capitalism whose inner time conflicts require us to reconceptualize cyclic understandings of prosperity and crisis, autarky and openness. The epochal distinctiveness of global capitalism derives from a concatenation of world-historical developments, which I will now consider.

Transnational corporations

Political economist William Robinson, writing in 2004, argued that world economic activity had become dominated by transnational corporations (firms with headquarters in more than three countries). He drew from various World Investment Reports published by the United Nations Conference on Trade and Development (UNCTAD) and from privately commissioned financial reports to outline the growth of such corporations (7,000 in 1970, 60,000 in 2000) alongside the growth in cross-border mergers/acquisitions (14 in 1980, 9,655 in 1999) (Robinson, 2004, pp. 55, 58). The latter trend, which also post-dates Robinson's initial analysis, suggests that for the largest corporations, the distinction between home and host country has weakened. Between 2000 and 2007, inclusive cross-border merger and acquisition deals in excess of US$1 billion totalled 1,335 (compared with 479 from 1992 to 1999) (UNCTAD, 2008, pp. 5–6). Each World Investment Report indexes the overall transnationality of a corporation against a composite of three ratios; foreign assets to total assets, foreign sales to total sales, and foreign employment to total employment. From 1993 to 2006, average transnationality values for the top 100 transnational corporations rose by 40 per cent (p. 29).

In all areas of capitalism, cross-border mergers and acquisitions have affected horizontal and vertical integration, global economies of scale and strategic alliances (in the areas of financial syndications, capital investment, research and development, distribution and marketing). By 2000, the 500 largest transnational corporations controlled approximately 80 per cent of the world's foreign investment, 30 per cent of global output and 70 per cent of world trade (Buckman, 2004). Subsequently, transnational corporate investment was drawn to the urban-industrial growth poles of South and East Asia. The emergence of China as a world epicentre of low-cost manufacturing at the expense of large Western economies provided new profit opportunities for transnational corporations. Most notably, Walmart held down prices for US consumers by expanding its procurement from China-based factories. Between 1996 and 2003, the imported component of Walmart's merchandise in the US increased from 6 to 60 per cent. Eventually, 80 per cent of Walmart's supplier factories were China-based (Palat, 2009).

Such developments represent a fundamental shift in the organization of capitalism. The initial integration of the world economy between 1860 and 1930 has advanced in scale and density. During the 1980s, and after the collapse of the Soviet Union, transnational rather than international capitalist networks incorporated or affected vast new populations. National circuits of capital became functionally integrated into new global circuits of capital accumulation. In this context, Robinson states that "global capitalism is not a collection of 'national' economies, if by that is meant autonomous entities related through external exchanges with other such entities" (Robinson, 2004, p. 16). There has been a "progressive dismantling of autonomous or auto centric national production systems and their reactivation as constituent elements of an integral world production system" (p. 16). One can add here that the construction of a "world production system" was complemented by the globalization of finance and consumption.

Capitalism, communication and convergence

The electronic networking of production, finance and consumption creates a triadic nexus of transnational capitalism, information-communication technologies (ICTs) and mass media organizations. To understand this nexus, one must first appreciate how ICTs became a new and substantial sector of global capital accumulation. In 2001, historian Jerry Harris identified several emergent subsectors. Established hardware corporations such as Cisco, Hewlett Packard, Sun Microsystems, and Compaq produced chips, boards, boxes, servers, routers and other infrastructural components. The next wave of corporations wrote software applications, developed operational systems and installed network architectures. Intuit, Microsoft, Oracle and Novell quickly became the dominant players. Subsequently, internet and dot.com companies attracted speculative and longer-term investment. Resilient innovators such as AOL, Amazon, eBay, Google and Yahoo developed expanding services and popular profiles. Meanwhile, landline-based telecommunication corporations such as AT&T, Cable and Wireless, Deutsche Telecom and Nippon T&T developed or purchased internet services, cable and broadband connections, satellite hook-ups and wireless communication services. Industrially based electronic corporations invested in the manufacture of semi-conductors, fibre optics, software, wireless phones and other ICT-related products. Such corporations included Motorola, Nokia, Samsung and Toshiba (Harris, 2001, pp. 36–7). By 2003, 18 of the top 100 non-financial corporations came from the ICT sector (World Investment Report, 2005, pp. 267–9). Between 1995 and 2000, the global telecom equipment market alone grew from US$62.5 billion to US$141.7 billion. Similarly, worldwide revenues from various telecom service markets increased from US$300 billion in 1990 to US$925 billion in 2000 (Yin, 2005, pp. 291–2). Over the same period, the telecommunications industry ranked second after commercial banking in the global mergers and acquisitions market (Yin, 2005, p. 295). In the US, the proliferation of telecom infrastructures and internet applications encouraged aggressive lending from banks and speculative investment from equity traders and fund managers. Throughout the ICT sector, new stock offerings drove up share prices and increased trading volumes. Exaggerated projections of increased demand for network capacity attracted more lending and speculation until share prices fell. The subsequent collapse and/or contraction of debt-laden corporations led to further transnationalization of the ICT sector. Critical communications analyst Dan Schiller has outlined this process. During 2004, Telefonica from Spain purchased South and Central America's wireless networks from Bell South. Telenet from Mexico acquired wireline networks from MCI in Brazil and AT&T in Argentina, Brazil, Chile, Columbia and Peru. China Netcom gained a major regional affiliate from the bankrupt Global Crossing, and a subsidiary of India's Tata group purchased a transnational cable network from Tyco International. Schiller described these appropriations of telecom properties by transnationals from the global South as an "historic sea change" (Schiller, 2007, p. 99).

Within global capitalism, the emergent ICT sector engaged with a media-entertainment system transformed by convergences of technology, content and cultural consumption. Advances in internet applications, digital television and mobile telephony blurred traditional separations between broadcasting, computing, telecommunications and consumer electronics. Such is evident in the evolving structures and strategies of corporate ownership. From about 1980, media conglomerates with lucrative holdings across key media markets took over standalone businesses. Major players such as Time Warner, Bertelsmann, Viacom, Disney, NBCUniversal and News Corporation subsequently acquired worldwide cross-media portfolios. During the 1990s, a broader picture took shape. A global oligopoly of media-entertainment corporations effectively established a dominating presence across core areas of cultural production and leisure activity (film, television, recorded music, print media, hotels, resorts, theme parks). Each corporation sought to control the production and distribution of cultural content through vertical integration. In film and television, for example, News Corporation conjoined Twentieth Century Fox with the Fox Network (1985), Disney acquired the ABC network (1995), CBS merged with Viacom (1999) and Universal appropriated NBC (2004) (Winseck, 2008). Media-entertainment corporations also integrated new media acquisitions with established holdings. Thus, Viacom bought NeoPets, a major children's website in the US, for US$160 million in 2004. Similarly, in 2005, News Corporation purchased the social networking site

MySpace for US$500 million, a gaming and entertainment site IGN.com for US$620 million and America's largest sports site, Scout Media, for US$60 million (Winseck, 2008).

Concurrently, ICT corporations bought into the media-entertainment sector. In 1988–1989, consumer electronics company Sony purchased CBS Records for US$2 billion and Columbia Pictures Entertainment for US$3.4 billion. Further acquisitions over the next 15 years positioned Sony as a major media-entertainment conglomerate. In 1998, telecom corporate AT&T acquired cable conglomerate TCI along with Liberty Media Group for US$148 billion. Two years later, internet service provider AOL merged with Time Warner to produce a combined valuation of US$125 billion (Hesmondhalgh, 2007, pp. 160–2). From the late 1990s, Microsoft's growing involvement in digital media and electronic games gave it a top tier ranking as a media-entertainment corporate. On a larger scale, General Electric assumed a triple profile in diversified industrial products, ICTs and media-entertainment (Flew, 2007, p. 71). In 2006, Google, with over 50 per cent of the search engine market, purchased video-sharing site YouTube for US$1.65 billion. This transaction was preceded by technology, traffic and advertising revenue arrangements with NBCUniversal, Time Warner, Viacom and News Corporation. Winseck notes that Google has become a "powerful nexus in the unfolding relationship between the 'old' and 'new' media" (Winseck, 2008, pp. 42–3).

As ICT-media corporations became transnational profit generators, ICT-media infrastructures precipitated real-time networking within and between transnational corporations. The first and most rapid phase of this process unfolded in the 1990s. A combination of new and incumbent telecommunication operators, cable companies and Microsoft were, directly or indirectly, involved in the laying of fibre optic cables. They linked Europe with North America and the US with Japan, China, Hong Kong and Singapore. Local fibre optic networks were concentrated in 150–200 cities worldwide for corporate, government and other professional users (in residential suburbs, business districts and specific buildings) (Winseck, 2002, pp. 399–400).

With these and other infrastructural developments, corporates could allow their affiliates greater autonomy and encourage channels of two-way communication (i.e. via email, e-commerce, intranets, video conferencing, mobile telephony and inter-enterprise computer networking). Such arrangements underpinned the management of complex, technologically innovative production chains in response to changing market conditions. Transnational corporations could use information and communication systems to decentralize and subcontract operations and to centralize financial control. This pattern became common to otherwise separate sectors of production: for example, textiles, garments, automobiles and semi-conductors (Dicken, 2003, pp. 317–436). At the same time, major firms in the same industry cooperated through joint ventures, subcontracting, franchising and research projects that would design specific products for identifiable markets. For Manuel Castells, these innovations were indicators of the network enterprise. Within this organizational model, firms remain the primary unit of capital accumulation, property rights and strategic management, while routine business practices are performed by flexible ad hoc networks (Castells, 1996, 2001, pp. 67–78).

Global finance, ICTs and financialized capitalism

The co-evolution of global finance with information-communication infrastructures was pivotal to the general formation of global capitalism. This development can be traced back to the disintegration of the Bretton Woods currency system and national Keynesianism. The key episode was the US' 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). 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, p. 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 national jurisdictions. US banks did the same in order to escape Federal financial regulations (Beeson, 1998, p. 84). The Eurodollar market that emerged was the precursor of a vast stateless banking system. The major players offered syndicated loans, international securities, currency trades and a range of risk-modelled derivatives contracts. 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 institutions themselves concentrated their wealth, diversified their portfolios and established branches in cities worldwide. The likes of Citicorp, Chase Manhattan, Warburg, Noumana, Goldman Sachs, Merrill Lynch, Barclays and Credit Suisse First Boston exemplified the new forces of global capitalism.

The globalization of finance capital depended upon microchip computers and associated advances in telecommunications. Satellite, optical fibre and cellular networks expanded and accelerated information transfer between computer terminals. Specific technological advances included high-speed internet link-ups which enabled stockbrokers, institutional traders and personal investors to buy and sell shares concurrently in different stock exchanges. Similarly, fund transfers among banks became coordinated by the Society for Worldwide Interbank Financial Telecommunications (SWIFT) (Gandy and Chapman, 1997, p. 126; Singh, 2000, pp. 11, 33). All of these developments created an unprecedented economic environment: multiple currency units and complex financial assets worth trillions of dollars were traded globally in real-time (Castells, 1996; Held et al., 1999; Singh, 2000; Dicken, 2003).

The collapse of Bretton Woods and the growth of global finance restructured the dynamics of capitalism as a whole. This multi-faceted process, under the rubric of "financialization", will be detailed in Chapter 5. It is sufficient here to briefly describe the main aspects of financialized capitalism and explain their epochal significance.

One should first realize that commercial banks, investment banks, insurance companies and new financial organizations, such as hedge funds and private equity firms, were not just a means of intermediation among businesses. As Rex McKenzie observes, they "targeted changes in macroeconomic fundamentals, prices of underlying commodities (like corn and oil), market indices (exchange rates, the price of bonds and shares), financial indicators (e.g. interest rates) or aggregate indicators (e.g. stock market indices)" (McKenzie, 2011, p. 202). The purpose was to take financial positions in all available markets worldwide and to speculate on changes across multiple indicators over specified periods of time. For McKenzie, these are the activities of "rentier institutions" who "make capital gain purely from the ownership of financial *claims*" (McKenzie, 2011, p. 203, emphasis added). They do not produce the commodities which are speculated against. This newly focused financial sector reconstituted the structure and strategy of major corporations. Consequently, a shareholder revolution began in the US during the 1980s, spread to other Western countries and had global ramifications.

Previously, the chief executive officer (CEO) and chief operating officer (COO) in a typical American corporate worked mutually to encourage firm growth and portfolio diversification. For equity investors, the success or otherwise of this strategy was reflected in the share price. According to a major study, three key developments in the financial markets combined to reshape the American corporation. First, hostile takeover firms grew in number and activity. They broke up conglomerates so that component parts could be sold for more than the previous market valuation. Second, individual investors gave way to institutional investors, who gained major control over corporate stock. Such investors could not easily value conglomerates as a whole; priority was given to divisional profit performance and the establishment of "focused" firms. Third, share analysts grew in number and developed industry specializations. Corporations eager to attract favourable analyst coverage were obliged to sell off businesses unrelated to core competencies. In these circumstances, the CEO worked with the chief finance officer (CFO) to generate profits from core competencies and to manage the share price in accordance with the preferences of institutional investors and analysts (Zorn and Dobbin, 2005).

Shareholder capitalism spread overseas during the 1990s and early 2000s as American institutional investors internationalized their activity and domestic markets opened up to foreign investors. The largest European food corporations, for example Nestle, Unilever and Danone, intensified their communication with financial analysts and investment managers. Corporate performance was monitored and chief executives rewarded according to levels of expected shareholder return (Palpacuer, 2008, pp. 395–6). Florence Palpacuer observed that, in general, large European corporations engaged in financialization strategies primarily to support their rapid international growth "with the objective of building or maintaining global leadership positions" (p. 397). A more recent examination of 929 of the largest corporations in the US, Canada, Germany and Australia found an uneven but "growing concentration of ownership in the hands of finance capital over the last three decades". The researchers also remark upon "the emergence of a small number of key corporations in finance capital that, through funds management in particular, repeatedly take leading shareholder positions in firms in the US and, to a lesser extent, other countries" (Peetz et al., 2013, p. 711).

The preceding account of financialization supports Christian Marazzi's judgment that "we are in a historical period in which finance is *co-substantial* with the very production of goods and services" (Marazzi, 2011, pp. 27–8, emphasis in original). This means that financialization is more than a longstanding, cyclic phenomenon of speculation and collapse, a parasitic deviation from the "real" economy or a corollary of overproduction and underconsumption. Rather, the co-substantiality of financialization and production is an epochal feature of global capitalism.

The transnational capitalist class

If world economic activity is dominated by inter-networked transnational corporations, such that national circuits of capital are largely integrated into global circuits of accumulation, then capitalist class formation will reflect this. Its most powerful elements will be transnationally cohesive and purposeful. In this regard, William Robinson identifies a major epochal shift from the Fordist-Keynesian model of wealth redistribution and "nation state supervised class compromise between capitalists and workers" (p. 42). As previously outlined, such principles also underpinned the import-substituting developmental states of post-colonial Africa and Asia. Fordist-Keynesianism and Third World developmentalism were embedded within an international system of nation states that mediated "relations between classes and groups including the notion of national capitals and national bourgeoisies" (Robinson, 2004, p. 46). Then, as Robinson states, "transnational fractions of local elites and capitalist classes swept to power in the 1980s and 1990s in countries ranging from Sweden and New Zealand to India, Brazil, Mexico, Chile, South Africa and so on" (p. 49). Transnational capital thereby arose out of former national capitals to constitute the "commanding heights" of the global economy (p. 47). A supervening transnational capitalist class (TCC) subsequently took shape.

The extent to which the TCC is cohesive *and* acts purposefully are matters of dispute within an expanding specialist literature. In the former context, the very categories of TCC membership are problematic. For Leslie Sklair, it comprises transnational corporate executives and their local affiliates, globalizing bureaucrats and politicians, and globalizing professionals, merchants and the media. These groups are transnationally cohesive because "ownership and control of money capital is augmented with ownership and control of other types of capital, notably political organizational, cultural and knowledge capital" (Sklair, 2001, p. 17). For Robinson, the TCC centres upon transnational corporate executives as a propertied group that owns or controls transnational capital at the expense of other classes. He excludes the strata below executive level identified by Sklair because they are "not necessarily propertied" (Robinson, 2004, p. 36). Aside from these differences, Sklair and Robinson both regard transnational corporate executives and their social milieu as the epitome of a globally supervening capitalist class. They do, however, provide caveats for their arguments. Sklair acknowledges that the TCC contains "real geographic and sectoral conflicts" and that it cannot impose its will uniformly throughout the world (Sklair, 2001, pp. 5, 21). Similarly, Robinson suggests that "the transnational bourgeoisie is not a unified group"; rather, it incorporates competition between "oligopolistic clusters" over accumulation strategies, control of assets and commodity chains (p. 45).

A more qualified version of the TCC thesis arises from William Carroll's empirical examination of corporate wealth and corporate board interlocks. From *Fortune* magazine's annual listings, the largest 400 industrial corporations and 100 financial corporations were selected between 1996 and 2006 over two-year intervals. They were ranked according to yearly revenue, financial asset value and geographic base. Senior directors were categorized according to the national and transnational orientations of their outside directorial affiliations and interpersonal networks. In 1996, the head offices of selected financial institutions were located within a triadic cluster of major economies – North America, Western Europe and Japan/Australasia. By 2006, the Bank of China, the Industrial and Commercial Bank of China, the China Construction Bank and South Korea's Kookman Bank had entered the top 100. The number of major Japanese banks declined over the same period. Carroll found, nevertheless, that major financial wealth mostly emanated from the US, Western Europe and the UK. A similar trend was evident for the world's largest non-financial corporations. A pronounced decline for corporate Japan coincided with the growth of major corporations in the Asian semi-periphery and with the continued dominance of American and West European industrial corporates (Carroll, 2010, pp. 83–6). In terms of directorial affiliations, Carroll traced a "modest and selective extension of the transnational network to the global south" (p. 105). By 2006, "twenty-five countries were represented by firms whose networks [spanned] national borders, including seven semi-peripheral states and 13 countries of Western Europe" (p. 106). These were not deemed transformative trends; Carroll concluded that the interlocking configuration remained "centred upon the North Atlantic with a proliferation of interlocks across the borders of Western Europe" (p. 107). When interpersonal networking among directors is factored in, support for the TCC thesis strengthens somewhat. From 1996 to 2006, in all three regions of the triad – Japan/Australasia, Western Europe and US/Canada – members of the global corporate elite became transnationally oriented in their social contacts. Carroll's networking analysis revealed that the number of transnational compared with national networks rose by 41 per cent, from 142 in 1996 to 200 in 2006 (p. 117).

Carroll's research provides partial yet definite support for Sklair and Robinson's TCC thesis. Further evidence can be drawn from Clifford Staples' investigation into the transnational outlooks of the Business Roundtable, an umbrella group for America's wealthiest corporations (Staples, 2012). Across a sample of 142 such companies (out of 247), the average proportion of foreign revenue to total revenue increased from 29.5 per cent in 1997 to 39.6 per cent in 2009 (Staples, 2012, p. 106). Between 2004 and 2009, at least 52.3 per cent of Business Roundtable corporations appeared at least once, and often more, on the Global Fortune 500 (p. 105). Staples' sociological research fleshes out these structural trends. Network and biographical data for 2006 revealed that relatively few could be classified as having "exclusively national" interests or experiences, while most "displayed varying levels of involvement in transnational careers, education and organizations" (p. 115).

The lobbying activities of the Business Roundtable were also transnationally focused. In 2005, they joined the World Business Leaders for Growth, an elite advocacy group set up to lobby the World Trade Organization. The US Business Roundtable worked alongside the Business Council of Australia, the Canadian Council of Chief Executives, the European Roundtable of Industrialists, Nippon Keidannen (Japan) and the Consejo Mexicano de Hombres de Negocios (Mexico). For Staples, these were "regional or national representatives of the transnational capitalist class". The World Business Leaders for Growth is said to exemplify "transnational capitalist class consciousness, solidarity and political action" (p. 116).

Transnational state structures

William Robinson argues that TCC interests were advanced through the construction of a transnational state network which circumvented established international forums and organizations. The cohesion and operational power of this network in relation to the largest nation states is contestable. It is nevertheless evident that a loose transnational state structure has been developed to advance the neoliberal policy preferences of transnational corporate elites. This structure incorporated policy development organizations such as the International Chamber of Commerce (ICC), the Trilateral Commission (TC), the Bilderberg group, the World Economic Forum (WEF) and the World Business Council for Sustainable Development (WBSCD). Together, they constituted a cultural milieu of financiers and corporate executives who, selectively, invited in major government leaders, non-government organizations (NGOs) and leading intellectuals. Transnational policy research groups set the ideological parameters for supra-national and international institutions of governance such as the European Union (EU), the G8, the G10, the Organisation for Economic Co-operation and Development (OECD), the World Trade Organization (WTO), the World Bank, the International Monetary Fund (IMF) and the Bank of International Settlements. Crucially, the transnational state network also incorporated the executive reaches of those nation states which had capitulated to neoliberalism. Office holders within finance ministries, policy advice groups and the senior civil service worked to match national economic priorities to the demands of global finance and transnational corporations (Robinson, 2004). For Michael Hardt and Antonio Negri (2004), the collusive workings of transnational political power were best observed at the WEF, Davos, Switzerland. Writing in 2004, they note:

> We can see clearly the need for leaders of major corporations to negotiate and cooperate with the political leaders of the dominant nation states and the bureaucrats of the supranational economic institutions. And there, too, we can see that the national and global levels of political and economic control do not, in fact, conflict with each other but actually work together hand in glove. At Davos, in short, we can see the institutional relationships that support and regulate the global political and economic system. (p. 167)

Theorizing the epochal shift

If one accepts that the formation of global capitalism was epochally distinctive, important matters of interpretation arise. What were the most significant drivers of this epochal shift? Qualitatively, was this epochal shift radically discontinuous from the past, or did certain legacies and continuities remain? And, what were the structural dynamics of the new, global capitalist system? Different answers to these questions are evident within four seminal texts: Michael Hardt and Antonio Negri's *Empire* (2001), William Robinson's *A Theory of Global Capitalism* (2004), Leslie Sklair's *Globalization* (2002) and Peter Dicken's *Global Shift* (2003). All of these books acknowledge the formation of a new globality, but each provides a different analysis of its historicity and structural nature.

The case for epochal change proposed by Hardt and Negri is radical and provocative. In *Empire* they noted, retrospectively, that the overthrow of colonial regimes and the collapse of the Soviet bloc had precipitated an "irresistible and irreversible globalization of economic and cultural exchange". Global circuits of production and exchange became integral to Empire: a new structure of rule and sovereignty. Hardt and Negri highlight the epochality of this phenomenon in their opening sentence – "Empire is materializing before our eyes" (Hardt and Negri, 2001, p. ix). This formative process incorporates older practices of state-centric authority, economic imperialism and international governance within an internally differentiated spatial totality. Empire constitutes the erasure of territorial limit and the absence of a geographically specifiable outside. Correspondingly, Empire presents itself not as a regime within the movement of history but as an "order that effectively suspends history and thereby fixes the existing state of affairs for eternity" (p. xiv).

Empire does not rule exogenously over territories and populations. Rather, it seeks to directly rule human nature through bio-power. In this regard, Hardt and Negri draw upon Foucault's writings to posit a shift from a disciplinary society to the society of control. In the former case, institutional apparatuses such as the factory, the prison, the school, the university, the hospital and the asylum operated in accordance with the requirements of capitalist accumulation (in Western countries and elsewhere). In the society of control, power is exercised through communication, information and monitoring networks, and interiorized within subjects themselves (pp. 2–27). For Hardt and Negri, this is a process of social production which comports with a new capitalist reality dominated by transnational corporations. They "directly distribute labour power over various markets, functionally allocate resources and organize hierarchically the various sectors of world production". The investment, financial and monetary activity of transnational corporations determines "the new geography of the world market and enables the new bio-political structuring of the world" (pp. 31–2).

This brief and partial synopsis of *Empire* prefaces our discussion of epochality and global capitalism. One should first commend Hardt and Negri's differentiation between a "cyclical understanding of historical evolution" and the idea of an "epochal shift" within history per se. Their distinction arises from a critique of Giovanni Arrighi's *The Long Twentieth Century* (1994). He argues that the crisis of American hegemony and accumulation in the 1970s was a fundamental turning point in the history of world capitalist accumulation. Yet, the gravity of this judgment is undercut by the assumption that the history of capitalism unfolds cyclically. For Arrighi, four systemic cycles of capitalist accumulation have been led, successively, by Genoa, Holland, Britain and the US. Within each cycle, from the seventeenth to the late twentieth century, a first phase of material expansion and productive investment is succeeded by a second phase of financial expansion, speculation and economic decline. For the US, the 1970s crisis of productive investment presaged financial expansion during the 1980s: a sure sign that hegemonic rule over world capitalism was coming to an end. Arrighi suggested that Japan would lead the next long cycle of capital accumulation (Hardt and Negri, 2001, pp. 238–9). In hindsight, one might now argue that the Chinese century is upon us. Hardt and Negri, though, are concerned less with the accuracy of Arrighi's cyclical analysis than with his reliance upon cyclicity as the driver of historical change:

> in the context of Arrighi's cyclical argument, it is impossible to recognise a rupture of the system, a paradigm shift, an event. Instead, everything must return, and the history of capitalism thus becomes the eternal return of the same. In the end, such a cyclical analysis masks the meteor of the process of crisis and restructuring. (p. 239)

Acceptance of this argument does not preclude the existence of capitalist accumulation cycles. The critical point is that epochal passages of history may reconfigure their scale and trajectory. In this case, the global interconnectedness and transnationality of capital accumulation overrules the assumption that successive state-hegemons will continue to dominate world capitalism.

However, Hardt and Negri's powerful case for the epochality of contemporary history relies, unnecessarily, upon a spatial dialectic of historical change. The expansionary logic of past capitalist imperialism is said to continually reconfigure "the boundaries of the inside and the outside" (p. 221). Capital's exploitation of labour produces a surplus value which must be realized in monetized commodity exchange. Because workers have insufficient capacity to consume all of the commodities produced, market relations must expand into non-capitalist social realms. Furthermore, once capitalists realize surplus value in the form of money, it is reinvested in cycles of production that require additional, outside supplies of raw materials, machinery and labour power. Here, Hardt and Negri draw upon Rosa Luxembourg's analysis of imperialism to suggest that capitalism uses and absorbs other economic systems. This ongoing process of "internalising the outside", which characterized nineteenth- and twentieth-century capitalism, brought the limits of finitude closer to hand (pp. 221–5). The emergence of Empire in the form of global capitalism signifies the erasure of the inside–outside distinction and renders the subjectivities of the proletariat and associated social movements central to the new global order (pp. 234–5). The same spatial dialectic informs Hardt and Negri's analysis of imperial sovereignty. Early-modern political theorists, they maintain, "understood the civil order as a limited and interior space that is opposed or contrasted to the external order of nature" (p. 187). In the contemporary world of global communication and the global market, such a distinction no longer holds; a new sensibility prevails, in which "the modern dialectic of inside and outside has been replaced by a play of degrees and intensities, of hybridity and artificiality" (pp. 187–8). These formulations contain a double flaw. Reliance upon a geo-spatial dialectic overlooks the possibility that dialectical oppositions of time drive historical change (in ways that disclose how time and space are intertwined). Consequently, the perceived resolution of the inside–outside opposition within the singular world of Empire precludes consideration of how conflicts of time pervade the new global order. As later chapters will show, time conflicts are internal both to global capitalism and to the resistance it entails.

Hardt and Negri's work oscillates between conceptual abstraction and the empirical critique of structural power. Thus, Empire is both an enveloping bio-political force *and* a global order comprised of transnational corporations and supra-national institutions. William Robinson's analysis reveals no such ambiguities. His book is subtitled *Production, Class and State in a Transnational World*, and it details the epochal shift from world capitalism to global capitalism (rather than from imperialism to empire) (Robinson, 2004). Previous epochs of world capitalist development are seen to cover, first, the formation of European mercantile capitalism during the 1400s and its subsequent expansion into coastal Africa, South East Asia and the Americas. The second epoch, beginning in the late 1700s, was marked by industrial revolution and the rise of the bourgeoisie, the formalization of European empires and the establishment of a European-centred nation-state system. The third epoch, incorporating most of the twentieth century, featured the growth of nationally based corporations. Major world wars among the imperial powers were followed by the expansion of a world market dominated by the US. A worldwide socialist alternative, partly associated with the Soviet bloc and/or Maoist China, was complemented by Third World liberation movements committed to the decolonization of European empires. The epoch of global capitalism was presaged by the collapse of national, Third World liberation movements, Soviet communism, international currency regulation and national Keynesianism (Robinson, 2004).

My own account of global capitalism outlined in this chapter draws favourably from Robinson's analysis of the transnational corporation and the transnational state and, with more qualifications, from his depiction of the transnational capitalist class. However, Robinson provides an absolutist interpretation of the epochal shift which has occurred. Transnational corporations, commodity chains and financial flows do, indeed, slice through national economies, but the process is uneven; large, established national economies are more cohesive than their opposites. Similarly, large national states with long historical legacies are not entirely defenceless against the interlocking power of transnational corporations and the transnational state. One must acknowledge structural inequality between nation states, as is registered by the G6, G7, G8 and G20 international summits. Those countries without representation at these forums are the most vulnerable to the transnational sweep of corporate and state power. The previous chapter argued that understandings of post-coloniality and global modernity, which highlight the plural contemporaneity of socio-cultural expression, tend to overlook the structural logics of global capitalism. The converse criticism can be made against Robinson's theory of global capitalism. Strict adherence to the view that capitalist production relations and the capitalist market have integrated world populations underplays the importance of collective political memories that are not class based. Over-emphasis upon the proletarianization of the world's poor undervalues the legacies and contemporary significance of anticolonial struggles centred around indigeneity and cultural autonomy. In different regional-local contexts, these legacies pervade working-class communities.

Sklair presents a more nuanced discussion of epochal change. He fully appreciates the emergence of transnational corporations and the transnational capitalist class, but acknowledges the residual forms of political-economic power. Theoretically, Sklair proposes "a dialectical synthesis in the attempt to transcend the contradictions of a state-centrism that fails to recognize the global, and a globalism that fails to recognize the persistence of states" (Sklair, 2002, p. 7). I would support this approach, with the inclusion of a proviso from Robinson's analysis: state structures are transnationally as well as nationally defined within the global order. Within global capitalism as such, Sklair identifies advertising, corporate branding and consumerism as "transnational culture – ideology practices" (p. 7). This aspect of transnationality usefully complements my earlier discussion of capitalism, communication and convergence. And, as the next chapter will show, corporate branding and the culture industries intermesh with the mediation and reification of real-time.

The strength of Peter Dicken's *Global Shift* is that it reconciles the totality of epochal change with the complexity of the processes involved. Thus, he announces that "we *are* witnessing the emergence of a new geo-economy, that is *qualitatively different* from the past" while asking "how can we begin to unravel the dynamic, kaleidoscopic complexity of this geo-economy?" (p. 14, emphasis in original). In a similar vein, Dicken declares "that it is increasingly the *transnational corporation* that plays the key role in coordinating production networks and therefore in shaping the new geo-economy" (p. 17) while stressing that "such networks are 'interrelated in complex ways' across local, national, regional and global scales" (p. 19). Like Sklair, Dicken understands that the residual structures of political-economic power co-exist with the discontinuity of epochal change. Global economic change is said to be "worked out through the actions and interactions of two major groups of actors – transnational corporations and states". They are "set within a volatile technological environment of which the 'space-shrinking' technologies of transportation and, especially communication are the most significant enabling elements" (p. xv). In contrast to Robinson, Dicken argues for "the continuing significance of the state as a key agent in the global economy". States operate as "containers of distinctive cultures and practices, as regulators of trade, foreign direct investment and industry within and across their borders, and as competitors within an increasingly connected global economy" (p. 3). These insights should be tempered by the reiteration that not all states are nation states. Robinson's point remains crucial: transnational state structures have the capacity to incorporate the upper, executive reaches of national states in accordance with the requirements of transnational corporations.

The preceding discussion sought to compare the texts of Hardt and Negri, Robinson, Sklair and Dicken without resorting to "either/or" judgments. I do, though, accept the "weaker" version of the epochal shift toward global capitalism proposed by Sklair and Dicken. The legacies of world history (nation states, international bodies, hegemonic economic powers) may still act upon the present without being the major drivers of the new global order. Furthermore, as I have suggested, it is clear, retrospectively, that there were economic and technological antecedents to the arrival of global capitalism in the 1990s and early

2000s. I would also argue, however, that Hardt and Negri, and Robinson, have a more acute grasp of global-epochal change per se, as a political, economic and class-driven process. With regard to global capitalism itself, my own approach distinctively foregrounds the time-related dimensions of global connectivity and the substantive tendencies of financialization.

4
Global Mediations of Time

Capitalism and communication are joined symbiotically. As mentioned previously, media-entertainment and ICT corporations are major sectors of global capital accumulation *and* infrastructural facilitators for the globalization of finance, production, distribution and consumption. This chapter foregrounds the communicational dimensions of global capitalism with reference to the epistemes of time reckoning, temporality and coevalness/allochronism. I will argue that manifestations and mediations of instantaneity/simultaneity or real-time are ideologically central to global capitalism, that globally mediated representations of immediacy and present-ness reify capitalist denials of coevalness and that ICTs have also facilitated counter-mediations of global activism and counter-representations of the global.

Ideological constructions of real-time

The accumulated developments of telegraphy, telephony, wireless telegraphy, radio transmission, terrestrial and satellite communication, fibre optic cables, personal computers and the internet have reconstituted the dynamics of time reckoning. The drive toward instantaneity and simultaneity has, to a large extent, subsumed the standardized reckonings of sequential time (calendars, clocks, time zones). Within global capitalism, the primary manifestations of real-time include ICT infrastructures, media institutions, finance culture, advertising, branding and consumption practices. These manifestations of real-time are densely connected across space and between places.

Discursively, the proliferation of real-time can be seen as an ideological expression of global capitalism. In this context, I view ideology as a symbolic construct that serves to reproduce prevailing relations of power. However, symbolic constructs such as language, imagery and technological formats are not always ideological. And, when this *is* the case, the ideological character of symbolic phenomena cannot be simply read off from the phenomena themselves; one must demonstrate how underlying relations of power are served (Thompson, 1990, p. 56). Thus, it can be said that the discursive formations of real-time perform ideologically if it is demonstrable that the historical origins of these formations are obscured from public view. One should also recognize that symbolic forms may constitute *and* obscure social reality. The array of screens in a foreign exchange room, for example, enables the circulation of finance capital *and* the ideological promotion of finance culture. Real-time is a multiple phenomenon that imparts truths about the contemporary world while giving a distorted picture of it. The critical point is that discursive formations of real-time often serve to naturalize prevailing relations of power by obfuscating matters of agency and historical context. Here, John Thompson remarks that

> relations of domination may be established and sustained by representing a transitory, historical state of affairs as if it were permanent, natural, outside of time. Processes are portrayed as things or as events of a quasi-natural kind, in such a way that their social and historical character is eclipsed.
>
> (Thompson, 1990, p. 65)

This occurred after the mid-1990s, when a real-time nomenclature emerged to become a descriptor of economic activity within popular business literature (Tapscott, 1996; McKenna, 1997; Davis and Meyer, 1998; Ranadive, 1999). A special *Economist* feature entitled “How About Now?” (Siegele, 2002) surveyed various aspects of the “real-time economy”. The following extract from the authored introduction inadvertently discloses the ideological and historical significance of the central locution:

> 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. (p. 4)

Here, the superficially apparent features of real-time ("dot com mania", "breathless internet time") are unfavourably compared with the true reality of real-time ("highly complex enterprise software" and "serious mathematics"). In the latter sense, real-time is assumed to be an authentic, verifiable construct that "can yield real savings". This favourably promoted version of real-time derives its authority from the capacities of "enterprise software" and "information technologies" in general. These capacities are given specific authorization by the director of a university digital technology centre, Andrew Odlyzko. In his expert assessment, the application of real-time technologies generates efficiencies for "the economy". In this abstract locution, "the" implies a sense of universal being. Widespread talk about "the economy" silences those representations, which express the capitalist nature of that economy. If the *capitalist* adjective is used, then the fundamental nature of such an economy is bought into sharp focus. Before the ascendancy of global capitalism and neoliberal ideology, "the economy" was depicted as a specifiable entity requiring expert management for rational ends (e.g. as in the economy needing to be managed, developed or expanded to achieve growth). Within such discourse, geographic qualifiers were common (e.g. as in "the national economy" or a nationally named economy). Under neoliberalism, a complementary deployment of the key locution prevailed; "the economy" became dynamic and self-operating by nature (as in phrases such as "the free market economy" or "the market economy"). The implication was that older versions of "the economy" had become anachronistic by definition. In the extract under review, "the economy" transcends all sense of historical change. This is a two-step process. First, against the "concept of real-time", the distinction between "the old and new economy" is deemed "somewhat artificial". Second, real-time (as an effect of information technologies) drives out "the lags and latencies" of sequentially ordered time. However, this cannot be a final accomplishment, because real-time as such is the marker of an accelerating process rather than a state of being. Its practical meaning derives from what lies beyond: the tractable other (i.e.

"lags" and "latencies" in the production system). In its own right, real-time stands for "the full potential" of what information technologies "could ultimately do". In the meantime, overcoming "lags" and "latencies" in the (capitalist) production system is the prevailing indicator of real-time's advancement.

The rest of this *Economist* feature specified real-time environments and issues from a capitalist perspective. In corporate management, General Electric was 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 remarked that "GE's aim is to monitor everything in real-time" (Siegele, 2002, p. 3). The *Economist* feature went on to declare that real-time technologies will "transform the company as we know it" (p. 13). Ray Lane, a partner with Kleiner Perkins Caulfield and Byers, a Silicon Valley venture capital firm, is reported as saying 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 offline world: hierarchies, departmental boundaries, paper shuffling employees" (p. 13). From this vantage point, it can be inferred that the entire offline world is a barrier to the progress of real-time technologies as deployed by major corporations. In a section entitled "Computers of the World Unite", it is acknowledged that the real-time economy "will raise problems of its own" (Siegele, 2002, p. 15). These include the instability of automated information flows, the possible inaccuracy of information content and the multiple impact of external shocks (i.e. a stock market 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). However, the distinction between appropriate and inappropriate uses of real-time information technology is not developed. It thus appears that the application of real-time technology should not, in fact, be restricted. In this context, "technology itself" is synonymous with the commercial priorities of share traders, corporate executives, financial planners, supply chain managers, systems analysts and software engineers. The extent to which *their* uses of technology night be appropriate or inappropriate is never scrutinized. In my view, their rush toward real-time solutions is itself the problem. Within global capitalism, the proliferation of real-time environments magnifies the realm of unpredictability in unpredictable ways; dangerous events may become uncontrollable.

Global manifestations of real-time

Within global capitalism, manifestations of real-time are huge in scale, intricate and pervasive. This presents a formidable challenge for critical scholars. The ideology of real-time appears to be everywhere at once and nowhere in particular. Where should one start?

My discussion here begins with a critique of satellite-driven television news. My reasons for choosing this area are as follows.

First, satellite television is a long-recognized, worldwide manifestation of real-time.[1] According to television historian Lisa Parks, the first truly global satellite spectacular was the 1967 two-hour programme *Our World*, coordinated by the European Broadcasting Union, edited from BBC studios in London and transmitted to approximately 500 million viewers in 24 countries. The significance of this accomplishment was clearly understood at the time. As Parks points out, "*Our World's* producers fully exploited what they understood to be the unique properties of live satellite television; its capacity to craft a global now" (Parks, 2005, p. 22).

Second, the subsequent routinization of live satellite television and global "now-ness" invites examination.[2] Global television news began with CNN World Report, launched in October 1987 as a complement to CNN's already established domestic network and world headline service (Medina, 2003, p. 86). Over the next decade, CNN established numerous bureaux outside of the US and signed joint ventures with media companies in different national markets. By 2003, CNN International had been regionalized into six scheduled channels: North America, Europe, Middle East/Africa, Asia/Pacific, South Asia, and Latin America (Chalaby, 2003). As CNN expanded, BBC television developed its own global strategy. A worldwide news channel was formed in 1991, and the "BBC World" brand was launched in 1995 to capitalize on the Corporation's international profile and spread its newsgathering costs over more services. Satellites with global reach were complemented by those with pan-regional, national and sub-national footprints, further increasing the availability of live 24/7 news coverage. A 2007 survey identified over 100 24/7 news channels worldwide. Four were entirely global (CNN and CNNI, BBC World, CNBC and Bloomberg TV) and one was almost global (Fox News). Another 27 could be classified as pan-regional, of which Al Jazeera (Arabic) and Al Jazeera (English) had major international reach (Rai and Cottle, 2007, pp. 54–7). Such coverage does not conform to the clock-defined viewing periods or programme schedules of territorial broadcasting networks (daytime, primetime).

Third, global satellite television is worth examining because it meshes with other evolving technologies of real-time. From the late 1990s, wireless infrastructures decoupled computers and communications from fixed locations, which multiplied the locales from which live-ness could be constructed and received. Laptops could be linked to satellite phones. Images and digital cameras could be edited onto a laptop and transmitted via the internet from the site of a breaking story back to the reporter's central office. Miniature video cameras enabled freelancers to obtain vivid footage from disaster sites and conflict zones. Together, these news-gathering innovations normalized the rolling, 24/7 news cycle (Jukes, 2002, p. 15). Evolving ICTs also multiplied the sites of news reception and remediated the experience of news consumption. Major real-time news events could be streamed through the internet as rolling headlines via specialist news sites. In March 2003, as the US military invaded Iraq, *New York Times* columnist Lisa Belkin observed that

> We must tune in. We can't escape it because the same technology that brings us this war also brings us our email and our interoffice memos and our project research. This is the Internet's war, the computer screen's war, a war that has come to the workplace. Go to Yahoo to search for a phone number. The headlines will tell you the latest tally of the dead and injured. Go to Netscape to check the stock market. You can see more streaming video of statues being toppled in Baghdad. Or go to a trading floor the way Jenny Fielding does every day. An investment adviser with Morgan Stanley, she sits surrounded by computer screens, hers and hundreds of others, all with an inset of CNBC. Huge television sets that loom in her field of vision are also tuned to the war.
>
> (Belkin, 2003)[3]

Since then, the advancing sophistication of web platforms has precipitated further manifestations of now-ness and immediacy via Facebook, Flickr, tweeting and the blogosphere. The scale, pervasiveness and portability of real-time communication blur the distinction between public and private, global and local. In these circumstances, it is especially important to recover earlier mass-mediated manifestations of real-time, such as global television news.

Our next global manifestation of real-time arises from the digital fusion of money, information and financial activity. As neoliberal governments of the 1980s deregulated banking, credit flows and exchange rates, digital technologies accelerated global monetary exchange. This was a historically new phenomenon. The rapid movement of finance capital blurred with the technological *means* of that movement (Wark, 1994, p. 171). Global finance was mobilized by business information networks and public news networks. News flows and financial flows became overlapping. During the late 1990s and early 2000s, the major vendors of financial/economic data and related news content were Reuters, Knight Ridder, AP Dow Jones, Bloomberg, AFT and Televate. Their application of networking technologies provided relevant and reliable data feeds to end users. Correspondingly, global trades and transactions depended upon the most accurate and recent information available. News and data vendors also promoted themselves as analysts of financial data. Reports about major indicators (e.g. exchange rates, stock values, interest levels, commodity prices) also identified salient market trends.

Within financial cultures, the fusion of money and information occurs through the screen. One study of foreign exchange dealing rooms suggested that the market on screen is a "whole" market consisting of information feeds and dealing systems. These components are "configured to form a global picture framed by the boundaries of the screen, which also serves as a medium of transactions" (Cetina and Bruegger, 2002, p. 163). Within the dealing room of a major bank, an array of screens represents the content and the context of the market. An electronic broker screen displays currency pairs, price action and recently completed deals. Another screen enables foreign exchange dealers to converse and contract online. Further screens display the currency positions of other banks and the commentaries of financial analysts. The entire process depends on "the specificity, speed and currentness of the information" (p. 166). Cetina and Bruegger argued that markets are constantly processing newly arriving financial information. In this sense, "the defining characteristic of the market as an agent is its lack of objectivity and incompleteness of being, its non-identity with itself" (p. 168). This comports exactly with the defining feature of real-time. The drive toward electronically networked instantaneity never reaches completion. In the process, however, information and money are fused together.

Within public news networks, media representations of economic activity help to constitute that activity. 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 centred around rival interpretations of growth figures, consumer price movements, trade balances and employment levels. Once neoliberal governments opened up national economies to global finance, bankers, currency traders, stockbrokers and investment analysts became the primary sources of economic information. In this situation, 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, p. 206). At the same time, the worldwide commercialization and regulation of national broadcasting systems encouraged the spread of advertising, infomercials and corporately sponsored current affairs programmes. Under these conditions, media representations of financially defined economic activity merged with the promotion of business and consumer culture.

The globalization of real-time electronic communication and the digital convergence between mass media and web-based technologies transformed advertising. Previously, agencies would coordinate campaign planning across specific communication channels (telephony, print media, radio and television broadcasting). Subsequently, as Pamela Odin observes, "commercials and programme content [were] delivered synchronously through layered multi-media channels at any place and time of day" (Odin, 2007, p. 207). In this environment, transnational corporate advertising seamlessly reflected the real-time circuits of global capital, and the branding of corporations themselves dominated advertising discourse and imagery. This was the general finding from Robert Goldman and Stephen Papson's (2011) longitudinal analysis of 2,400 television advertisements from corporations in telecommunications, ICTs, finance, biotechnology, energy, automobile manufacture, aerospace, defence, pharmaceuticals and corporate consulting.

> What unites all corporate ads is that they aim at "branding" the company. In our rubric this "branding" process contributes (by building, reinforcing or defending) to a corporation's "sign-value". Brand building works to create an association between a recognizable commodity or corporation and the imagery of a desirable quality. The brand itself is assigned a recognizable but differentiated representation: the logo. Then, that representation is attached to a series of layered signifiers that point to a specific set of meanings: the signified. The goal is to harmoniously blend layers of signifiers to support the branding message. Vectors are created across elements (visual, audio, textual) so that a sound signature might bind a narrative to a logo as well as signifying something in its own right.
>
> (Goldman and Papson, 2011, p. 12)

It will be argued presently that these and other vectors are constitutive of a detemporalized global present. For now, it is sufficient to note that the electronic vectors of corporate branding contribute to the global ascendancy of real-time. The formation of this environment accelerated everyday practices of consumption. The idea of convenient, ready-made solutions had always been inherent in modern consumer culture. From the mid-1990s, however, MP3 players, digital cameras, internet search engines, handheld remotes, multipurpose phones and social media platforms opened up new time-saving opportunities for consumers. Personal media technologies were easy to operate, ready-to-hand and offered instant access to an emporium of purchasable commodities. Online shopping exemplified the widespread assumption that the delivery of consumer goods should be rapid and continuous. Cultural theorist John Tomlinson argued that the culture of consumption had shifted from "an emphasis on steady accumulation and the enjoyment of continued possession" to that of "the immediate and repeated appropriation of new goods" (Tomlinson, 2007, p. 137). Quickening rhythms of consumption are intimately associated with technological mediations of experience. In this regard, global communication infrastructures combined with personal media technologies allow branded cultural industries spanning film, music, fashion, sport, celebrity promotion, tourism and related leisure activities to normalize immediate gratification and "in the moment" consumer lifestyles. This precluded reflection upon the labour relations and commodity chains involved in producing consumable goods, services and experiences.

One must acknowledge here that the globalization of fast-paced consumer lifestyles is tempered by socio-economic inequalities and cultural traditions. In a major exploration of these themes, Edward Comor pointed out that the growing middle classes of India and China were demographic minorities and that the majority of rural and urban dwellers in each country lacked sufficient income for repeat, aspirational buying (Comor, 2008, p. 117). In China, for example, traditional "from scratch" food preparation limited the spread of supermarkets and the demand for processed food (pp. 125–6).

Global mediations of real-time

The manifestations of real-time outlined thus far – remediated global television news, digital fusions of finance, information and economic activity, global corporate advertising and branding – can also be understood as mediations of global capitalism. It is pertinent now to consider the *kinds* of mediation which came to constitute the unfolding global present. In doing so, one must acknowledge manifestations and mediations of real-time that are less central to the economic workings of global capitalism. Thus, the real-time aspects of political, military and cultural communication will be discussed.

Twenty-one years ago, in a prescient analysis of global media events, McKenzie Wark noted that the technological vectors of satellite television were integrally connected with the technological vectors of financial, diplomatic and military communication (Wark, 1994). Consequently, everyone and everything was, potentially, the "object and/or subject of a mediated relation, realized instantly" (p. 15). Because these vectors implicated the entire globe, there was no synoptic vantage point from which to represent global events. In these circumstances, the constitution and development of major events could not be easily separated from their mass mediation, and mass-mediated, globally transmitted information about an event because inexorably drawn into other, media- and event-related vectors of communication (e.g. global finance, international diplomacy, military networks). This, in turn, activated a process whereby the representations of a momentous event made by journalists, camera teams, editors and interested parties fed back into the event itself via a global loop encompassing television, radio, telephone and fax technologies (Wark, 1994, p. 22).

Since Wark's initial observations, the proliferation of satellite channels, computer-mediated communication, mobile telephony and social media has continuously generated intersecting global vectors and feedback loops. Electronically connected foreign exchange markets, for example, adhere to the same real-time logic as global television news. Traders worldwide watch and participate in the market continuously and simultaneously, while market transactions and associated information arrive continuously on networked computer screens. As Karin Cetina observes, in this environment, information is not verified against any external reality. Instead, "the material on screen can only disclose itself as information in as far as it is new compared to earlier material". Consequently, "the new is presented as-things-happen and vanishes from the screens as newer things come to pass" (Cetina, 2005, p. 43).

Intersecting real-time communication networks conjoin the activities of financial-business journalists, market traders and market analysts. Interlinked major players across all of these groups respond to financial-information flows which are endogenously generated. Market participants routinely make buy-and-sell decisions based on expectations of future prices which are partly shaped by incoming analyst reports and by updated financial news content across all media. The real-time feedback loops that proliferate are inherently volatile and globally infectious (Thompson, 2003, pp. 34–7; 2004, pp. 14–18).

The real-time news flows of global television also interact with the decision-making practices of government foreign policy and international diplomacy. The immediacy of high-profile political events may exert a quickening influence upon the course of those events and shorten the time available for policy making. Failure to act swiftly may create a media image of political indecision or dissension (Gilboa, 2003, p. 99). In some cases, the very intensity of live news coverage may influence a government's foreign policy decision. According to Piers Robinson, this occurred in February 1994, when the mortar bombing of a Sarajevo marketplace provided instant CNN footage of human carnage which impelled the Clinton administration to issue an ultimatum to Bosnian Serb nationalists: namely, that if the shelling of Sarajevo continued, air strikes would ensue (Robinson, 2002, pp. 86–7).

This turn of events is not automatically generalizable; global television news coverage will not alter a pre-determined foreign policy position. From a macro-perspective, however, global television news flows and international political communication are integrally and continually connected. Thus, televised images of an unfolding atrocity or catastrophe accelerate diplomatic exchanges, whatever the policy outcome. To this extent, global television has partly replaced ambassadors and policy experts as a source of critical information about major international events.

Of course, similar observations could be made about the international impact of the telegraph, the telephone or radio transmission. Nevertheless, it can be argued that a qualitative shift in the nature of international diplomacy took place during the 1990s. In this respect, Eyton Gilboa made the following observation:

> Before the global communication revolution a leader could have sent one message through local media to his people and another through foreign media to other peoples. Today this distinction has disappeared and a policy statement reaches at the same time both local and foreign audiences including enemies and allies.
>
> (Gilboa, 2003, p. 107)

Real-time flows of global television news also began to interact with military communication networks and the prosecution of military campaigns. The 1991 Gulf War offers an obvious starting point. For the first time, a major military intervention unfolded tele-visually for audiences worldwide. Amidst the US bombing of Baghdad, reporters often provided traumatic pieces to camera by focusing on their own location in relation to surrounding events (Hoskins, 2004, pp. 50–1). Behind the scenes, global television and military networks relied upon the same technologies. Night vision lenses developed for night combat enabled 24-hour reportage from combat locations. Satellite communication itself enabled global telecasting *and* military mapping of the globe. The installation of missile tip cameras fused global media communication with the exercise of military power; the vision of a target became connected in real-time to its destination (Wark, 1994, pp. 42–4). These interactions between military and media communication networks were reflexively reinforcing. On certain occasions, journalistic interventions and news judgments directly affected military statements and decisions, which in turn generated further news stories. After 1991, the reflexive interaction between media and military communication intensified with the rapid proliferation of 24/7 satellite channels in combination with the digital remediation of television newsgathering and news reception. During the US invasion of Iraq in March 2003, events on the ground were intensively and rapidly circulated outward into global, pan-regional and national media domains. These multiple mediations influenced the tactics and communication strategies of military commanders. At the same time, regional and international circuits of political communication reflexively overlapped with the real-time force field of media-military events.

There are, of course, multiple players involved in the global mediation of real-time feedback loops. In the political sphere alone, nation states are communicationally linked with the United Nations, elite international gatherings, supra-national bodies within the transnational state, and various non-government organizations, along with armed resistance groups and millenarian terrorists within and beyond conflict zones. Between nation states, various military sectors (army, navy, air force, special forces and intelligence agencies) are engaged in real-time communication and conflict short of war, via satellites and internet infrastructures. As previously explained, 24/7 global television news interacts with ICT-facilitated newsgathering, news presentation and news reception as well as nationally established mass media systems. And, the vectors and real-time formations of finance capital intermesh with multimedia corporate advertising and branding. In these conditions, unexpected events of substantial magnitude will accelerate the generation of multiple feedback loops across the intersecting vectors and formations of real-time (financial, economic, political, military). Such events might involve military conflict, terrorist atrocities, a massive natural disaster, a pandemic or a combination thereof. The unfolding event or events in question will expand and intensify the interplay of real-time feedback loops. This, in turn, will pervade lifeworlds of work, domesticity, consumption, leisure and civil activity. In worst case scenarios, the scale and immediacy of information flows, image flows and aural stimuli will prevent temporal comprehension of the situation at hand. A globally mediated pandemic outbreak or financial collapse, for example, may elicit widespread fear and collective panic: behaviour that will inflame the reflexive interplay of real-time feedback loops which actually constitute the unfolding event and its many repercussions. In the former case, patterns of travel and interpersonal communication worldwide are likely to change radically, perhaps to the detriment of businesses, public institutions and civil society generally. In the case of a financial collapse, widely publicized bank runs fuelled by the uncontrollable spread of bankruptcies will affect financial and consumer behaviour worldwide. All of these developments may impact upon political-economic systems and the consciousness of mass populations. How events and event clusters play out, and how they are managed, reflects the density of real-time feedback loops across different communicational domains (global, international, transnational, national, local). The density and extensity of feedback loops also depend on the location of the event or events in question. Thus, a financial collapse, military alert, political assassination or insurrection emanating from a global city will have enormous, multi-scalar repercussions. In a less networked location, such events will unfold less extensively and less prominently.

Depicting the global: temporality, coevalness and critique

Global capitalism's drive toward internetworked instantaneity polarized the human condition. Wealthy global elites came to enjoy the personal and material advantages of extra-territorial mobility as the poor were consigned to the secondary experience of locality (as slum dwellers, rural labourers, refugees, or office, factory or domestic workers). Those who benefitted most from the rapid circulation of money, imagery, information and knowledge inhabited phenomenological worlds of business, travel, consumption and leisure activity which positioned the poor as "out of time". From within actual lifeworlds of impoverishment, time was and is experienced variously as loss, insecurity, exhaustion, boredom or fate. The historicity and socio-temporal separations of global capitalism were obfuscated by the manifestations and mediations of real-time. In this regard, Carmen Leccardi identifies a present which has become detemporalized. This is not a present that progresses conventionally from the past toward the future. Rather, it is a self-defining present disconnected from any sense of past-ness or futurity. Drawing from Agnes Heller, Leccardi argues that the present has become "all there is" (Heller, 1999, p. 7 cited in Leccardi, 2007, p. 30). Under such conditions, historical time and prospective global futures cannot be subjects of open debate. Here, Johann Fabian's critique of colonial allochronism can be reformulated for the present epoch. Global a-temporal mediations of real-time obscure the denial of coevalness inherent in the separateness of wealth and poverty. In one sense, this is a paradoxical statement. Compared with colonial times, contemporary depictions of wealth and poverty have become clearly apparent. Within capitalist imperialism of the nineteenth century, sinecured metropolitan elites did not "want to know about their colonies or about the violence and exploitation on which their own prosperity [was] founded, nor [did] they wish to be forced into any recognition of the multitudinous others hidden away behind the language and stereotypes, the subhuman categories of colonial racism" (Jameson, 2003, p. 700). Those populations who were marginalized and exploited could not publicly communicate their experiences between colonial outposts and within Western metropoles. Within global capitalism, it seems as though the opposite is true. Images of opulence pervade Hollywood and Bollywood film and high-end advertising for cars, electronic goods, exclusive real estate and luxury travel. Global, pan-regional, regional and national flows of remediated, 24/7 television news highlight the celebrity lifestyles of world leaders, corporate CEOs, royalty, film stars, writers, artists, musicians and athletes. Associated breaking news stories filter into radio reports, daily and weekly newspapers, and celebrity gossip magazines. Summit gatherings of global elites in Genoa, Quebec City, Sydney, Prague, Davos and Washington DC receive prominent coverage. League tables of rich and powerful individuals are regularly published worldwide. Meanwhile, the poor and destitute are kept in the limelight by aid agencies and news media as the victims of floods, earthquakes, famines, disease outbreaks and insurgencies. With the internet, portable cameras and videos, depictions of poverty, crime and violence freely proliferate. Press coverage of the 2008 G8 summit in Tokyo, for example, disdainfully listed the conference dinner menu and wine list alongside discussion of the world food crisis. Headlines worldwide in July 2008 included "Food for thought" and "Eat as we say, not as we do – a rich answer to hunger".

In a mediated world of unfolding immediacy, however, the structural and allochronistic relationships between the lifeworlds of wealth and poverty are denied representation. This obfuscatory process is built into global disseminations of banal, cosmopolitan outlooks. Openness toward peoples, places and experiences from different cultures and nations is superficially celebrated through branded products and advertising, with images of fashion, food, music, wine, sport and celebrity figures constituting a "ready-at-hand" global world of "exceptional co-presence" (Urry, 2000, p. 6). From the early 1990s, this consumerist cosmopolitanism was continuously reproduced through the internet, mobile phones, modems, plane travel, billboards, neon signs and television (Urry, 2000, p. 6). The ubiquity of television in particular generates a world of "imaginative travel" where "sensations of other places especially facilitated through channel-hopping and programmes that simulate channel-hopping" can "create an awareness of cosmopolitan interdependence" (Urry, 2000, p. 8). In this context, media researcher Dayan Thussu noted that "symbiotic relationships between the news and new forms of current affairs and factual entertainment genres, such as reality TV, have developed, blurring the boundaries between news, documentary and entertainment". On a global scale, "such hybrid programming feeds into, and benefits from the 24/7 news cycle: providing a feast of visually arresting, emotionally-charged infotainment which sustains ratings and keeps production costs low" (Thussu, 2007, p. 69).

Banal cosmopolitanism is also central to capitalist branding strategies. Thus, Goldman and Papson argue that Benedict Anderson's conception of an "imagined community" comprised of shared national sentiments has been displaced by a transnational corporate imaginary in which disparate communities form around branded products and services to celebrate global interconnectedness and universal humanism. IBM's television advertising of the mid-1990s provides a case in point. Under the tagline "Solutions for a Small Planet", various people from Africa, Europe, Asia and North America spoke in their native tongues (with English subtitles). For Goldman and Papson, "the common thread among otherwise linguistically diverse peoples that turns them into an imagined community is their ability to recognize IBM" (Goldman and Papson, 2011, p. 167). Overall, ICT corporate advertising was seen to advance a meta-narrative whereby "free, open and fast communication eliminates all discriminations associated with race, gender, ethnicity and social positioning" (p. 170). Goldman and Papson's summary remarks concerning their dataset of televised corporate commercials aptly explains how capitalist denials of coevalness are built into mediated depictions of the global.

> While each particular corporation tells stories to valorize itself, when these stories are taken together they tell a de-historicized story about Capital in a world that has become laterally arrayed. In this mythology, Capital has no apparent source; it exists in the form of grand signifiers that appear to be autonomous in every sense, except for their relationship to the individual subject. Capital seeks not power or even excessive profits, but rather the greater good; Capital does not stand in relation to society, *it appears as society* via the imagery of a network of markets integrated by telecommunications and cool new technologies.
>
> (Goldman and Papson, 2011, p. 202, emphasis in original)

Opposing global capitalism: mobilizations and counter-mediations

Although global mediations of time effectively denied the historical and structural relationalities between wealth and poverty, powerful counter-tendencies were at work. In an economically interdependent world driven by instant transfers of knowledge, information and imagery, the where-ness of one's felt life could be positioned in relation to other lived places. And, the ICT infrastructures which generated the real-time mediations of global capitalism also enabled real-time global networking among oppositional activist groups.[4] Such mobilizations can be traced from the 1992 United Nations-sponsored Earth Summit. On that occasion, official plenaries and major government entourages were confronted by the Global Forum, an oppositional environmental network comprising 1,000 non-government organizations. They used interlinked computer screens to challenge official proceedings, share information, advance internal discussion and construct issue agendas. Delegates received documents outlining the utility of computer technologies. Immediately, this facilitated further networking among environmental groups worldwide (Hassan, 2004, p. 108). At the same time, ICTs enabled high-speed collaboration between different activist networks. These capabilities also allowed activist networks to obtain visibility within local, national and global media. The Zapatistas rebellion in Chiapas, Mexico exemplified this process. Their military actions were publicized by faxing declarations and communiqués to the *New York Times*, the *Los Angeles Times*, CNN and world news agencies. This initial surge of publicity was complemented and reinforced by Zapatista-related current affairs coverage in *Time*, *Newsweek* and metropolitan newspapers worldwide. Declarations, communiqués and supporting articles were also disseminated to supporters via computer-mediated communication. Within Mexico, information about the rebellion flashed onto specialist bulletin boards and use nets. This information was collected, updated and duplicated by interested parties within US universities. Simultaneously, opposition to the North American Free Trade Association (NAFTA) was rapidly taking shape. Within Canada, the US and Mexico, a broad coalition of several hundred groups knitted together. They included unions, women's groups, environmentalists, churches and indigenous rights organizations. Computer-mediated communication became the infrastructure for information sharing and joint mobilizations. Once the Zapatistas burst onto the media stage, anti-NAFTA alliances were activated. Their websites became interlinked with Chiapas-related websites and with websites associated with the world's indigenous peoples' movements (Oleson, 2005). This, in turn, energized all global networks opposed to transnational corporations and transnational institutions of governance.

One primary focus was the then recently formed World Trade Organization (WTO). In December 1999, WTO global trade negotiations in Seattle attracted 50,000 people, representing an array of activist organizations. Amidst street clashes with militarized police units, many delegates were unable to attend the talks. Similar protests continued during 2000 in Washington (against an IMF–World Bank meeting in April), in Chiang Mai (against a meeting of the Asian Development Bank in May), in Melbourne (against a meeting of the World Economic Forum in September) and in Prague (against a World Bank–IMF meeting in September). During 2001, protests were launched in Quebec City (against the Summit of the Americas in April), in Gothenburg (against a European Union Summit in June) and in Genoa (against a G8 meeting in July). The latter occasions attracted 200,000–300,000 people (Buckman, 2004, p. 115). These protests were coordinated and publicized by various manifestations of the Independent Media Centre or Indymedia. A few years later, activist communication infrastructures were reshaped by social media networks and Web 2.0 (Mosca, 2014).

Behind the scenes organizations such as Corporations Watch, Multinational Monitor and Focus on the Global South formed a growing knowledge base. Meanwhile, a proliferation of policy forums developed global alternatives to global capitalism. The best known of these were the World Social Forums (WSF), initially held in Porto Alegre, Brazil from 2001 to 2003 and in Mumbai, India in 2004. The latter gathering attracted 100,000 people, including 15,000 from outside India (Buckman, 2004, pp. 116–17). The WSF eschewed governmental authority and insisted that no recommendations or formal statements should be made on behalf of participants. Successive gatherings opposed neoliberal policy imperatives and were committed to non-violent struggle. These precepts of global solidarity were intended to draw in many voices while avoiding major divisions and hierarchies (Smith, 2004, p. 414).

The proliferation of transnational political activism opposed to global capitalism facilitated counter-representations of the global. To this end, film historian Tom Zaniello compiled and indexed what he called "the cinema of globalization". He noted the proliferation of short films on political investigative and news websites and predicted the growing availability of "longer films about globalization made in this new media" (Zaniello, 2007, p. 16). Maintaining a public presence for alter-globalization perspectives was more problematic. Early activist appropriations of internet platforms did not substantially challenge dominant configurations of real-time. Ultimately, rapidly coordinated high-profile protests at transnational summit meetings were subsumed by the enveloping immediacy of global news coverage. From Seattle to Genoa, vivid television footage of violent street clashes between demonstrators and police decontextualized the fundamental issues at stake. As protest organizers were trapped within the real-time imperatives of mass-mediated events, the intellectual and political contributions of global activists were absent from public view. It was difficult to create a political distance between the official global event and opposition to it.

Part III

Conflicts of Time within Global Capitalism

5
Capital Realization, Financialization and Time Conflict

In Part I, global capitalism was portrayed as an epochal construct which was forged by a constellation of economic, political and technological forces. During the 1990s and early 2000s, the world became dominated by transnational corporations, global finance and information-communication technologies (ICTs) as the rudiments of a transnational capitalist class, and a transnational state emerged. Consequently, new global patterns of class exploitation, elite insularity, immiseration and social exclusion took shape. The nature and magnitude of this epochal shift were obscured by concurrent manifestations and mediations of real-time. The digital fusion of finance and technology, televisual representations of real-time, vectors of political and military communication, and the real-time reflexivity of unfolding global events, combined with the ubiquity of global branding, were constitutive of a detemporalized, a-historical global present, notwithstanding the counter-mediations and representations of global activist groups. This critical overview implies, somewhat misleadingly, that global capitalism arose as a hegemonically organized, reified entity. In this part, I will argue from the converse perspective. The whole arrangement was riven by a cluster of fundamental time conflicts centred around financialization, worker exploitation, and the political economies of national/transnational governance. Before proceeding with this analysis, a major point of emphasis is necessary. My time-conflictual interpretation of global capitalism contrasts with Manuel Castells' totalistic approach. In *The Rise of the Network Society* (1996), he questions the relevance of historicity as a standpoint for understanding the global and posits an irrevocable shift in the very nature of time. These propositions are set out in a chapter entitled "The Edge of Forever":

> But we are not just witnessing a relativization 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, pp. 433–4)

Castells subsequently points out that "timeless time" is a dominant rather than an all-inclusive form of social time with regard to "processes, social groupings and territories in our society" (p. 434). This account suggests that capitalism has transcended any kind of historical development and the structural tensions therein. There are major problems with this position. First, "timeless time" appears to be a final, absolute accomplishment unaffected by the principle of finitude; its possible demise in the future cannot be contemplated (what would bring it about?). Second, "timeless time" is a singular construct which precludes reflection upon how different epistemes of time have materialized conflictually across the global domain. Third, overlooking the conflictual dynamic of time oversimplifies the depiction of global capitalism. Thus, Castells' reference to "capital's freedom from time" ignores evidence that conflicts over temporal priorities are inherent in business and investment operations. Hence, pension funds can be an ongoing resource for short-term returns *or* long-term social investment. Similarly, strategic planners and financial engineers may battle for power in corporate boardrooms. And, within manufacturing enterprises, supply-chain management is a contested science; enthusiasts for just-in-time solutions confront risk-averse 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 lie in the *speed* of the transactions.
> (Castells, 1996: 434, emphasis in original)

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 homogeneous and unassailable. In fact, however, the proliferation of 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 (1996) clearly recognizes the dire consequences of unregulated finance. He refers to "recurrent monetary crises" and "the inability of capital investment to anticipate the future" (p. 436). The problem is that such insights are not conceptually grounded. Castells never acknowledges the problematic nature of real-time itself.[1] In particular, he fails to realize that real-time financial flows and associated financialization processes are at odds with the temporalities of capital realization.

On the preceding subject, I will draw from David Harvey's Marxian explication of capital realization in *The Limits to Capital* (1999).[2] My purpose is to critique his conceptions of time and finance capital. On this basis, I will argue that the financialization of capitalism generates and exacerbates fundamental conflicts of time within the capital realization process.

Capital realization, finance capital and time

For capitalism in general to reproduce itself, money capital has to be realized through production, productive capital must be realized in commodity form, and commodities must be realized as money in market exchange. Money surpluses accruing to capitalists then become the raw material for money capital to be reinvested in production. This general sequence is premised on the extraction of surplus value from labour during the production process. Independently of production, merchant capitalists may purchase commodities cheaply and sell them at a profit

(M-C-M). Alternatively, money lenders and speculators employ money to create monetary profit (M-M), a strategy which may expand to destabilize the capital realization process (Marx, 1970, pp. 146–55).

Let us now examine capital realization in more detail. This general process must unfold *continually* if capitalism is to remain viable. Money cannot rest idle as a hoard; it must be reinvested in production. Inventories of plant and machinery must be utilized in production for commodities to be made. Commodities cannot be stockpiled indefinitely; they must be sold and purchased in market exchange. Here, Harvey argues that "the time structure of production and realization" is a "crucial consideration" (Harvey, 1999, p. 85). Idle money, unutilized inventories and unsaleable commodities are not in themselves negative for capitalism. This will be the case, however, if such problems cannot be alleviated within designated periods of time. Thus, there is constant pressure to maintain, and, where possible, accelerate, the realization of capital (pp. 85–6). In Harvey's account, time is understood in terms of chronological time reckoning as enabled by the calendar and the clock. This becomes clear when one observes the production and realization of commodities through the lens of the labour process. My own observations on the matter will build upon Noel Castree's concise explication of the time argument contained within Harvey's *The Limits to Capital*. For them, clock time is more than a stable measurement system for the remuneration of workers; it is central to the realization of capital as such. Thus, commodity exchange brings into existence socially necessary labour time (which is measurable by the clock and given a monetary value or cost). The price at which a commodity is sold minus the socially necessary labour time needed to produce it represents capitalist profit. The degree of competition among capitalists in a given industry or market over chronological time will affect time/value labour costs and profit margins. Overall, Castree observes that "it is precisely clock time's abstract qualities that underlies the material commensuration of diverse use values and the concrete labours involved in their production" (Castree, 2009, p. 40).

For Castree and Harvey, banking and finance perform contradictory roles in the realization of capital. From one perspective, loaning money and recouping interest facilitate commodity production. Capitalist producers may borrow to maintain and upgrade inventories or to remain commercially viable before expected profits arrive. Finance capitalists must sustain loan/interest returns by putting some of their money to work in various productive enterprises (Harvey, 1999, pp. 260–1;

Castree, 2009, p. 45). Banks and other financial enterprises also provide credit to cover the initial and long-term expense of fixed capital infrastructures. Commodities cannot be produced, distributed or sold without factory buildings, warehouses, power stations, transport networks, water supply and sewage systems (Harvey, 1999, p. 223; Castree, 2009, p. 46). Production enterprises must repay their borrowings with interest over time, just as banks and other financiers must recoup their loans plus interest over time. Together, these requirements serve to stabilize the realization of capital.

On the other hand, the severity of such requirements may be counterproductive. In given scenarios, banks and other financiers may elect to circumvent the realization process (and the maintenance of fixed capital) by investing elsewhere purely for short-run monetary profit (e.g. stocks, real estate, bonds, derivatives, hedge funds, private equity). For Castree and Harvey, this eventuality is synonymous with the problems of over-accumulation (unused inventories, bankruptcies, unemployment, underconsumption). These problems are symptoms of an oscillating cyclic discrepancy between the time frames of finance and production.

In my view, M-M profit circuits are more than a cyclic phenomenon. They have become endemic within global capitalism to the detriment of the capital realization process. As indicated previously, we have witnessed a process of financialization characterized by shareholder-driven corporate governance, and by financially oriented equity investors and rentier institutions speculating upon world commodity prices, market indices and financial indicators. Other relevant developments have included the pervasiveness of derivatives trading, the widening transactional activities of investment banks, the direct engagement of non-financial corporations with financial markets, and the financial liberalization of banking and monetary policy in developing countries (Lapavitsas, 2013, pp. 200–55). Such exemplars of M-M profit-making depended more upon the real-time capacities of ICT networks than on the enumerated divisions of calendric and clock time.

The preceding insight requires us to reconsider Harvey's and Castree's conceptualizations of time within capitalism. Two lines of criticism are pertinent. First, clock time is assumed, mistakenly, to be the only form of time reckoning which is central to the realization of capital in relation to credit and finance. Although financial intermediation and the issuing of loans are partially autonomous from, and in tension with, systems of production, a fundamental homology of time is seen to remain. In this context, Castree's understanding of the credit system and its relation to the production system is illustrative:

> It is different in that the repayment periods of interest (in its various empirical forms) are set by financial institutions in the private and state sectors. *It is the same in that the temporal measure is, of course, still clock time and the annual calendar.* And, it is causally connected to production time in that the size of interest payments and the speed of their repayment directly affects production costs in the primary circuit and so the ability of firms to respond to the pressures of socially necessary labour time concretely.
>
> (Castree, 2009, p. 47, emphasis in original)

This formulation completely overlooks the proliferation of internetworked real-time, alongside, yet distinct from, clock time. Conflict between these two forms of time reckoning became inherent in global capitalism during the 1990s and early 2000s. Major investors and speculators exploited the M-M potentialities of real-time communication networks in ways that circumvented and disrupted the clock time requirements of the capital realization process. This conflict between different modes of time reckoning is not simply reducible to the formula of finance versus production. As I will later explain, the impact of financialization means that such conflicts play out within capitalist sectors and institutions.

The second line of criticism concerns Harvey's and Castree's narrow conceptualization of temporality in regard to capital realization and finance. Castree's depiction of "clock time and the annual calendar" as a "temporal measure" simplistically conflates the temporal and the chronological. Thus, there is deemed to be a temporal gap between the creation and realization of value which is bridged by multiple constructions of credit or fictitious capital (Harvey, 1999, pp. 266–72). When over-accumulation and under-investment in production start to occur, finance capitalists may temporally displace or defer the problem by investing in fixed capital infrastructures. If this stratagem, too, is eschewed, then the consequent investment within speculative M-M circuits will contract the temporal parameters of profit-making (to the detriment of fixed capital and the capital realization process). But, temporality is not *just* about chronological markers or periods of time which span past, present and the prospective future. As I have argued, temporality primarily concerns the qualitative relationalities between past, present and future independently of time reckoning. Individuals, groups, institutions, societies and economic systems may construct this relationality in ways that are oriented toward past-ness, present-ness or futurity. Financial speculation, and financialized capitalism generally, is biased toward forms of presentism which tend toward detemporalization despite ideological appearances. Thus, speculative futures trading is actually contrary to the ideas of scenario planning and futures-in-the making. The recurring, real-time volatility of such trading contradicts the temporal principle of learning from the past. These insights suggest that the general problematic of capital realization and finance is not a function of intra-systemic coordination over chronological time (although this is an important symptomatic issue). Rather, the central problem is that the financialization of capitalism damages the temporal resources necessary for system reproduction: memory, learning and future-awareness.

Derivatives, financialization and time conflict

My criticisms of Harvey's and Castree's approach to time open the way for an analysis of the time conflicts inherent in financialized capitalism. To simplify this task, I will initially focus upon the strategic importance of derivatives. During the 1990s and early 2000s, they became integral to global M-M circuits and the ICT infrastructures which made this form of profit-making possible. Derivatives generally, and financial derivatives in particular, were generated by the largest investment banks, a plethora of hedge funds and the market trading divisions of non-financial corporations. The unprecedented growth of financial derivatives compels us to re-examine the relationship between M-M circuits of speculation and the capital realization process. I will undertake this task by highlighting two major forms of time conflict within financialized capitalism: real-time versus clock time; and presentism versus temporality.

What, then, are derivatives? What explains their ubiquity and significance? Traditionally, they took the form of futures contracts: agreements to buy or sell a stock, bond or commodity at a future date at an agreed price (Strange, 1998, pp. 29–30). With the disintegration of the Bretton Woods currency system and the international deregulation of interest rates, currencies and currency relativities became tradable derivatives. The unfolding price discrepancies between, say, a government bond, a block of shares, a financial security, or a physical commodity could be the basis for a derivatives contract (or a related trade) between willing parties. In short, any commodifiable manifestation of capital was tradable across time and space. After Bretton Woods, derivative-based trading became a routine risk management exercise for transnational corporates, merchant importers, export producers and financial institutions themselves. As political economists Dick Bryan and Michael Rafferty point out, "the decline of Keynesianism and its way of managing a range of risks permitted greater flexibility into price relations but brought forward the need for means other than the state to fix the future to the present" (Bryan and Rafferty, 2006, pp. 7–8).

Within financialized capitalism, however, fixing the "future to the present" could also be a means of financial speculation. The modelling of price movement parameters across a range of capital assets (bonds, currencies, equities, property) allowed corporate traders, institutional investors, specialist hedge funds and investment banks to develop lucrative risk-return strategies. Financial derivatives per se were fundamentally different from derivatives associated with bulk commodities (e.g. energy, agriculture, manufacturing). In the latter, options, futures and other forward contracts were linked to assets which were grounded in production and the contingencies of capital realization. Financial derivatives, however, became exclusively connected to the medium of money and its technological means of circulation; underlying assets did not have to be purchased or sold. The scale and significance of speculative capital was thereby transformed. The point was made by Edward LiPuma and Benjamin Lee in their aptly titled *Financial Derivatives and the Rise of Circulation* (2005):

> once the speculative capital devoted to financial derivatives becomes self-reflexive and begins to feed on itself it develops a directional dynamic towards an autonomous and self-expanding form. It operates independently of production and becomes global in scope, enormous in size and growing exponentially, starting from virtually nothing in 1973 to become, some 30 years later, according to estimates produced by the Bank of International Settlements, the planet's largest, most profitable and most influential market. So, in the end, the creation of risk-driven derivatives that focus on the interconnectivity of forms of money allowed for the ascension of a new and powerful form of circulation based speculative capital.
>
> (LiPuma and Lee, 2005, p. 412)[3]

The power of "circulation based speculative capital" was delimited by the time conflicts involved. I will now consider their nature and importance.

Clock time versus real-time

It is critical here to recall that the drive toward inter-networked instantaneity is a process of becoming that is never finally accomplished; tiny ineliminable lengths of time remain. Within telegraphic, terrestrial satellite and digital communicational environments, the paradox is created whereby real-time outpaces and circumvents clock time, but can never finally escape from it. Within global capitalism, the economic beneficiaries of inter-networked instantaneity regard clock time as an encumbrance *and* as an object of manipulation in the search for profit. Capitalists who specialize in derivatives trading (involving underlying assets or financial products) use the real-time capacities of electronic networks to "game" clock time through the techniques of arbitrage. Daniel Beunza and David Stark's ethnographic analysis of Wall Street arbitrage practices (at a global investment bank) illustrates this general stratagem (Beunza and Stark, 2004, pp. 349–400). In what they call classic arbitrage, a bulk commodity is purchased cheaply at one location and sold more expensively at another. Profit accrues to the arbitrageur if the price differential exceeds the costs of transporting the commodity. They must spot such opportunities before competitors do: a task which becomes complex if the price movements of two or more assets are compared, and if more than one market is involved. Successful arbitrageurs require a fast and reliable system of access to unfolding price information. The development of micro-computing, network connectivity and mathematical trading formulae compelled market participants to create novel associations across different assets within ever-quickening time spans. With regard to the share market, Beunza and Stark distinguish arbitrage trading from value and momentum investing. In the latter activity, particular actors in a market are monitored as to whether they are bidding the stock up or down. The identification of bidding patterns over time enables investors to anticipate trends, trajectories and scenarios for given stocks. Value investing focuses upon the difference between the market value and the intrinsic value of given companies through analyses of annual reports, financial results, executive performance, growth prospects and risk-return ratios. Arbitrage traders focus upon co-variations of price movement across securities, stocks and related derivatives products. They identify the categorical attributes of comparable stocks or other indices and use financial instruments (swaps, options, futures) to shape the trade. The relevant attributes depend upon the type of arbitrage: mergers, convertible bonds, stock indexes and statistical modelling, and financial derivatives. Each sector of arbitrage has its own novel associations, pattern recognition and principles of evaluation. In Beunza and Stark's study, these were often represented and continually updated by robotized, automatic trading systems at each arbitrage desk. Unfolding price information arriving at close to real-time enabled high-frequency–high trading volumes and, potentially, high returns. Social interactions among traders on different desks allowed automated data flows and resulting trades to be monitored. Ultimately, however, the risks of high-frequency–high volume arbitrage stem from the irreducible conflict between clock time and real-time. Here, Beunza and Stark cite the testimony of a statistical arbitrage trader. He recalled one particular day on which some banks had been receiving delayed price information from their Reuters servers. This obscured the fact that certain stock indexes were rising, such that the affected arbitrageurs made misinformed trades, resulting in major losses. Conversely, better-informed arbitrageurs at other banks made substantial gains. From this episode, Beunza and Stark drew the following lesson:

> When trading at Formula 1 speed, "the future" is only seconds away. When the speed of trading amplifies second-by-second delays, the statistical arbitrage trader must be attuned to a new kind of problem: by how many seconds are the data delayed? That is, traders have to remind themselves of the time lag that elapses between what they see – the numbers on their screens – and actual prices. The prices that matter are those that reside in the computer servers of the market exchange, be it the NASDAQ or the New York Stock Exchange, for that is where the trades are ultimately executed. What traders see on screen are bits and bytes that have been transported from the exchange to the trading room in a long and sometimes difficult path of possible delays. If the traders mistakenly take delayed data for real-time data, losses will pile up quickly. In that situation, delegating the trading decisions to the robot could lead to disaster.
>
> (Beunza and Stark, 2004, p. 394)

The conflict of time reckoning indicated here became systemic to financialized capitalism from the mid-1990s. The growth of automated, high-frequency trading allowed investment banks, hedge funds and some corporations to acquire and liquidate arbitrage positions over very short periods of time. Although near-instantaneous M-M profit circuits constantly manipulate clock time, the traders who shape these circuits cannot escape the fact that the updating of market indices is a chronological process. Clock time can never be entirely subsumed within real-time electronic environments.

Presentism versus temporality

LiPuma and Lee argue that technologically driven financial derivatives trading necessarily requires the abstraction and objectification of risk (LiPuma and Lee, 2005). In my view, the various steps in this process also illustrate a fundamental conflict of time: between presentism and temporality.

Initially, the construction of a risk-return derivatives position is detached from the economic, political and social circumstances which created the risk, and positioned within a conceptual space of financial calculation. Within this space, risks are classified independently of specific socio-historical surroundings. Thus, the likelihood of a certain election outcome or a private sector credit default is perceived in terms of "interest rate risk, counterparty risk, volatility risk, country risk, credit risk, directional risk, transaction risk and so on" (p. 414). This obscures understandings of risk which are materially embedded and situationally specific within political economies and social structures.

The next step in the process concerns the perception of volatility. Derivatives traders assume that "the market can best describe and predict the behaviour of abstract risk by measuring its variability over time" (p. 415). In trading environments defined by patterns of price movement, those socio-economic realities which actually shape the market are obfuscated. Risk is further objectified by the use of mathematical formulae to predict price volatilities across multiple indices. Such formulae fundamentally distort the complex social reality that is being modelled. It is assumed that "the space of events is finite and de-limitable, that all future events are replications of past events and that the conditions of application are uniform across time and space" (p. 415). All such events involving, say, governments, political parties, corporations, central banks, private banks and other financial entities are factored into the relevant derivative and priced as an abstract totality.

For LiPuma and Lee, the process of objectification has a major consequence which deserves further exploration; mathematical finance "assumes that society and history play no part in the determination of risk" (p. 415). I would further argue that the determination of risk eschews social memory as a process which conjoins the past with the present through verifiable documented knowledge. Such knowledge underwrites the multiple filaments of ongoing business activity. Peruvian economist Hernando De Soto argues that industrial and commercial development from the mid-nineteenth century required knowledge to be gathered, organized, standardized, recorded and continually updated.

> The result was the invention of the first massive "public memory systems" to record and classify – in rule bound, certified and publicly accessible registries, titles, balance sheets and statements of account – all the relevant knowledge available, whether intangible (stocks, commercial paper, deeds, ledgers, contracts, patents, companies and promissory notes) or tangible (land, building, boats, machines, etc.). Knowing who owned and owed and fixing that information in public records, made it possible for investors to infer value, take risks and track results.
>
> (de Soto, 2011)

Within global capitalism the spread of financial derivatives trading weakened these "public memory systems". Officially, such trades were subject to rules imposed by clearing houses such as the London International Futures Exchange. They maintained records of transactions between parties, daily trading volumes, price fluctuations and the profit-loss ratios for individual dealers. Unofficially, however, over-the-counter (OTC) derivatives trading avoided clearing houses and the intrusions of national and supra-national regulations. Parties to such transactions had to determine market trends and individual exposures for themselves (Strange, 1998, p. 32). The growth of OTC trading during the 1990s and early 2000s was self-sustaining. The degree to which derivatives were being used to hedge against specific risks declined, compared to the use of derivatives for speculation. Without adequate memory systems, it became impossible to determine where risks were being held and how they were proliferating (Morgan, 2012, p. 397). The financial technology of derivatives also entailed probabilistic attempts to model the future. As Jakob Arnoldi has argued, "the future in this context is simply a yet-to-arrive consequence of technical prediction". In another sense, the future is pulled into the domain of the present (to be assigned a monetary value). In actuality, the technology of derivatives, as part of the financial system, brought to hand ever more risks and uncertainties. Attempts to calculate uncertainty thus became the basis for technologized derivatives speculation and a constitutive feature of the real-time present (Arnoldi, 2004, pp. 106–7). This created a dangerous misperception. Uncertainties about the future appeared calculable and manageable to market participants just as the underlying realities of systemic uncertainty were reinforced.

In sum, the spread of financial derivatives mitigated against the employment of social memory and futurity as resources for understanding the actual risks of financial speculation. Meanwhile, the abstract calculus of risk modelling naturalized presentist, a-temporal configurations of global finance markets and exacerbated the reflexive instability of their operations. Such was evident during the demise of Long Term Capital Management (LTCM). This secret hedge fund, established in the early 1990s, attracted large amounts of investment capital and huge loans (bonds, shares, currency relativities, commodity prices). If one part of the portfolio lost value, another would at least gain in proportion. Additionally, LTCM sold derivatives futures/options contracts to counterparties (who were willing to pay more, to insure against unfavourable market movements, than LTCM's models deemed necessary). Over time, losses from short-term market fluctuations would be outweighed by returns as asset differentials converged (when this occurred, profits were gained from risk-averse investors who had paid considerable sums to offload their risk onto LTCM). During 1995 and 1996, LTCM leveraged massive profits from bank loans worth 28 times its collateral base (Thompson, 2003, pp. 34–5). From August 1998, LTCM's position deteriorated as follows. First, the collapse of the Russian Rouble and the imposition of temporary foreign exchange controls caused investor panic. Rouble-related derivative positions were offloaded to an extent unanticipated by LTCM's models. Secondly, the prices of those assets and securities which were modelled to diverge, converged instead. Other institutions had tried to replicate LTCM's portfolio and strategy. Consequently, the withdrawal from Rouble-related trades became a major global phenomenon. Thirdly, as volatility increased, LTCM had to cover the risk of losses by paying creditors more. This requirement exposed LTCM's OTC derivatives deals to public scrutiny. LTCM's worsening positions were thus globally communicated to creditors and counterparties. The disposal, or rumoured disposal, of LTCM-connected assets and securities became self-reinforcing. As Peter Thompson noted, "the problem here was that high-volume selling of the assets/securities LTCM held – whether by LTCM or another party – might itself move the market, reducing the value of LTCM's portfolio and bringing the prophecy of its collapse closer to fulfilment" (Thompson, 2003, p. 37). Eventually, the US Treasury Department, the Federal Reserve and the US Commodity Futures Trading Commission (CFTC) prevented a full-scale financial collapse. Nevertheless, the LTCM debacle presciently revealed that, in times of financial volatility, "the communication and collective perception of crisis or systemic risk" could become "a constitutive aspect of their reality" (Thompson, 2003, p. 37).

Risk perception–risk reality feedback loops in the context of OTC trading magnify presentism at the expense of temporal awareness. This central danger was recognized by Brooksley Born, chairperson of the CFTC from 1996 to 1999. Writing in 2001, she recounted that the CFTC had no information about the OTC derivatives positions held by LTCM, other large hedge funds, and their various counter parties. Consequently, the extent of borrowing and leverage in the OTC derivatives market could not be ascertained (Born, 2001, pp. 635–6). The broader regulatory concerns arising from this situation were succinctly summarized:

> Although detailed information on large exchange-traded futures and option positions is reported to the CFTC daily, no reporting requirements are imposed on most OTC derivatives market participants. The lack of basic information about the positions held by OTC derivatives market participants, the nature of their investment strategies and the extent of their risk exposures potentially allow them to take positions that may threaten the regulated markets without the knowledge of any federal regulatory authority.
>
> (Born, 2001, p. 636)

Born also noted that the lack of transparency had contributed to the failure of Barings merchant bank in 1995 following the "allegedly unauthorized derivatives trading activities" of an affiliate employee in Singapore. Over US$1 billion were lost; significant international repercussions were only averted when the Dutch bank ING took over Barings.

In light of these events, Born proposed an end to OTC derivatives trading, against fierce opposition from private financial institutions, Alan Greenspan at the Federal Reserve, Robert Rubin and Larry Summers in the Clinton Treasury department and Arthur Levitt at the Securities Exchange Commission. They sought, successfully, to legally exempt OTC derivatives from the purview of US and international regulators. Born's subsequent resignation from the CFTC signified the triumph of presentism over temporality within global financial markets.

Corporate enterprises: conflicting temporal horizons

The conflicts of time which came to pervade global M-M circuits shaped the temporal horizons of governance and performance within non-financial corporations. This process was synonymous with the shareholder revolution which swept through Western boardrooms during the 1980s and 1990s. As outlined in Chapter 3, institutional rather than individual investors gained control over corporate stock. They compared divisional profit results within and across conglomerates, and favoured sell-offs and acquisitions outside of core competencies (rather than portfolio diversification). The CEO and CFO (chief financial officer) of each corporation worked to generate core profits, raise profit performance expectations and manage the share price. Under these conditions, the share price was no longer a sequential reflection of yearly/half yearly profit and dividend returns. Instead, greater priority was accorded to profit and share price projections. These projections were a function of consensus estimates among analysts; a corporation's performance thus depended on whether they could meet or beat the estimates. Market-to-market accounting rules meant that earnings over the life of a given contract were recognized immediately, rather than progressively as cash was received. Bringing future profits to account at the start of a contract created an urgency to increase deal flow in order to maintain earnings growth (Das, 2011, p. 66). This represented a collapse of the future into the present: a mode of operation reinforced by the arrival of faster accounting technologies and the trend toward quarterly earnings reports. At the same time, specialist teams of analysts frequently announced buy and sell recommendations. The net result was share price volatility, a short-termist culture of corporate governance and merger-acquisition activity driven by financial imperatives rather than the realization of capital.

The new orthodoxy was stridently articulated by Albert Dunlap (former chairman and CEO of Scott Paper) in *Mean Business: How I Save Bad Companies and Make Good Companies Great* (1997). The book's front flap defines "dunlap" as a verb which means: "1. to turn a company around at lightning speed; 2. to focus on the best; eliminate what is not the best; 3. to protect and enhance shareholder value". In subsequent passages within the book, Dunlap himself outlines the requisite temporal parameters of corporate governance:

> Executives must commit to a continuous, strategic process with plenty of room for change, because the business always changes. A proper strategy breathes new life every day. Still, you must have a direction that dictates what you do on a day-to-day basis. If your strategy is to have a global brand, what are you doing day-in-and-day-out to develop it?

> Look ahead ten years but don't expect or demand precise adherence to such a long-term vision. That approach will bankrupt you. Instead, set new goals along the way; adjust annual plans so they dovetail into new strategic directions. Review action plans daily, weekly, monthly and yearly to assess whether conditions have changed and whether it's time for you to shift in a different direction.
>
> (Dunlap, 1997, p. 100)

Dunlap had equally strong convictions about who should put these temporal priorities into practice. In his view, "a top flight board should be comprised of outsiders, except for the CEO and perhaps one other inside executive. You need a brilliant investment banker and a skilled lawyer, preferable one who understands securities" (Dunlap, 1997, p. 210). The closest fit for these criteria were financially engineered corporations. Here, the case of Enron is illustrative. Formed in 1985 as a merger between two natural gas pipeline companies, Enron began as a regulated energy company which distributed gas from producers to power plants and then to customers. With the deregulation of gas and electricity pricing, Enron transformed itself into an energy broker and commodities trader. The process was gradual at first; by 1997, 40 per cent of Enron's revenues came from trading and 60 per cent from the regulated pipeline business. By 1999, however, trading operations had rapidly expanded into metals, pulp and paper, plastics and a range of derivative products. Overall, trading revenues comprised 90 per cent and pipeline revenues 10 per cent. During its years of operation, Enron created 2,832 subsidiaries across four continents. The board included outsiders closely connected with major US regulatory authorities, the British government and successive US presidencies (Bill Clinton and George Bush). Enron hired top-rated traders and financial engineers as major investment banks helped to create off-balance sheet speculative vehicles (Prins, 2004, pp. 152–5; Blackburn, 2008, p. 28). Until its massive fraud disclosure and bankruptcy in December 2001, Enron's strategy matched Dunlap's criteria for business success. Top-flight outsiders were appointed to the board, annual plans were adjusted, action plans were constantly reviewed and new goals were set along the way.

An opposing view on the temporal priorities of corporate government was provided by Bob Garratt, a global consultant advising on director development and strategic thinking. In *The Fish Rots from the Head* (1996), he makes the following declaration:

> In the policy loop of learning, the directors are both listening to what operations tell them is going on, and simultaneously monitoring the

> complexity and chaos of the continual changes in those external environments which create their ecological niches for their enterprise – the levels outside of which the organization will die. These levels must be monitored in the following environments: political, physical, environmental, economic, social, technological, and trade. The dynamic balances struck here by the board are crucial to the effectiveness of the organization in relation to the outside world.
>
> (Garratt, 1996, p. 33)

Garratt proceeds to berate Anglo-Saxon businesses for their over-emphasis upon short-term performance measures such as “quarterly results” and “shareholder value”:

> Digging up a plant to examine its roots with ever-increasing frequency is a sure way of killing it. Organizations, like plants, need time to bed down (stability), fertilizing (strategic thinking) and relatively fallow periods (continuity).
>
> (Garratt, 1996, p. 34)

Garratt’s temporal priorities generally comported with those of Japanese, Korean and Taiwanese corporations as well as Chinese family businesses. Japanese Keiretsu, for example, conduct stable, long-term, inter-firm relationships based upon mutual obligations. Bilateral relationships between firms are embedded within a broader ensemble of related companies. Horizontal Keiretsu, such as Mitsubishi, Mitsui and Sumitomo, are diversified industrial groups organized around a core bank and a general trading company. Vertical Keiretsu are organized around a large parent company in a specific industry (for example, Toshiba, Toyota and Sony) (Dicken, 2003). The conflicting temporal horizons of Dunlap and Garratt do not simply reflect different cultural traditions of corporate organization and governance; the globally interconnected nature of finance, production and trade precipitates conflict as well as co-existence between rival corporate temporalities. This conflict was to become more evident after the 2008 global financial crisis.

6
Capitalism, Worker Exploitation and Time Conflict

Within global capitalism, the time conflicts of financialization overlap with specific time conflicts which are inherent in worker exploitation and the associated strategies of class rule. Before developing this argument, the global economics of work will be briefly outlined and the time-epistemic features of exploitation explored. In my view, three central propositions encapsulate the time conflicts involved: the real-time operations of transnational corporations structurally increase the severity of clock-based worker exploitation; the real-time tourniquet of labour process and labour pool management threatens the temporal autonomy of working life; and global capitalism's strategy of class rule denies coeval status to the working and wageless poor. These conflicts of time are separated conceptually in order to emphasize their complementarity in practice. I will then suggest that the time conflicts which came to shape global capitalism's exploitation of the waged/wageless poor provide opportunities for disrupting the system.

Global capitalism and the global worker

Global capitalism is more than a collection of national economies and production systems related through external exchange. Transnational corporations have developed worldwide commodity chains based on subcontracting, outsourcing and allied arrangements. Anna Tsing has described this phenomenon as "supply chain capitalism" (Tsing, 2009). The term may lack specificity; it overlaps with informational capitalism (as encapsulated by the network enterprise) and is a defining feature of global capitalism. What is clear, however, is that supply chains are pervasive. Here, Tsing provides a compelling depiction:

> Supply chains offer some of the most vivid images of our times: telephone operators assisting customers from across the globe; "traditional" indigenous farmers growing specialist crops for wealthy metropolitan consumers; Chinese millionaires reaping the profits of Walmart contracts; sweatshop workers toiling in locked rooms while brand name buyers disavow responsibility. (p. 149)

It is worth noting here that supply-chain subcontracting also overlaps with the financialization of Western-based transnational corporations. Their need to realize additional shareholder value through the decomposition, revaluation and trade of corporate assets undermined stability of employment. Managers were compelled to cut labour costs and restructure operations to meet capital market requirements (Thompson, 2013, pp. 477–8). The global context of these developments has been succinctly outlined by political economist William Milberg (2008):

> The globalization of production has clear implications for pricing, profits, wages and investment at the level of the firm and these have supported the process of financialization. Pressures for financialization and increased short-run shareholder returns have in turn spurred greater globalization of production as firms have divested the less competitive aspects of their production or relocated parts of the production process in order to lower costs. (p. 445)

Corporate financialization and supply-chain subcontracting did not just support rates of profit and exploitation in developing countries. In developed countries, some of the profits were used to support financial speculation, mergers and acquisitions rather than the revitalization of added value production (Smith, 2012, p. 21). These insights direct our attention to what Nick Dyer-Witheford calls the "global worker". This figuration, in contradistinction to the Fordist blue collar worker from the Western industrial heartlands, is central to the globalization of capitalism. The global worker is variegated by an increasingly complex division of labour strongly associated with the service sector, universalized by the incorporation of women workers, the growth of production centres outside the West and flows of migrant labour. New jobs and occupations, with many hierarchies, are connected directly to information-communication technologies (ICTs), as indicated by the rapid growth of internet and cell phone use. The computer industry, for example, contains a software sector incorporating business applications and digital games designed and engineered in North America, Western Europe and Japan. Programming jobs have been typically outsourced to subcontractors in Eastern Europe, South Asia and South East Asia. In the hardware sector, salaried engineers and architects design and prototype phone, gaming and specialist computer devices. Assembly of these devices has been performed in Central America, Eastern Europe and southern China. Manual labour also entails mining the specialist minerals necessary for consumer electronics and excavating parts from toxic e-waste disposal sites in Asia and Africa (Dyer-Witheford, 2010, pp. 490–1; Fuchs, 2013).

The variegated social lifeworlds of the global worker are positioned in relation to global supply-chain networks and regional/local traditions, including the cultural legacies of Western colonialism. To understand how these forces play out in particular circumstances, we need a conception of exploitation which acknowledges the plural epistemes of time. It is to this task that I now turn.

Workers, exploitation and epistemes of time

Let us now consider the concept of exploitation. Economically, this occurs when one section of the population controls, and benefits from, the labour of another section. In conventional Marxist terms, exploitation occurs when the class of industrial capitalists, within a capitalist economic system, generates profit from working-class labour. In this situation, workers have only their labour to sell. Other exploiting classes or class fractions benefit from this arrangement. Erik Olin Wright provides a more analytical description of exploitation. In his view, the material welfare of the capitalist class causally depends upon the deprivation of the working class. Exploited workers are excluded from access to productive resources and private assets by the legal enforcement of property rights. Capitalism does not simply deprive and marginalize workers. It also enables capitalist owners of productive resources to appropriate their labour. The efforts of the exploited ensure the welfare of the exploiter (Wright, 1997, pp. 10–11).

The component features of exploitation explain the inseparable relation between capitalist profits and workers' wages. This relation materially unfolds as a class contest over rights and remuneration. It is crucial here to appreciate that workers, as people, are not interpersonally exploited by capitalists, as people. Rather, as Moshie Postone has observed, living labour (the workers) confronts capitalism "as a structurally alien and dominant power" (Postone, 1993, p. 30). This means that capital-labour exploitation is systemic to capitalism, with ramifications that extend beyond waged work and designated workplaces. The social realities associated with the system of exploitation, I want to suggest, can also be characterized as "a bitter and dark struggle around time and the use of time" (Lefebvre, 2004, p. 74). This observation from French philosopher Henri Lefebvre was intended to encapsulate a vital truth about everyday life in general. Our lives contain conflictual modalities of time associated with bodily rhythms, solar rhythms, biological nature, biospheric seasonality and social custom. In the modern world, these experienced modalities of time are in constant struggle with the obligations and schedules associated with quantified standardized time. Such a struggle is inherent in, and formalized by, the processes of class exploitation within capitalism. The darkness and bitterness of it all are mainly experienced by workers; capitalist employers have more time resources at their disposal. Yet the capitalist can never disengage from the struggle. The appropriation of labour and the generation of profit, as measured by time, cannot be guaranteed. Here, one must re-emphasize that time is not a singular construct and that the different epistemes of time (time reckoning, temporality, coevalness/allochronism) illuminate certain aspects of worker exploitation in a capitalist economy.

For capitalist enterprises, calculations of profit and labour productivity have long depended upon the standard reckonings of clock time. The process is delineated in E.P. Thompson's seminal article "Time, Work Discipline and Industrial Capitalism" (1967). On his account, clock time has a nascent presence within medieval and mercantile Europe before converging with the growth of industrial capitalism. In non-industrial economies centred around hunting, farming, fishing and trade, work is task-oriented and embedded within the social fabric of family, tribe, village and town. As Thompson points out, "social intercourse and labour are intermingled. The working day lengthens or contracts according to the task, and there is no great sense of conflict between labour and 'passing the time of day' " (p. 60). The social lifeworlds of task orientation are instilled with the rhythms of nature (weather, seasons, the diurnal cycle) and biology (circadian, hormonal and reproductive cycles). By contrast, timed labour requires the synchronization of work tasks. This emerged in eighteenth-century England as small, domestically based workshops developed simple divisions of labour. The eventual arrival of machine-powered industry in the mid-nineteenth century required greater exactitude in time routines and a more substantial synchronization of labour processes.

Waged labour and time discipline were most rigorously imposed in textile mills and engineering workshops. Thompson notes that this was an attritional process: "the first generation of factory workers were taught by their masters the importance of time; a second generation formed their short-time committees in the 10 hour movement; the third generation struck for overtime or time and a half". By this stage, organized workers had "accepted the categories of their employers and learned to fight back within them" (p. 86). An associated propaganda campaign of time thrift was advanced by employers, church leaders, school teachers and conservative politicians. Their insistent message was that time must be put to use; it was offensive for men and women of working age to merely "pass the time" (p. 61).

Paul Glennie and Nigel Thrift subsequently challenged the historical accuracy of Thompson's account. He was said to have underestimated the diffusion of time pieces before the nineteenth century, the proliferation and penetration of public clocks, sundials and bells, the time cues of town life, and the time schedules of vernacular schooling. These developments indicated that the information and ability to reckon with time pre-dated the arrival of factory time discipline. Thompson's general distinction between task-oriented and clock time societies was thus overstated. When factories did become established, workers struggled against the enforcement of clock time measurement rather than the introduction of clocks as such (Glennie and Thrift, 1996, pp. 284–5). Furthermore, Thompson's conception of "time discipline" was seen to be generic rather than multi-faceted. Glennie and Thrift proposed a three-fold schema comprised of *standardization*, the degree to which people's time-space paths are disciplined to be the same as one another's; *regularity*, the degree to which people's time-space paths involved repetitive routine; and *coordination*, the degree to which people's time-space paths were organized to connect with one another's (p. 285). In their view, Thompson's approach required all three aspects of time reckoning to be part of a "single disciplinary force". In England, the early industrial economy of the mid-to-late nineteenth century did not meet this threshold. For example, resilient, local forms of agricultural labour, such as harvesting and gang work, were coordinated but not regular. Guild-based production, such as furniture-making and ironwork, was partly standardized, partly regular and not widely coordinated. Glennie and Thrift argued that high degrees of standardization, regularity and coordination coalesced later, under Fordist factory discipline (p. 286).

At this stage in our discussion, one must acknowledge Moshie Postone's (1993) distinction between abstract and concrete understandings of socially necessary labour time. Initially, he makes this distinction with reference to the supersession of handlooms by steam-powered looms in nineteenth-century textile production. The average handloom weaver produced, say, 20 yards per hour yielding a certain market value. Power looms doubled productivity; 40 yards of cloth were produced per hour, and this became the average as the new machines proliferated. The remaining handloom weavers, still producing 20 yards per hour, received only half of their individual hour of labour (assuming that the market price was constant). Extrapolating from this example, Postone remarks that "changes in productivity move the determination of socially necessary labour time along an axis of abstract time; socially necessary labour time decreases with increased productivity". Fundamentally, however, "although the social labour hour is thereby predetermined it is not moved along that axis – because it is the coordinate axis itself which is the frame against which change is measured". This means that "the hour is a constant unit of abstract time; it must remain fixed in abstract, temporal terms". Workers themselves inhabit what Postone calls "concrete time", which is a function of individual/social actions and events (Postone, 1993, p. 292). At this level, increases in productivity and exploitation (as systematized by abstract clock time) are partly constitutive of working-class experience and the process of history.[1]

The increasing abstraction of clock time as the measure of productivity and as the means of disciplining workers was central to Frederic Taylor's doctrine of scientific management. In Western economies from about 1890, labour processes across different industries were recalibrated by the stopwatch and by time and motion studies. The separation of work time and non-work time enabled by the industrialization of production was extended into the factory itself. Taylor and his followers broke down labour processes into simple complementary tasks so that managers could eliminate periods of inactivity and rest time from the working day. Previously autonomous jobs were deskilled and the pace of work increased (Hermann, 2014, pp. 60–1). Henry Ford built upon Taylor's work by introducing a moving assembly line with labour-saving machinery, interchangeable automobile parts and standardized job tasks. Subsequent refinements of this system, within and beyond the car industry, advanced productivity and established a new kind of clock time discipline; machines themselves, rather than clocks and stopwatches, ultimately set the pace of work. The time-saving efficiencies of the production line were subsequently positioned within systems of vertical integration. Ford's River Rouge plant incorporated the entire range of production steps from steel-making to final assembly. A three-shift system was introduced to maximize the time-saving benefits of costly machinery (pp. 62–3). Increases in the rate of productivity and exploitation generated worker opposition in the form of absenteeism, union solidarity, and collective struggles for reduced hours and increased pay. Eventually, in Western economies, the excesses of Fordist-Taylorism were mitigated by legally constituted union organizations acting on behalf of their members across workplaces, occupations and industries. At national level, union federations took part in tripartite negotiations over wage determination with peak employer groups and government leaders. During the 1950s, it was evident that reducing the amount of time per unit of factory output would not, in itself, guarantee profitability. Simply providing and selling more of the same products was unsustainable; incessant marketing was needed to stimulate aggregate demand and shape consumer tastes. Correspondingly, capitalists developed a new approach to mass production. The expansion of output per unit of work time was complemented by a greater effort to reduce work time per unit of output. In practice, this meant that technological advances in the use of machinery reduced the number of workers required (p. 65).

In American, Western European and Japanese factories of the 1970s, microchip computers and robotics began to drive assembly lines. These and other technologies enabled the development of lean production: a system of task integration, worker flexibility and teamwork psychology which further reduced the socially necessary labour time embodied in manufactured commodities. Workers attending the new machinery were compelled not just to produce more but to carry out additional tasks within designated periods of time (p. 69).

Christoph Hermann (2014) observes that lean production was designed not to speed up work flows but to "accelerate the entire factory". To this end, special time study software allowed "management to simulate the production process and test different compositions of tasks" (p. 71). This represented a further permutation of abstract clock time reckoning and a substantial intensification of worker exploitation. Lean production became integrated within just-in-time (JIT) delivery systems whereby parts were delivered to the assembly line as they were needed. Levels of output across different product types were matched with variations in demand and consumer preference. During the 1990s, transnational corporations were able to utilize JIT and lean production techniques within supply-chain networks which spanned the globe. Global workers confronted two tiers of exploitation: clock time and ICT-enabled real-time. As I will later explain, these aspects of time reckoning were complementary and conflictual.

Temporality incorporates memory, expectation and attention to the present. These are manifestations of lived time which are not inherently subservient to any supervening schema of time reckoning. Under capitalism, however, systems of labour exploitation threaten the temporal autonomy of workers within and beyond the workplace (Nadeem, 2009). Empirically, temporal autonomy equates with discretionary time: "the residual that remains after deducting necessary time in three realms: paid labour, unpaid household labour and personal care" (Goodin et al., 2008, p. 40). Within workplaces, households, extended families and wider communities, the waged and the wageless constantly assess the time–cost ratios of sustainable life as material circumstances change. In a household, for example, the capacity to mark out discretionary time and to control its use is contingent upon the dynamics of exploitation experienced by the wage earner(s) and the general availability of public services and infrastructures. In worst case scenarios, where long shifts, uncertain hours and minimal real wage rates coincide with inaccessible, unaffordable health, education and transport services, discretionary time will be absent. Human temporality is intimately connected to the rhythms and cycles of biological nature, climate and the cosmos, including the moon, sun and solar system. This kind of temporal autonomy allows us to experience these connections through our bodies, senses and emotions. Being able to call upon our senses, in moments of repose, to note our breathing, the circulation of blood, beatings of the heart, movement of limbs and the delivery of speech invokes the present-ness of lived temporality (Lefebvre, 2004). Worker experiences of employer-imposed systems of time reckoning may adversely affect the biorhythms of felt life. Unconstrained capitalist exploitation manifested in low wages, increased workflow and workplace surveillance will damage the bio-temporal routines of workers and their families. Sensory, emotional, physical and intellectual interactions among people, underscored by natural rhythms and cycles, generate specific socio-cultural temporalities through craft, music, story-telling, mediated texts, folk rituals and mythic/religious beliefs. In working-class communities, these socio-cultural temporalities depend upon the availability of jobs and the adequacy of wages, and are affected by the intensity of exploitation within workplaces. Under global capitalism, the temporal repercussions of worker exploitation have increased in scale and severity. Worldwide deregulation of established labour laws under neoliberal policy regimes led to the implementation of irregular and flexible work schedules. A 2000 study of 21,505 workers employed in 15 European countries found that so-called "normal" or "standard" working hours were more the exception than the rule. Only 24 per cent of the workers sampled routinely worked between 7–8 am and 7–8 pm, Monday to Friday (Costa et al., 2004, pp. 832–3). The detrimental temporal effects of night and shift work have been documented in studies pertaining to the correlation between work schedules, worker health and well-being, and to the need for internal synchronization of circadian rhythms (Fischer et al., 2004, p. 832; Birth, 2007). Meanwhile, as I will later argue, the subcontracting of formerly Western-located assembly plants to Mexico, South Asia and China has had profound temporal consequences for local workforces and communities. Occupation/work-related diseases, workplace injuries and premature deaths have been common occurrences (Fischer et al., 2004, p. 816). Subcontracted work is, inevitably, insecure or precarious. The associated condition of precarity refers to insecurity of income, working hours, workplace health and safety, collective representation, legal rights and skill advancement (Standing, 2011, p. 10). Precarious work has proliferated throughout developed, developing and the poorest regions within construction, manufacturing, ICT assembly, consumer service and state sectors. Dependence on precarious work is a phenomenological condition. The absence of a securely based work identity affects temporal experience. In precarious jobs, the low probability of personal progress or career advancement breeds short-termism and the incapacity to think beyond the immediate future. This impacts upon interpersonal temporal experiences and outlooks. If one's position in life is unstable, social trust becomes fragile and contingent. Thus, precarious workers, broadly speaking, may have a weakened sense of intergenerational social memory. Shifting between jobs and localities undermines community belonging (Standing, 2011, pp. 18–25).

As outlined in Chapter 1, coeval research practices arrange or reorganize historical and epochal time in a way that gives identity to the "other" (in relation to one's self). Such practices advance the possibility of co-temporal understanding (with regard to otherwise disparate ways of life) and appreciate that temporal relations are embedded within global social totalities (Fabian, 1983). It is important here to realize that coevalness and conflict are not mutually exclusive. Recognizing the other's modus operandi may entail a reluctant acknowledgement of *their* worldview and *their* perspective on history. With the decolonization of Western empires after 1945 and the demise of Cold War politics after 1989, transnational, global-local, and trans-local cultural interactions weakened the Eurocentric preconditions for the denial of coevalness.

At the same time, however, the denial of coevalness has assumed a class dimension within global capitalism. Previously, Fordist-Keynesian political economies featured an inbuilt coeval tension between capitalists and organized workers. This situation is usually termed a "class compromise". This may take the form of mutual cooperation: workers benefit from increasing wages and salaries, and capitalists make profits from increasing aggregate demand. Alternatively, in a negative class compromise, two mutually opposed sides acknowledge that neither is strong enough to definitely prevail. The associational power of the working class curtails the material interests of capitalists, and vice versa. These forms of class compromise play out in the spheres of exchange (labour market regulation, demand management), politics (social democracy, corporatism) and production (union recognition, labour process co-management) (Wright, 1997, pp. 338–51). Class compromises can be regarded as coeval even if they are riven by tension and conflict. Each side recognizes the other's historical outlook, either willingly or reluctantly. In these circumstances, bourgeois and working-class cultures co-exist. Global capitalism requires the erasure of this coeval relationship. Workforces are treated as a collateral or disposable component rather than as a fixture internal to capital–labour relations. The worldwide configurations of this process have been outlined by Ankie Hoogvelt. She observes that economic and social power relations constitute "a three-tier structure of circles" which "cut across national and regional boundaries" (Hoogvelt, 2006, p. 163). In this context,

> We may count in the core some 20% of the world population who are deemed "bankable" and therefore able to borrow funds. They are encircled by a fluid, larger social layer of between 20% and 30% of the world population (workers and their families) who labour in insecure forms of employment, thrown into cut-throat competition in the global market. State-of-art technology, frenzied capital mobility, and neo-liberal policies together ensure both a relentless elimination of jobs by machines and a driving down of wages and social conditions to the lowest global denominator. The third, and largest, circle comprises those who are already effectively excluded from the global system. This does not mean that they are not affected by the global system; on the contrary, they carry more than their fair share of its

> burdens of environmental degradation and resource depletion, of war and conflict, of forcible dispossession. But what it means is that they are expendable.
>
> (Hoogvelt, 2006, pp. 163–4)

Those "already effectively excluded from the global system" live on the edges of paid work, precarious or otherwise. For the most part, they form the burgeoning slums of African, Latin American and South Asian metropolises, such as Lagos, Cairo, Johannesburg, Mumbai, Karachi, Bangkok, Kolkata and Sao Paulo. Myriad processes of micro-exploitation operate within this massive informal sector. Rag pickers, prostitutes, drug dealers, petty criminals, car washers, shoe shiners, and street vendors lead lives of radical contingency. As Mike Davis has argued, they are not a reserve army of industrial labour to be employed and laid off as the economy grows and contracts. Rather, they constitute a surplus humanity produced by a dual system of structural exclusion (Davis, 2006). In the 1980s and 1990s, the standard International Monetary Fund-World Bank structural adjustment programme of currency devaluation, privatization, tariff reduction, public sector contraction and food subsidy abolition benefitted private lending institutions and transnational corporations at the expense of local working populations. Meanwhile, the profit imperatives of global agribusiness corporations undermined rural agricultural infrastructures. Throughout Africa and Latin America, fertile lands were converted into agricultural production units designed to service world commodity markets. For each agricultural commodity, the imperatives of corporate profit undermined rural livelihoods centred around ecologically sustainable mixed farming, local-regional market exchange and food security. The resulting dereliction of rural communities accelerated immigration to the cities (Davis, 2006; Li, 2011, pp. 281–98).

On the basis of the previous discussion, global capitalism's exploitation of the global worker can be understood anew as a set of overlapping conflicts "around time and the use of time" (Lefebvre, 2004, p. 74). I will now examine these conflicts as interlinked propositions.

The real-time operations of transnational corporations structurally increase the severity of clock-based worker exploitation

By the mid-2000s, the ascendancy of ICT-enabled real-time within the upper reaches of transnational corporations and across supply chains was ratcheting up clock-based rates of labour exploitation. The totality of this development is best understood in terms of global labour arbitrage. As outlined in the previous chapter, arbitrageurs make money by detecting minute and monetary price discrepancies across financial markets in order to buy cheap and sell dear. Over long time periods, transnational corporations profit from inter-geographic discrepancies in the cost of labour. In 2004, Morgan Stanley's chief economist, Stephen Roach, noted that a "new global labour arbitrage" was acting as a "powerful structural depressant" upon traditional sources of job creation in high-wage economies such as the US, Europe and Japan. Three interconnected causal trends were identified. First, offshore outsourcing platforms, already established in manufacturing, were shaping the services sector from "low value-added transactions processing and call centres to activities with a high intellectual capital content, such as software programming, engineering, design, accounting, actuarial expertise, legal and medical advice, and a broad array of business consulting functions". Second, Roach observed that ICT infrastructures had streamlined the logistics of supply-chain management. In manufacturing, the real-time monitoring of sales inventory, production and delivery trends became routine. For services, the intellectual capital associated with research analysis and consulting could be transmitted anywhere, instantaneously. And, low-wage offshore knowledge workers could be seamlessly integrated into global service businesses, once the exclusive domain of knowledge workers in the developed world. Third, new imperatives of cost control brought global labour arbitrage to life. In the 1990s and early 2000s, wage rates in China and India ranged from 10 to 25 per cent of those for workers of comparable quality in the US and the rest of the developed world. Clearly, offshore outsourcing that extracted products and/or services from low-wage workers in the developing world was a routine profit-maximizing strategy. Meanwhile, in the US and other developed economies, the outsourcing of jobs became the functional equivalent of imported productivity as global labour arbitrage substituted cheap foreign labour for more expensive domestic labour input (Roach, 2006).

Particular aspects of global labour arbitrage constitute the interface between the real-time world of global capital and the clock time world of exploited labour. The streamlining of logistics and logistics work is a case in point. Previously, industrial capitalism's need to shift products faster, further and more cheaply had incorporated the labour of warehouse stackers, drivers, seafarers, and port, airline and many other workers. From the 1980s, ICTs intermeshed with the established logistics sector to integrate transnational supply chains and transport products to their point of consumption. Meanwhile, global logistics corporations moved beyond traditional transport sectors, such as railways and shipping, to provide customers with "a complete supply chain solution" (Sealey, 2010, p. 27). To this end, the very nature of logistics was transformed. It utilized "electronic communication to integrate all forms of transportation with systems of wholesale trade (or distribution) in order to deliver products immediately, if not instantaneously, in response to market demand" (p. 28). Expert analysts had to ensure that unexpected shifts in market demand did not destabilize JIT systems of production and supply-chain management. This, in turn, required subcontracted workforces flexible enough to absorb redundancies, increases or decreases in work hours and shorter spans of "down time". In 2005, David Ciscel and Barbara Smith aptly described the schema of exploitation which had been constructed:

> Flexible labour is a key component of the logistics solution to work-organization problems. The factory is no longer the key source of profitability. In fact, it has become only a small – and increasingly outsourced – component of a complex distribution and labour system. Cost control comes not just from global outsourcing but also from control of labour scheduling, terms of employment and working conditions through the entire logistics system.
>
> (Ciscel and Smith, 2005, pp. 431–2)

For our purposes, Ciscel and Smith's essential point is that manipulation of labour was incessant as well as flexible. The mathematics of clock-based worker exploitation could be continuously recalibrated to fit changing economic circumstances (pp. 431–2). This was the logic of retail-driven supply chains whereby brand-defined companies, such as Nike, Gap, Reebok and Mattel, specified the production requirements for subcontracted factories. Longstanding manufacturer-centred supply chains in areas such as automobiles, aircraft and heavy machinery were also able to develop global reach. The retail-driven model incorporated the light manufacturing sector of shoes, apparel, accessories, toys and consumer electronics (Appelbaum and Lichenstein, 2006, p. 107). By 2001, the world's 40 largest retailers were generating almost US$1.3 trillion in revenues, nearly 4 per cent of world GDP (Appelbaum, 2005, p. 370). The integration of bar codes, computers and telecommunications, and data storage banks allowed the major players to coordinate sales and distribution with consumer demand. Factory contractors in

China, India, Bangladesh, South East Asia, and Central and South America were effectively supervised and controlled by major retail conglomerates (p. 108). As Richard Appelbaum and Nelson Lichenstein have outlined, the paradigm case here was Walmart, the world's largest buyer of consumer products. Their headquarters in Bertonville, Arkansas was also home to suppliers, such as Procter and Gamble, Sanyo, Levi Strauss, Nestle, Johnson and Johnson, Eastman Kodak and Kraft Foods. Meanwhile, China's Guangdong province in the Pearl River Delta provided 30,000 factories and more than 40 million migrant workers to Walmart and other transnational retailers. Walmart's world buying headquarters was established in Shenzhen, a rapidly expanding manufacturing centre and container port. As Appelbaum and Lichenstein pointed out, these interlinked transnational operations were the drivers of worker exploitation within Guangdong's contracted factories:

> instantaneous links between Bentonville and Shenzhen are a mechanism that puts relentless pressure on Chinese vendors to meet production and shipping deadlines. Because Walmart can so accurately forecast its inventory needs and change those forecasts as conditions shift in the United States, it now expects the same kind of flexibility from its manufacturers. Thus, the stop-and-start nature of work in so many Chinese factories and the heavy overtime punctuated by short work weeks and unpaid vacations.
>
> (Appelbaum and Lichtenstein, 2006, p. 120)

Another aspect of global labour arbitrage concerned the time arbitrage associated with transactional processing and call centre work. Transnational corporates constructed a 24-hour business cycle by exploiting the time zone differences between geographically disparate labour pools. Within local labour processes and workplaces, time arbitrage entails the extension of work hours and/or the acceleration of work activities. The process is detailed in Shezhad Nadeem's investigation into India's outsourcing industries. Between March 2005 and March 2006, he interviewed workers, managers and executives from three companies who provided either IT-enabled services or business process outsourcing services (that is, customer service, transcription, claims processing, graphics and content development). The other companies selected were an IT subsidiary of an investment bank and a major IT company (Nadeem, 2009, p. 22). Overall, two kinds of time experience were identified. Higher-end IT workers, usually salaried, worked long hours without overtime. Internal time schedules were elastic and breaks regular as long as a designated series of complex tasks were completed. In other words, time was stretched. As I will later explain, these interviewees were representative of inter-networked global professionals working in synchronic fashion across countries and time zones. Globally set deadlines for project completion would translate into different clock times in different zones. In contrast, wage-remunerated call centre workers involved in business process outsourcing were subjected to the clock time pressures characteristic of lean production. Workers at call centres with automated dialling were only fed live calls in order to excise time gaps, accelerate workflow and increase targets (customer transactions per hour). In call centres generally, meal and restroom breaks were often strictly monitored and workers punished for small time infractions. Nadeem's interviews indicated that personal internalizations of these time disciplines were "manifested in a psychological desire to perform" (p. 25).

The real-time tourniquet of labour process and labour pool management threatens the temporal autonomy of working life

Increasing the severity of clock-based worker exploitation negatively affects discretionary time, diurnal-circadian biorhythms and cultural traditions within poor communities. Throughout India's IT-enabled services sector, for example, night shifts were, and are, a required condition of employment. Nadeem's fieldwork summary included a management flyer distributed to a Bangalore call centre. Workers were enjoined to recite "my 2 am is the rest of the world's 9 am" (Nadeem, 2009, p. 29). Nadeem observed that 63 of the 103 night shift workers interviewed reported experiencing "loss of appetite, insomnia, eyestrain, fatigue, stomach cramps, acidity, constipation, headaches and backaches" (p. 30). Outside of paid employment hours, travel time and daily sleep periods, workers struggled to find time for family and friends. Personal relationships, religious participation and general social engagement were adversely affected. Nearly half of Nadeem's total sample, including most night shift workers, reported social and family problems (p. 35). As indicated earlier, Nadeem's professional interviewees, from an IT services company and the IT subsidiary of an investment bank, also experienced restrictions of temporal autonomy. They were expected to work overtime and received instant out-of-office messages in accordance with the "24 hour work culture" of their corporate employers (Nadeem, 2009, pp. 26–8). Salaried workers' diurnal rhythms were disrupted and their discretionary time curtailed. Although Nadeem found that Indian IT professionals worked longer hours than their counterparts in other countries, a common work culture was identified. Inter-networked professionals from different time zones, working on transnational projects with transnational deadlines, had to rearrange personal clock time routines.

Dutch researcher Ida Sabelis' in-depth interviews with 15 top-level managers from large transnational organizations noted that faster and more frequent communication was a taken-for-granted feature of professional life. For one respondent, "teleconferences were scheduled during the day and after hours in order to synchronize with Asian and American partners in *real-time*". Sabelis found that such imperatives were "colonising the private lives of executives and managers". These respondents, unlike Nadeem's, had some capacity to delegate time management tasks to families, secretaries and friends (Sabelis, 2007, p. 264, emphasis in original).

In stark contrast to Sabelis' interviewees, temporal autonomy for Chinese manufacturing workers arriving from the countryside was entirely precluded by the establishment of dormitories in and around factory compounds. Communal, multi-storied buildings contained shared bunkrooms and facilities without provision for private spaces. Individual workers, often young single migrant women, were separated from families and expected to adjust to unfamiliar surroundings on a short-term contractual basis. These arrangements eventually became the norm for production workers throughout China (Pun and Smith, 2007). During 2002 and 2003, labour studies researchers Ngai Pun and Chris Smith interviewed managers, supervisors and workers at two foreign-owned clothing factories. One was a medium-size subcontractor in Dongguan producing for first and second tier supply companies. The other was a higher-end subcontractor in Changzhou seeking to gain Western buyer approval for overseas export orders (p. 37). In the first case, 12–16 workers were housed in each dormitory room. The three-storey building, adjacent to the factory, was overcrowded, with poor lighting, ventilation and toilet-washroom facilities. At the second firm, living conditions were somewhat better, especially for managers, forepersons and clerical staff. However, women production workers were crowded into dormitory rooms without inbuilt kitchens, bathrooms or adequate toilets. Pun and Smith concluded that labour exploitation at each factory was co-extensive with a "dormitory labour regime" in which the erasure of home–work separations "extended management powers over workers' lives". The JIT disciplines of production work were complemented by "direct control over the daily reproduction of labour power in accommodation, food, travel, social and leisure pursuits within the production units" (p. 42).

In other poor, local-regional contexts, the socio-temporal hierarchies of informal work are configured and pressured by the time-cost imperatives of global supply chains. For example, Alessandra Mezzadri's investigation of the Delhi export-oriented garment sector found that traditional social structures central to the Indian informal economy had been restructured to supply international buyers from transnational fashion brands and retail chains (Mezzadri, 2008, pp. 603–17). The local nexus of this supply chain was observed to be pyramidal. At the top, merchant and manufacturing exporters have direct contact with the international buyer. Delhi-based processing centres cut, thread, stitch, iron, check and pack the garments. Subcontracting is used to increase tailoring capacity. Traditionally, such activities were performed by the *darzis* tailoring caste of northern India. From about 1980, increased export requirements loosened this arrangement as new workers arrived. Forty-five thousand were then employed in the Delhi garment industry. By 2005, according to official sources, over 100,000 garment workers were employed, mostly in unregistered sectors. Mezzadri's research indicates that the actual workforce was two or three times larger (p. 609). Ninety per cent of garment factory workers were male migrants from the poor, outside states of Uttar Pradesh and Bahari. They obtained temporary and casual jobs, often on a daily basis. Inside Delhi's garment units, subcontracting allowed merchant and manufacturing exporters to maintain product and workflow flexibility in response to the needs of international buyers. Exporters also hire labour contracts or *thekedaars* to bring groups of workers to factories. Mezzadri notes that "in this way, the exporter is discharged of any obligation towards labour which is not 'his' " (p. 609). The Delhi garment industry also makes use of ancillary non-factory labour, especially for the tasks of embroidery. These tasks are usually carried out by machines or by hand. Embroidery workers skilled with handlooms (*adda*-work) are supervised by proprietors in designated units. *Moti*-work or beading is realized through networks of home workers. Vendors and sub-vendors bring orders from Delhi to the proprietors of embroidery workers in outlying towns and villages. Family and socio-cultural temporalities were thus shaped by a local-regional economy which had become a node of transnational labour exploitation.

William Robinson has documented the emergence of a similar pattern in Latin America. Neoliberal policy regimes dismantled import-substituting national economies and deregulated labour markets such that formal employment "contracted inverse to the expansion of informal work" (Robinson, 2008, p. 242). In 1970, 70 per cent of Latin America's labour force worked in the formal sector; the figure dropped to 53.1 per cent in 1985, 45.7 per cent in 1992 and 42.1 per cent in 1998 (pp. 242–3). Transnational corporations were outsourcing jobs to subcontractors who in turn drew on labour from the informal economy. In this economy, work activities, such as domestic service and street vending, were irregular, unstable and below legal minimum wage levels. In global terms, Robinson argued that capital had ultimately come "to dominate a vast army of workers *and* 'independent' producers labouring in various degrees of formality and informality" (p. 242). For our purposes, the new situation can be described as one in which real-time manipulation of labour pools increases the amount of precarious work at the expense of temporal autonomy for the waged and wageless poor.

Global capitalism's strategy of class rule denies coeval status to the working and wageless poor

The formation of global capitalism precluded class co-existence and class compromise. As Angie Hoogvelt noted, securely employed professionals and waged workers were incorporated within the system as "bankable" borrowers and consumers (Hoogvelt, 2006). Other wage earners, informal workers, service providers and their families lived precariously. The outer layer of the world's poor was individually expendable and a structural depressant on global wage levels. Their temporal experiences and sensibilities became the unrecognized "other" to global capitalism's operating logic of inter-networked real-time.

Systemic denials of coevalness often entailed extra-economic coercion of precarious workforces and surrounding communities. Such is evident in the establishment of migrant labour regimes whereby states, in collaboration with transnational corporates and financial institutions, deliberately create workforces without full citizenship protection in order to sustain a globally competitive export niche (Lee and Kofman, 2012). Examples include the demarcation of export-processing zones by Indonesia, Philippines, Singapore and other South East Asian governments.

One especially vivid case was Dubai, a Gulf state where prosperity and opulence depended on an "indentured invisible majority" (Davis, 2007, p. 64). In an essay entitled "Sand, Fear and Money in Dubai", Mike Davis outlines a social pyramid in which the al-Maktoum sheikdom and their cousins sit atop a layer of leisured local Arab speakers (15 per cent of the population), well-off expatriate managers and professionals (from North America, the UK, Europe, India, Lebanon and Iran), and a populous bottom layer of "South Asian contract labourers legally bound to a single employer and subject to totalitarian social contracts" (p. 64). Dubai's luxurious personal lifestyles are attended to by "vast numbers of Filipino, Sri Lankan and Indian maids". The construction industry is carried by "an army of poorly paid Pakistanis and Indians". They work "twelve-hour shifts six and a half days a week, in the asphalt melting desert heat" (pp. 64–5). Trade union strikes and protests are illegal and workers are immediately deportable. Migrants and their conditions of life receive little media coverage. Labourers are housed in desert camp settlements and excluded from the world of cosmopolitan consumption (p. 65).

Just as invisibly, African mineral workers endure slave-like conditions to produce the raw materials necessary for the production of cell phones, laptops, light bulbs and cars. The minerals are smelted, refined and enriched in China, Thailand, Malaysia and Indonesia for electronics markets. In the Democratic Republic of the Congo, many mines are controlled by either armed forces or rebel armies. Communications researcher Christian Fuchs argues that "the informational productive forces of capitalism that create digital media are to a certain extent coupled to the slave mode of production in developing countries in order to reduce labour costs and maximize profits" (Fuchs, 2013, p. 12). In Central Africa, "the slave mode of production" derives from local traditions of debt bondage (to outside lenders) and time bondage, whereby workers belong to their employers for a given part of the week (Fuchs, 2013, p. 12). In this form of subcontracted labour, pre-modern legacies of hierarchical brutality mesh with the profit imperatives of a global supply chain.

Throughout global capitalism, the denial of coevalness characterizes not just worker exploitation but also wider patterns of class rule. As Mike Davis observed, structural adjustment programmes and the rural encroachment of agri-business precipitated the growth of mega-slums throughout Africa, Latin America, and South and East Asia. They were segregated from the lives of the wealthy and the upper middle class by urban geography and design. The consequent denial of coeval status to the poor can be seen in Ran Dasgupta's vivid depiction of Bhalswa Colony, in the north of Delhi. A "mountain of garbage" is seen to preside over "huts and slums" comprised of "rickshaw drivers, vegetable vendors, cobblers, construction workers and other working people" (Dasgupta, 2014, pp. 236–7). Much of the population had been evicted from rural dwellings or from surrounding townships closer to central Delhi and forcibly resettled during the late 1990s and early 2000s. Dasgupta reflects on the fact that getting out of Bhalswa took over an hour on a community bus: the only public transport available.

> It is impossible to communicate how remote and inaccessible this place is, though it is in the middle of one of the world's largest cities. It is easy to understand how national borders might separate populations with very different access to the global economy, but more difficult to conceive of how such divisions might run through a single city. But in this metropolis where many people are totally restructuring the global economy with their capital ideas and labour, and where you can sometimes feel, therefore, that you are sitting where all the forces of the globe converge, there are populations that are entirely irrelevant to that system. Bhalswa is not a place of capitalist oppression – in fact many of its residents would love a bit more of that. It is a place of unwanted lives, of people who can find almost no connection to the economic boom that surrounds them.
>
> (Dasgupta, 2014, p. 252)

Dasgupta goes on to describe the people of Bhalswa as a surplus population with nowhere else to go. This plight is shared by counterparts in other large megalopolises (Caldeira, 2000; Davis, 2006; Bond, 2007; Gayer, 2014).

Disrupting the time conflicts of worker exploitation

The time conflicts outlined here together constituted a global assault against formally and informally employed workers and all other marginalized populations. Transnational corporations, networked in real-time, levered the clock time exploitation of subcontracted labour pools, imperilled the temporal autonomy of workers, families and communities, and denied their rights for coeval recognition. Yet, this was in some respects a fragile accomplishment. The repositioning of formal and informal workers within global supply chains and production networks created opportunities for co-temporalities of labour agency. In an economically interdependent world, workers from disparate socio-cultural backgrounds could, potentially, comprehend their experiences in relation to other lived places of work. For labour organizer Katie Quan, this was a major strategic objective:

> to give workers a picture of the entire production system, to help them understand that there is much profit in that system, and to

> convince them that it would be worthwhile to fight for improved wages and working conditions, labour organizers try to teach workers about their own position in the global value chain, and about their position in relationships to the other economic actors in the chain.
>
> (Quan, 2008, p. 90)

During the 1990s and early 2000s, the movement against Californian sweatshops had already depicted a "pyramid of power and profit" with numerous garment workers at the base holding up contractors and subcontractors, manufacturers and retailers (Quan, 2008, p. 91; Cummings, 2009). At a more sophisticated level, Quan portrays the global apparel industry as a webbed cluster of competing chains in which workforces are units of exchange value. From a worker-centred perspective, activists were urged to reveal the multiple subcontracting arrangements of transnational corporates as well as the leverage points or weak links in their value chains. With this and other information about corporate performance, organized labour could form external alliances with sympathetic political and social actors and coordinate campaigns with designated targets and objectives. Quan cites the case of Kukdong Corporation, a South Korean apparel manufacturer for Nike, Reebok and other major brands with production centres in Indonesia, Bangladesh and Mexico. In 2000, the Mexican plant established in Atlixco, Puebla, attracted mainly women workers from surrounding rural areas. They endured long travel times, intimidating managers, minimal wages and poor food. In January 2001, a three-day strike in defiance of the company union provoked violence on the picket line and dismissal notices from management. In support of the workers, a local non-governmental organization (NGO), major American unions, an independent monitor of labour standards for collegiate apparel, and a student group known as United Students Against Sweatshops (USAS) launched a public campaign against Nike, Reebok and Kukdong. The dismissed workers were reinstated and fought, successfully, to establish an independent union and a collective bargaining agreement. The pressure points in this campaign were, first, the absence of a code of conduct agreement between Kukdong and its retail partners Nike and Reebok and, second, Kukdong's dependence upon the US campus market; university authorities had their own code of conduct obligations (Quan, 2008).

Co-temporal solidarities among disparate workforces were central to the campaign against Tainan Enterprises, a Taiwanese firm with factories in Taiwan, India, China, Cambodia, Indonesia and El Salvador that manufactured apparel for Gap, Lands' End and Ann Taylor. After Tainan closed its El Salvadorean plant in response to the formation of a union, local labour activists found evidence that the employer was shifting orders to facilities in other countries. Workers refused to accept legally required severance pay and vowed to reopen the plant. Through a local NGO, they made internet contact with union members at Tainan factories in Taiwan, Cambodia and Indonesia. Concerted actions in those countries were complemented by publicity drives from the US Textile and Garment Workers Union (UNiTE) and the US Labour Education in the Americas group (USLEAP). Quan recalls how "surrounded by pressure from so many sides, the Tainan employers finally agreed to meet with workers' representatives". A July 2003 agreement allowed all former Tainan workers to be re-employed. This campaign had advanced worker solidarity across multiple locations, as internationally linked NGOs and labour activist groups exerted pressure on Tainan and its major retailers (Quan, 2008, pp. 98–9).

The JIT calibrations which conjoin supply orders, production runs and retail demand for the finished product are fragile. Hold-ups at key nodal points will de-synchronize the scheduling of retailers, subcontracted suppliers and logistics operators. This occurred in April 2007 when striking workers at Shenzhen's Yantian port prevented 10,000 containers from being loaded or unloaded. They demanded higher wages and the right to organize independently. Their demands were largely met after negotiations with Shenzhen City authorities, the Labour Bureau and the Shenzhen Federation of Trade Unions. Labour researchers Eli Friedman and Ching Kwan Lee's account of this and other container terminal strikes at Shenzhen noted "the critical position of the port in international supply chains" (Friedman and Lee, 2010, p. 520).

As formally employed workers advanced transnational, co-temporal solidarities and disrupted the time-reckoning synchronicities of supply chains, production lines and retail sector demand, the informal poor battled for coeval recognition from local power structures, union organizations and NGOs. For activists Christine Bonner and Dave Spooner, "it is crucial that informal workers are agents rather than subjects" so that they can "move from dependency to independence and to speak for themselves through their elected representatives" (Bonner and Spooner, 2011, p. 128). From their personal experiences and the writings of other activists, informal worker organizations are seen to range from voluntary membership frameworks (unions, community associations, cooperatives, self-help groups) to hybrid formations with NGO characteristics. Such groups differ in size and scale "from small, fragile local organizations to national federations and alliances to regional and international networks and federations – both inside and outside the formal trade union movement" (p. 131). This broad mosaic was first signalled at the 2002 International Labour Conference by the "Resolution Concerning Decent Work in the Informal Economy" (p. 127). As advocates for Women in Informal Employment: Globalizing and Organizing (WIEGO), Bonner and Spooner have investigated two sectors: domestic workers and waste pickers. From this analysis, one can note manifestations of coeval communication and reciprocity. They took shape after the 2008 global financial crisis; their political efficacy, alongside other forms of political mobilization, will be considered in Chapter 10.

7
Political Economies of Time Conflict

In this part, I have so far proposed the following argument. Global capitalism's supra-territorial, instantaneous networks of financial speculation, subcontracted production and worker exploitation were riven by conflicts of time. Presentist and short-term profit-taking clashed with longer-term profit-making strategies. Transnational, intra-managerial impositions of real-time upon clock time sharpened the conflict between capitalist time reckonings of production and workers' temporal autonomy. Within regional-local and urban surroundings, the waged and informal poor were denied coeval recognition. The sum of these tendencies fundamentally disrupted the realization of capital through the interlinking circuits of money, investment, production and commodity exchange. A vital question thus arises: how could global capitalism stabilize conflicting priorities of time for the purposes of accumulation and reinvestment? Clearly, more is at stake here than economic factors. There must be surplus capital and a form of organization capable of translating the surplus into certain use values over a designated period of time. This organization may, with varying degrees of success, take the form of a state, a regional bloc of states or a supra-national institutional structure of economic governance. This chapter proceeds on the basis that the realization of capital requires a general congruence between intra- and extra-economic time reckonings and temporalities. With the formation of global capitalism, such congruity was abandoned in principle and its future possibility systematically prevented. In making this argument, I will question the usual recourse to "spatio-temporal fixity", "spatio-temporal fix" and other related locutions. Under global capitalism, the internal cohesion of nation states, national economies and national democracies eroded, albeit partially and unevenly. I will conceptualize these developments as a twin set of time conflicts: the nation state versus global capital, and the national polity versus the transnational state. The latter conflict, I will argue, helped to precipitate the emergence of transnational political activism.

Keeping capitalist political economies together: time congruities and conflicts

The realization of capital within, say, a national setting will require a state structure to ensure security of money supply and external trade, a system of law and rules of contract. Such a state will seek to arbitrate between different fractions of capital with different time-reckoning approaches and different temporal horizons. This, in turn, requires an extra-economic configuration of capitalism (such as a national economy) and micro-macro configurations of employment, home settlement, civic association and political activity. Successful assemblage of these components brings together principles of temporality and markers of chronology at odds with presentist and short-term profit imperatives. More specifically, the realization of capital requires a temporal horizon and a sense of history compatible with the strategic objectives of macro-economic development. These objectives are given policy substance by research cultures, state departments, public bodies and political structures with complementary institutional memories and outlooks. How policy development proceeds will significantly depend upon the structural relationships and tensions between state institutions and business interests. The memories and future orientations of ruling institutions are also informed and challenged by various pressure groups, worker organizations, civic associations, and religious and culturally identified communities. Together, they constitute a socio-cultural sphere which may publicly express a shared imaginary based upon regional and national history. To the extent that socio-cultural imaginaries cohere, they reflect the normative values of the political process and macro-economic policy objectives. Examples here include national constructions of Keynesian social democracy and the import-substituting developmental state.

For political economist Bob Jessop, such formations can be seen as examples of “the spatio-temporal fix”. The idea of a fix is meant to connote not rigidity or adhesiveness but stability, in the sense that contending and contradictory forces are reconcilable. In spatial terms, these forces are represented by “the formal market economy considered as a pure space of flows” and “the substantively instituted economy considered as a territorially and/or socially embedded system of extra-economic as well as economic resources and competencies” (Jessop, 2003, pp. 109–10). Thus, fixity or stability requires financial circulations over space to be counter-balanced by investment in physical infrastructures (in regard to production, transport and communication). The state, as organizer of extra-economic resources, is a territorial construct rather than a spatial dynamic. Jessop's conception of temporality identifies a conflict between "short term economic calculations (especially) in financial flows and the long-term dynamic of real competition rooted in resources (skills, trust, collective mastery of techniques, economies of agglomeration and size) that may take years to create, stabilize and reproduce" (p. 109). Under conditions of spatio-temporal fixity, state structures have the capacity to reconcile these discrepant priorities.

The above account is partial rather than comprehensive; the spatio-temporal fix, as a theoretical formulation, occludes certain perspectives on time which might advance our understanding of capitalist political economies. The posited conflict between short-term and long-term temporal horizons, for example, is simplistic if the conflict of time reckonings is overlooked. As explained in Chapter 5, the short-termist outlooks of financial speculation reflected the manipulation of clock time by real-time, notwithstanding their symbiotic connection. In this context, the rebalancing of time reckonings would necessitate compulsory chronological auditing of financial institutions and practices. In temporal terms, fixity or stability represents more than an institutionalized complementarity between short- and long-term business horizons. As I have intimated, in such circumstances a shared sense of the economic past informs the institutional memories of government, the public sector, intellectual cultures and the national polity. Thus, Keynesian social democracy was forged from collective memories of the Great Depression and the resolve to overturn the then prevailing orthodoxies of economic management. The Third World developmental state was premised upon nationalist rejections of the Western imperial past. The issue of past-oriented temporality will figure prominently in our later discussion of the time conflicts between the nation state and global capital, and between the national and the transnational state.

The global provenance of the spatio-temporal fixity idea was explicitly addressed in David Harvey's *The New Imperialism* (2005). A critique of his standpoint will illuminate my argument concerning the emergent political economies of time conflict. For Harvey, the globalizing circuits of capital hinge upon the continual production of space. This may involve the opening up of new markets, production capacities, resource opportunities and labour pools. This process generates a spatial contradiction whereby "fluid movement *over* space can be achieved only by fixing certain physical infrastructures *in* space" (Harvey, 2005, p. 99, emphasis in original).[1] Thus, transport and communication infrastructures constitute physically located capital which absorbs considerable investment capital. The recovery of and return on investment depend on commercial use of the infrastructure (for the purposes of trade, production and consumption). If such use cannot be commercially sustained, investment capital will mobilize to exploit opportunities elsewhere. From this perspective, stable configurations of accumulation and reinvestment entail the integration of mobile and geographically fixed capital. In temporal terms, Harvey argues that surpluses of money capital may be absorbed "through investment in long term capital projects or social expenditures (such as education and research) that defer the re-entry of capital values into circulation into the future" (Harvey, 2005, p. 109).[2] Here, we return to the idea that sustainable temporal fixity requires a macro-economic balance of short-term and long-term time frames.[3] Within this framework, Harvey makes a crucial analytical distinction between the spatio-dynamism of capital and the territorial nature of states (p. 33). In spatio-temporal terms, the state is positioned as follows:

> The capitalist operates in continuous space and time whereas the politician operates in a territorialized space and, at least in democracies, in a temporality dictated by an electoral cycle. On the other hand, capitalist firms come and go, shift locations, merge or go out of business, but states are long lived entities, cannot migrate and are, except under exceptional circumstances of geographical conquest, confined within territorial boundaries.
>
> (Harvey, 2005, p. 25)

Harvey later outlined how spatio-temporal instabilities were greatly exacerbated by the emergence of transnational corporations, worldwide financialization, privatization of state sectors, International Monetary Fund (IMF) structural adjustment programmes, and multilateral trade regimes (pp. 66–8, 157–61).[4] In general, mobile, short-termist capital had overruled fixed, long-term capital and reduced the public-territorial functions and national-temporal moorings of states. The net result for the world's poor was termed "accumulation by dispossession" (pp. 137–82). Harvey's analysis presents several interrelated difficulties. First, the state is depicted as a territorially and temporally inscribed entity within capitalist relations of power, but not as an arena of conflict between classes or the discrepant requirements of capital accumulation and government legitimation.[5] In global terms, the latter viewpoint widens our understanding of pan-regional inter-state systems, supra-national institutional networks, and national states (including the structural inequalities between them). Second, the general focus on temporality elides other, equally relevant epistemes of time (time reckoning, coevalness[6]) and this oversimplifies conceptions of the state–capital relation within global capitalism. Third, the conflation of temporality with cyclicity and chronological time frames underplays the significance of inter-institutional memory and the qualitative dimensions of futurity (scenario planning, futures-in-the-making, futures past). These aspects of temporality are central to the reproduction of state power and legitimacy. Fourth, in light of these criticisms, Harvey's spatio-temporal schema brackets out the idea that states within global capitalism operate, doubly, as agents and arenas of time conflict.

Political economies of time conflict arise out of the intertwined histories of state, nation, economy and democracy. The interrelationships between these central categories and their empirical referents have changed substantially over historical time. Reflection on this matter will highlight the epochal appositeness of contemporary time conflict analysis.

In principle, the modern state exercises power that possesses internal sovereignty over delimited terrain and a designated body of people. State power is generally constituted through a legal order whose jurisdiction is restricted to state territory. Recognition of this restriction is a defining feature of inter-state arrangements built upon territorial frameworks of diplomacy. A nation is composed of people who belong to a political community, minimally shaped by language, culture and collective memory (Habermas, 1998). People become a nation when diverse local memories and traditions are combined to create a common heritage and purpose. When this process is documented and institutionalized, a nation state takes shape. Popular national self-consciousness can enable individuals and groups to mobilize for democratic rights. However, this is not necessarily the case; nationalist sentiments can also be mobilized to extinguish democratic rights. Nor is there a necessary correspondence between state formation and national consciousness. They are separate processes which converge in given historical circumstances; there is no single trajectory of convergence. The development of state institutions may forge local, ethnic and/or linguistic traditions into a national identity, as was the case in Northern and Western Europe during the 1600s. Conversely, national self-consciousness may precipitate the construction of state institutions, as occurred in Italy, Germany and Central Eastern Europe during the 1800s and early 1900s (Habermas, 1998). In Latin and Central America from the early 1800s, the transition from national consciousness to nation state was wrought through wars of independence from Spain.[7]

In any event, modern states facilitated and depended upon some economic system of production, exchange and distribution. One should recall at this juncture that rivalrous Western nation states were built upon the economic exclusion and immiseration of colonized peoples. After 1945, Asian and African decolonization, driven by anti-imperial nationalisms, precipitated a new historical trajectory of internationalism and nation-state development. These new entities were typically founded within colonial frontiers out of nationalist identities which could not always ensure durable governing institutions. National strategies of economic development confronted Cold War geo-politics and the economic preponderance of the US, Western Europe and Japan. With the collapse of the Soviet Union after 1989, the formation of independent states in Eastern and Southern Europe followed a path of more or less violent secession (Habermas, 1998). In parlous economic circumstances, these countries become governed by dominant ethnonational groups. Thus, Yugoslavia fragmented into rival ethnic states, none of which possessed ready-to-hand frameworks of law, democratic representation or government succession.

In an epoch shaped by global finance, world-spanning production networks, transnational corporations and supra-national institutions, it could not be assumed that nation states and national economies were integrated wholes. Indeed, the opposite tendency of disintegration became increasingly evident throughout the 1990s and early 2000s. Let us now identify the political-economic contours of time conflict involved.

The nation state versus global capital

The globalization of finance and the financial deregulation of national economies weakened the capacity of governments to create credit, set monetary policy and impose capital controls. And, as transnational corporations generally directed international investment flows, governments lost influence over conditions of production whereby taxable profits and incomes funded macro-economic and public policy. For well-resourced governments, this weakened the fiscal basis for income redistribution. In the poorest developing countries, state institutions were difficult to sustain. Under such circumstances, the real-time world of finance capital was at odds with the chronological time of state institutions and government leadership. Such became apparent during moments and periods of financial volatility. Open conflicts over time reckoning between the nation state and global capitalism reflected a deeper strategic battle for the temporal authority to determine the memory, futurity and contemporary priorities of macro-economic policy.

Conflicts of time reckoning between nation states and global capital were notably apparent during the South East Asian currency crises of the late 1990s. Major Western banks had poured short-term loans into the financial centres of the region's national economies as hedge fund operators exploited the time arbitrage opportunities arising from unfolding exchange rate differentials. Core oscillations between the Chinese yuan and the American dollar affected other national currencies which were also subject to speculative pressures. Various South East Asian governments tried to adjust their exchange rate policies and domestic macro-economic settings. Thailand was the first to experience a currency crisis, in early March 1997, after a speculative attack on the baht in February had driven up inter-bank interest rates and made liquidity tighten. Offshore speculators perceived that further attacks would necessitate a lowering of the baht's value. Meanwhile, some local investors began selling baht for US dollars in order to hedge against possible devaluation. In May 1997, a new series of attacks on the baht compelled the Bank of Thailand to spend billions of dollars in defence of the national currency. The government tried to regulate against offshore trading involving the baht to deter speculation. A US$50 billion fund was set up in cooperation with the banking sector to rescue a falling stock market. During May and June, a proposal to introduce a "managed float" foreign exchange system foundered amidst cabinet division. Over the same period, property values in Thailand fell sharply. Samprasong Land and other real estate companies began to default on their debts. The central bank responded by setting up a property loan management organization (PLMO) and by merging banks and finance companies (Lauridsen, 1998, pp. 145–6). Naomi Klein has pithily described the national and region-wide repercussions of these events:

> Construction ground to a halt on half-built malls, skyscrapers and resorts; motionless construction cranes loomed over Bangkok's crowded skyline. In a slower era of capitalism the crisis might have stopped there, but because mutual fund brokers had marketed the Asian Tigers as part of a single investment package, when one Tiger went down they all did: after Thailand panic spread and money fled from Indonesia, Malaysia, the Philippines and even South Korea, the

> eleventh largest economy in the world and a star in the globalization firmament. Asian governments were forced to drain their reserve banks in an effort to prop up their currencies, turning the original fear into a reality: now these countries really were going broke. The market responded with more panic. In one year, $600 billion had disappeared from the stockmarkets of Asia – wealth that had taken decades to build.
>
> (Klein, 2007, pp. 264–5)

In this scenario, the real-time world of financial speculation impinged upon the sequential decision-making processes of South East Asian governments and their central banks. They could only respond reactively to the unexpectedness, tempo and simultaneity of unfolding events. Currency collapses, property market crashes, stock market falls, liquidity contraction, bankruptcies, fiscal shortfalls and associated political controversies undermined national capacities for economic management. Successive attempts by governments in Thailand, Malaysia, Indonesia and South Korea to defend the national currency, stabilize the financial sector and calm local populations merely intensified the mediated reflexivity of unfolding events. The nature of this predicament was inadvertently highlighted by Malaysian Prime Minister Mahathir Mohamad's attacks against "rogue speculators" and his vilification of hedge fund manager George Soros. Malaysian economist K.S. Jomo described the international market reaction as "swift and powerful". Piqued speculators pushed the falling ringgit even lower and exacerbated the decline of stock market indices (Jomo, 1998, pp. 185–6). Clashes between the presentist, real-time reckonings of speculative finance and the reactive, sequential decision making of besieged Asian governments reflected a deeper time conflict. Countries which had previously liberalized financial services and investment regulations did not have the temporal authority to resist the real-time incursions of global finance. By contrast, the governments of China, Taiwan, Vietnam and Singapore were less vulnerable to the effects of hedge fund attacks, currency fluctuations and financial pull-outs. They had maintained capital controls, a necessary condition for state temporal authority within global capitalism.

Political economist Robert Wade has explored the general correlation between increasing capital flows into developing countries, financial liberalization and the declining capacity of the state to manage the macro-economy. For poorer countries with high external debt relative to gross domestic product (GDP) and a national currency without international influence, interest rate settings were strongly influenced by foreign commercial banks and global currency investors. If the central bank attempted to raise interest rates to defend a weakening domestic currency, government debt servicing costs increased and development projects lost investment funds. Local bank customers who were pessimistic about the national economy typically moved their domestic money into foreign currencies as a medium for savings and transactions. The speed and scale of such movements compromised the longer-term priorities of domestic credit expansion, investment growth and macro-economic development (Wade, 2006). In the worst scenario, Wade observed, "most countries of Sub-Saharan Africa experienced a slow burning debt crisis during the 1990s involving levels of debt (private and public) so high relative to GDP or exports as to cause a fiscal crisis and collapse of public services, on top of a currency crisis" (Wade, 2006, p. 121).

Countries dealing with the short-term emergencies of external indebtedness, financial vulnerability, currency collapse and fiscal shortfalls had no reliable means for collecting tax and predicting future revenues. Many governments worsened their predicament by exploiting the global interconnections between open capital flows and tax havens. Here, Nicholas Shaxson's analysis broadens our understanding of how global capital dismantled state temporal authority in the world's poorest regions. Tax havens, or secrecy jurisdictions, offer an escape from national tax authorities, financial regulations, legal scrutiny and law enforcement organizations. Transfer pricing, shadow banking, money laundering and a myriad of financial services can be secretly organized and protected from outside scrutiny. Although such arrangements have imperial and international histories, they became central to the workings of global capitalism during the 1990s and early 2000s. Shaxson divides the world's secrecy jurisdictions into three major groups: traditional European havens; a British zone centred on the City of London; and a US-focused zone. Thus, Switzerland, Austria, Belgium, Luxembourg, the Netherlands, Liechtenstein, Monaco and Andorra offered an array of offshore services. The City of London's offshore networks contained: Britain's Crown Dependencies – Jersey, Guernsey and the Isle of Man; substantially controlled overseas territories, such as the Cayman Islands; and a financially linked outer ring of autonomously governed havens, notably Ireland, Hong Kong, Singapore, the Bahamas and Dubai. By the early 2000s, the US-based secrecy jurisdictions consisted of federally organized exemptions and provisions for the attraction of foreign capital, individual states such as Florida, Delaware and Nevada, and a scattered overseas network including Panama, the Marshall Islands, the American Virgin Islands and Liberia (Shaxson, 2011, pp. 14–20). Shaxson describes the world's havens as "an endlessly shifting ecosystem" whereby "each jurisdiction offers one or more offshore specialities and attracts particular kinds of financial capital" (p. 22). The general consequences for national economies have been calculated by the Tax Justice Network and a Global Financial Integrity programme at the Centre for International Policy in Washington DC. Shaxson's summary of their findings reveals that in 2005, wealthy individuals held US$11.5 trillion offshore, about a quarter of all global wealth. In 2006, developing countries lost an estimated US$850–1,000 billion in illicit financial flows (criminal money, corrupt money and cross-border financial transactions). These figures excluded the taxes foregone via the transfer pricing schemes of transnational corporations (pp. 26–7). For Shaxson, such massive tax leakages were both cause and consequence of worsening inequality between nation states and of declining government legitimacy in poorer countries:

> When a tax haven creates an innovative new way for wealthy individuals or corporations to escape taxes, high income countries tend to take countermeasures, patching up their own tax or regulatory systems as best they can to defend against new abuses. Yet developing countries, blind and inexperienced to the ever-deepening offshore complicity are defenceless. They will slip further behind and their elites will have ever more opportunities for abuse, rotting local politics.
>
> (Shaxson, 2011, p. 28)

The worldwide privatization of state and public assets also threatened the temporal precepts of state authority. In a state-facilitated national economy, energy enterprises, telecommunications, electricity transmission, transport networks, and health and education services are supposed to operate over a long period of time in response to long-range socio-economic needs. Under privatized ownership, these same enterprises, networks and services are reorganized to fit the short-term imperatives of commercial profit. The state thus loses the temporal authority to shape infrastructural development for national purposes. The scale and impact of privatization were especially evident in Latin America. From 1988 to 2003, such transactions amounted to US$195 billion: 48 per cent of the world's total. William Robinson remarks that asset transfers "included just about every aspect of the economy, from national phone and telecommunications companies, to electrical, water, gas and other public utilities, airports and seaports, sugar refineries, public banks, pensions and insurance services, tourist centres, forests, land and water, parastatal agriculture and industrial production enterprises among others" (Robinson, 2008, p. 187).

Evidently, financial liberalization, open capital flows, tax haven networks and large-scale privatization allowed global capital to contract or colonize state temporal authority. Developmental futures-in-the-making and scenario planning became defeated principles of national economic management. Just as importantly, these principles were also expunged from national memory. It is pertinent here to consider Robinson's description of the power struggles within Mexico's Institutional Revolutionary Party (PRI):

> The "dinosaurs" in the power struggle represented the old bourgeoisie and state bureaucrats whose interests lay in Mexico's corporatist import-substitution-industrialization version of national capitalism. The new "technocrats" were the transnational fraction of the Mexican bourgeoisie, which captured the party, and the state, with the election to the Presidency in 1988 of Carlos Salinas de Gortari. The Salinas de Gortari government set out to dismantle the old national capitalist system and to facilitate a sweeping integration of Mexico into the global economy.
>
> (Robinson, 2004, pp. 50–1)

This course of events indicates the integral relationship between futurity and memory. Corporatist import-substitution was erased doubly: as a framework for future economic development *and* as a remembered historical accomplishment. Dismantling the coalition of interests which had built Mexico's developmental state (fractions of the bourgeoisie, federal bureaucracies, the PRI and civil society groups) necessarily required the erasure of institutional memory.[8]

The national polity versus the transnational state

The declining temporal authority of national states coincided with the prevalence of a transnational state network comprised of supervening policy development organizations (the International Chamber of Commerce (ICC), the Trilateral Commission, the Bilderberg Conference, the World Economic Forum and the World Business Council for Sustainable Development); elite international gatherings (the G7, the G8, the G10 and the International Organisation for Economic Co-operation and Development (OECD)); and major institutions of governance (the World Trade Organization (WTO), the World Bank, the IMF and the Bank of International Settlements). It is crucial to reiterate that this general apparatus incorporated the executive reaches of these nation states committed to neoliberal policies.[9] In these circumstances, officeholders within finance ministries, policy advice groups and the senior civil service sought to match national economic objectives with the priorities of global finance and transnational corporations. The transnational state was designed to overrule or circumvent national traditions of executive government, judicial process, legislative deliberation and public debate. Consequent tension between the national polity and the encroaching transnational state differed from country to country. And, how these tensions played out was largely contingent upon the intra-national political culture (as positioned on the continuum from strict authoritarianism to formalized democracy). In all cases, however, conflicting principles of time were at stake.

Such was evident during the South East Asian currency collapses of 1997–1998. As real-time global capital trumped the reactive decision making of state elites and usurped their temporal authority, the transnational state moved to formalize these developments. As capital outflows drained foreign reserves, the IMF offered conditional loans. Thailand, for example, was required to cut the current account deficit by maintaining high interest rates, reduce fuel subsidies, privatize state infrastructures and restructure the finance sector in favour of finance capital. In November 1997, initial government resistance collapsed after IMF pressure forced the National Assembly to pass four emergency decrees to expedite the financial restructuring (Bullard et al., 1998, pp. 85–91). In South Korea, in early December 1997, scheduled presidential elections featured two candidates opposed to the IMF's structural adjustment programme. Loan money was withheld from the government until the four main presidential candidates acceded to IMF conditionalities (Klein, 2007, p. 270). In Indonesia, the IMF and global financial markets together squeezed the government. Naomi Klein noted that during the IMF negotiations of November–December 1997, Suharto refused to institute major public expenditure cuts. Coincidentally, a *Washington Post* article containing remarks from a senior IMF official predicted that promised loans would be withheld. Indonesia's currency immediately lost 25 per cent and more of its value, forcing Suharto to comply with the structural adjustment programme (Klein, 2007, p. 271).

Time-related conflicts between the transnational state and liberal democratic polities can be more protracted. Executive state structures committed to neoliberalism confronted the uncertainty of electoral outcomes, parliamentary sovereignty and the general unpredictability of democratic will formation. Just as significantly, independent judicial authority and the legal process itself are functions of national sovereignty rather than of the transnational state. Discussion of these matters will first require a short digression on the relation between liberal democracy and epistemes of time. In the latter context, I will focus upon certain salient features of chronological time amidst the different temporal settings of surrounding institutions.

Within political democracy, governments are elected for specified periods of time. Unlimited time spans of rule characterize authoritarian regimes, although they may hold non-competitive elections for public relations purposes. In this regard, Juan Linz remarks that opponents of political democracy "reject the incertitude that goes with regular elections" (Linz, 1998, p. 20). I would add that the degree of incertitude partly depends upon the range of policy perspectives on offer and the freedoms available in the public sphere. Upon election, a new administration requires time for deliberation and consultation. It needs to become familiar with the operations of government, formulate basic policies and enact the necessary legislation within one or more representative institutions. Additionally, democratic governments need time to: prepare and approve budgets; implement the relevant measures through the appropriate administrative structures; and make corrections thereafter where necessary (Linz, 1998, p. 23). The sovereignty of nationwide representative bodies is also a form of time sovereignty. Elected politicians are accorded periods of time for debating, refining and enacting legislation. At sub-national level, micro-time rules set the timetables of everyday politics throughout communities and localities. Democratic decision making among groups and individuals reveals a central incompatibility between rapid resolution and lengthy discussion. As Andreas Schedler and Javier Santiso have explained, the "limitational idea of an ideal consensus" is compromised in practice because "time is scarce, delays are costly and decisions have to be taken" (Schedler and Santiso, 1998, p. 9).

From the preceding observations, it follows that time is also subject to, and a resource for, various political strategies. Schedler and Santiso's discussion of "tempo" is especially relevant here. For strategic purposes, the tempo of decisions and related activities can be accelerated in order to surprise opponents, set political agendas or create an irreversible course of events. Such actions may establish a reputation for leadership, overcome time shortages and generate further momentum or change. In contrast, slowing down the tempo of decision making may give political actors time to deliberate over decisions, build political support, frustrate political adversaries and ignore difficult public issues. Within the political process, struggles over the manipulation of tempo usually centre around impending deadlines and are contingent upon the urgency and complexity of the issues at stake. To the extent that political decision making requires opposing parties to give consent, the pace of persuasion sets the pace of change. Accelerations and decelerations of political tempo are also affected by non-political spheres of action. Slow chronological rhythms of religion or education may hold back political innovation. Conversely, as I have shown, the tempo of political processes may be quickened by the real-time pressures of capital markets and/or the sudden impact of neoliberal shock therapy (p. 11).

Political democracy is more than a struggle over chronological time, timetables and the use of tempo. William Scheuerman makes this clear in his *Liberal Democracy and the Social Acceleration of Time* (2004). He argues that liberal democracy, as such, is shaped and divided by a temporal separation of powers. Thus, representative assemblies deliberate upon legislation which is prospective (future oriented), judicial activity is retrospective (past oriented) and executive actions are contemporaneous (present oriented). When these different temporal emphases fall out of balance, liberal democracy becomes fragile. Fast, executive decision making, for example, can overrule prospective deliberation within the legislature and retrospectively guided due process within the judicial system. Under these circumstances, representative assemblies may accelerate the pace of legislation and enact statutory laws which annul customary law and legal precedent. And, within different national settings, established inter-institutional practices of constitutional change are pressed to match the fast-changing world of government. I would emphasize here that these intra-temporal incongruities are exacerbated by the pressures of global capital and the incursive transnational state.[10] Against this background, Scheuerman's discussion of "globalization and the fate of law" is illuminating (Scheuerman, 2004, pp. 144–86). He begins with a critical explication of the presumed affinity between capitalism and the rule of law. Intuitively, it seems true to say that the calculative ethos of modern business depends upon a rational system of law. Accounting and book-keeping practices, for example, presuppose a common legality. Overall, the congruence between economic and legal calculability ensures the cohesion of capitalism. Additionally, the rule of law allows proprietors and entrepreneurs to plan ahead without undue state interference. At a deeper level, conceptions of legal order are presumed to reflect the temporal preconditions of economic activity. Before the arrival of steamships, railroads, automobiles and aeroplanes, merchants and producers operated within a slow-moving precedent-based legal environment. Subsequent modernizations of transport and communications facilitated a faster-moving affinity between the complex dynamics of law and capitalism. For Scheuerman, this situation changed with the advent of economic globalization:

> Contemporary capitalism is different in many ways from its historical predecessors: economies driven by huge transnational corporations that make effective use of high speed communication, information and transportation technologies represent a relatively novel development. The relationship of capitalism to the rule of law is thereby transformed as well.
>
> (Scheuerman, 2004, p. 45)

Scheuerman defines the rule of law as clear, public, prospective and stable. Judicial authority should be equally applied, power holders should be legally accountable, and all parties to legal proceedings should receive fair notice (p. 184). Clearly, these were not the requirements of global capital or the transnational state. Institutional investors, currency traders and hedge fund operators preferred an open-ended legal environment conducive to fast transactions. Transnational corporations, commercial lawyers and government officials worked to neutralize the declared regulatory capacities of nation states and advance informal modes of conflict resolution via arbitration, mediation and/or conciliation. Scheuerman comments that "states need increased generality, consistency and stability within international regulation in order to preserve their integrity whereas privileged economic interests oftentimes seem perfectly happy with legal inconsistency and irregularity among states forced to court them" (p. 169). The critical point here is that legal inconsistency and irregularity are fostered within institutions that operate according to short flexible time horizons. The WTO, for example, entered agreements which contained exceptions, waivers, vague clauses, loopholes and sectoral exemptions. Ad hoc dispute resolution procedures outstripped nation-based processes of formal legality. Additionally, WTO tribunal meetings were confidential, and all associated documents contained opinions which were anonymous (pp. 167–8). In short, "soft" law usurped the rule of law, a process which was enhanced whenever state elites circumvented their legislatures to negotiate multilateral or bilateral trade and investment agreements. The international proliferation of such agreements reinforced temporal incongruities within liberal democratic polities.

In this context, ICT-enabled transnational activism can be seen as a rejection of the burgeoning transnational state within global capitalism. Accordingly, William Carroll has identified hegemonic–counter-hegemonic pairings between the following organizations: the International Chamber of Commerce (ICC) versus the International Trade Union Confederation (ITUC); the Mount Perelin Society (MPS) versus the Transnational Institute; the World Business Council for Sustainable Development (WBCSD) versus Friends of the Earth International; and the World Economic Forum (WEF) versus the World Social Forum (Carroll, 2010). It would be tempting here to posit a set of time conflicts between the transnational state and transnational opposition groups. However, this would overlook differences of strategic outlook among global activists themselves. Michael Hardt's assessment of the 2002 World Social Forum at Port Alegre made this situation clear:

> The most important political difference cutting across the entire Forum concerned the role of national sovereignty. There are indeed two primary positions in the response to today's dominant forces of globalization: either one can work to reinforce the sovereignty of nation states as a defensive barrier against the control of foreign and global capital, or one can strive towards a non-national alternative to the present form of globalization that is equally global.
>
> (Hardt, 2002, p. 114)

Hardt subsequently argued that the conflict between "the sovereignty, anti-globalization position and the non-sovereign, alternative globalization position" (p. 114) corresponded to different forms of political organization. Traditional parties and centralized campaigns emphasized national sovereignty issues, whereas horizontally networked activists were more committed to local and transnational forums. One can also detect differences of temporal priority. Advocates for national sovereignty and national political processes are defenders of institutional memory and history. Global social justice activists across a range of issues are inspired more by "futures-in-the-making" and prospects of the new. Past- and future-oriented priorities did coalesce within early, broadly based campaigns. For example, during 1997 and 1998, the

Multilateral Agreement on Investment (MAI) attracted diverse opposition. Originally, this OECD proposal enabled corporations to seek retrospective compensation from states that had extended regulatory controls over foreign companies and investments. Under MAI, such policies were legally defined as indirect acts of expropriation. Corporations would have recourse to dispute resolution procedures in the event that states were seen to violate the agreement. This radical diminution of state autonomy was prevented by a worldwide, three-year campaign driven by public policy advocacy groups, political parties, NGOs, environmental organizations, trade unions and MAI-specific coalitions (Smith and Smythe, 2001). The campaign represented both a defence of national sovereignty and the constitution of new transnational solidarities.

Part IV
The Crisis of Global Capitalism

8
Time, Communication and Financial Crisis

Thus far, I have provided a time-epistemic framework for analysing the material formation of global capitalism. My account of this formation traced the unfolding of contemporary history, during the 1990s and early 2000s, without anticipating, retrospectively, the eventual arrival of the 2008 global financial crisis. The intention was to explicate the salient features of global capitalism as it was taking shape, in contrast to what had gone before. Before 2008, it became evident that the hegemony of global capitalism emanated from the transnationality of corporations, ruling class formation and state structures. Their very existence depended upon the digital convergence of the mass media and information-communication technologies as encapsulated by the internet. This was the nervous system of global capitalism, and it drove the growth of global finance and the financialization of capitalist profit. The world-historic significance of these developments was largely obscured by the ideological constructions, manifestations and mediations of realtime. World history, as critically understood from a coeval standpoint, was subsumed within global capitalism's pervasive aura of detemporalized immediacy. Yet, the reproducibility of global capitalism was, from the outset, threatened by fundamental conflicts. As the three preceding chapters have shown, financial speculation and the financialization of capitalist enterprises profoundly affected the realization of capital and patterns of worker exploitation as well as the cohesion of nation states and national economies. In this part, I will explain how the time conflicts inherent in financialized capitalism erupted into a crisis that was displaced rather than resolved. Whether this constituted a fundamental crisis of global capitalism as opposed to an episodic crisis within the system will be examined in Chapter 9. For now, we must pause to consider how and why the time conflicts of financialized capitalism erupted as they did. Theoretically, I argue that the conflictual tension between real-time M-M circuits and the clock-centred, chronological requirements of capital realization *over* time became unmanageable.

The same will be said of the conflict between presentism and temporality in financial derivatives markets. Real-time and presentism prevailed under the assumption that future financial risks were calculable, just as the underlying conflicts of time were reaching a flashpoint. This chapter details the worsening predicament and explains why financial dangers were allowed to accumulate. There are four contributory factors to consider here: the power of investment banks, the securitization of household debt, the spread of mortgage derivatives, and the global connectivity of these developments. Against this background, I will outline the mediated reflexivities of panic and provide a time-epistemic summation of how the crisis played out.

Investment banks

Under neoliberalism in Western countries, financial deregulation transformed the structure and operations of investment banks just as the transformation of investment banking drove the financialization of capitalism. In this context, Peter Gowan focuses upon the emergence of a "new Wall Street system" (Gowan, 2009, pp. 7–13). Traditionally, investment banks engaged in lending, funds management and trading on behalf of clients, while commercial banks eschewed securities trading altogether. From the mid-1980s, investment banks undertook proprietary trading in financial and other assets while lending to other bodies for *their* trading activities (e.g. financialized corporations, hedge funds, private equity groups, structured investment vehicles (SIVs)). This lender-trader strategy did not supersede traditional banking activities. However, as Gowan notes, these activities acquired a new significance in that they provided the banks with vast amounts of real-time market information of great value for trading purposes (pp. 8–9).[1] Trading activity here means buying and selling all kinds of financial and "real" asset derivatives to generate, and then exploit, unfolding price differentials.

In this respect, the over-the-counter (OTC) derivatives market was of central importance. Banks operated as market agents, ready to buy and sell positions, and as dealers integral to market processes. They also established market institutions, such as the International Swaps and Derivatives Association (ISDA). Costas Lapavitsas notes that in 2011, three years after the financial crisis, almost one third of all OTC trading took place in "dealer-to-dealer transactions, while all transactions had at least one dealer bank as a counterparty" (2013, p. 8). This meant that the largest banks wielded enormous strategic power.

> There were perhaps seventy sizeable dealer banks in about twenty countries transacting with many thousands of end users of derivatives; indeed, concentration appears to have been greater than that and perhaps fifteen to twenty dealers controlled the overwhelming bulk of over-the-counter trading across the world. These dealers were large global banks that were also fundamental to financialization.
>
> (Lapavitsas, 2013, p. 8)

Most OTC transactions were financial derivatives, especially those involving interest rate and foreign exchange positions. Growth was strongest in credit default swaps (CDSs) from the early 2000s. The valuation of derivatives partly depended on the daily interest rates averaged by the London Interbank Offered Rate (LIBOR). As Lapavitsas tartly observes, banks so dominated derivatives markets that they were "even capable of manipulating the key rate on the basis of which derivatives prices are formed" (Lapavitsas, 2013, p. 10). Gowan has outlined the dangers of derivatives speculation with regard to a standard Wall Street strategy which became the rationale for top echelon investment banking worldwide. The steps are: first, enter a particular market to generate a price bubble; second, make large speculative profits; third, withdraw, collapse the bubble and enter a new market (Gowan, 2009, pp. 9–10). This sequence accounts for the crucial, underlying role of investment banks in the 1990s currency bubbles (in the UK, Russia, Mexico and the South East Asian economies), the late 1990s dot.com boom and the early 2000s housing bubble (especially in the UK and the US). Critically, Gowan notes that arbitrage and bubble blowing required banks to mobilize huge funds by maximizing their leverage ratio. Thus, if the securities and equity held by a bank rose in value relative to its debt, then further debt would be taken on to purchase more securities (so as to maintain the leverage ratio). For the bank, this tactic generated sufficient funds to move markets and shift price differentials in a favourable direction. Alternatively, however, a decline in the value of securities and equity holdings could leave the bank overleveraged and financially vulnerable (Gowan, 2009, pp. 10–13).

Within the financialized capitalism they had helped to create, investment banks exploited and reinforced systemic asymmetries of commercially sensitive information. As former investment banker Philip Augar observed, the major players operated as giant global stock exchanges. All that was "tradable, conceivable, and legitimate – equities, bonds, derivatives, foreign exchange, commodities and mortgages – flowed through their dealing rooms" (Augar, 2005, p. 107). Because lending, sales, research, underwriting, advisory, brokerage, asset management and trading activities occurred within the same organization, specialists could work collaboratively to exploit unfolding market trends. Through their corporate advisory departments, banks quickly learnt of strategic changes in the thinking of business leaders. Through their brokerage businesses, banks tracked price formation and customer flows as they happened. And, major involvement in consumer credit and insurance selling allowed banks to anticipate significant changes in the "real" economy (Augar, 2005, p. 108). After the 1987 share market crash and the 1990s currency crises, major investment banks regularly drew together their top global traders, analysts and business heads (including the CEO) for conference video risk assessment meetings (Augar, 2005, p. 112). These meetings encapsulated the symbiosis between intra-organizational global communication networks and dominant market positions.

Overall, investment banking represented the institutionalization of real-time M-M circuits of speculative profit-making. The conflicts of time involved were revealed by another key facet of financialized capitalism: the shadow banking system. Investment and commercial banks were prime brokers for major hedge funds, private equity firms and SIVs engaged in speculative arbitrage and OTC derivatives trading. Furthermore, participants in these activities were required to hand over collateral to the banks (they used part of this collateral to raise funds for their own speculative activities). Within shadow banking, the engineering of increasingly sophisticated financial instruments to leverage credit was designed also to circumvent regulations (such as these established by the US Commodity Futures Trading Commission). As George Soros states, "the engineering reached such heights of complexity that the regulators could no longer calculate the risks and came to rely on the risk management models of the financial institutions themselves" (Soros, 2008, p. 64). These observations remind us that the instantaneity and simultaneity of the speculative process, guided by computer modelling, were at odds with the slower sequential requirements of capital adequacy ratios, inter-bank settlement procedures and market surveillance practices (undertaken by designated market authorities).

Securitizing households

The fragilities and myopias of financialized capitalism did not simply unfold at a macro-level. They also shaped the everyday subjectivities and social lifeworlds of ordinary people. Leading into the 2007–2008 financial collapse, middle- and upper-middle-class homeowners throughout Anglo-America routinely internalized particular forms of neoliberal discourse. Historically, urban or suburban home ownership exemplified the material-ideological imperatives of individualism and personal financial security. During the 1990s, many homeowners and property buyers moved away from intermediated, bank-centred loan services toward disintermediated buying, selling and trading across financial markets. As Paul Langley noted, this general transition was facilitated by the emergence of asset-based securitization (ABS). Here, borrowings to finance the purchase of houses, cars, holidays and consumer goods appear on lender balance sheets as “assets”. Under ABS, designated pools of assets accrued to the lender are transferred to a special purpose vehicle (SPV). This vehicle facilitates the ongoing transfer of assets, and issues packages of those assets as tradable securities. They can be sold to third parties under specific conditions at an agreed price. The original lender’s capacity to cover the interest and principal on these securities depends upon the cash flows generated by borrower repayments. Between 1993 and 2002, US ABS issues (excluding mortgage-backed securities (MBS)) increased by approximately 900 per cent (Langley, 2006, p. 285). Originators of ABS included automobile manufacturers, commercial banks, pension funds, building societies and thrift institutions. During the early 2000s, major investment banks became primarily involved in arranging the financial structure of issuable securities and marketing them to investors. All securities were evaluated by credit rating agencies such as Standard and Poor’s, Moody’s and Fitch Investors (Langley, 2006, p. 286). Amidst these developments, mortgages became the largest asset group subject to securitization. MBS involved the packaging of householder debts into commodifiable, tradable “assets”. Within each package, debts were ranked according to the likelihood of repayment (prime, Alt A prime, subprime). During the 1990s, before MBS became vehicles for bank-driven speculation, individual borrowers were subject to credit checks and minimal deposit rules.

Ideologically, the ABS/MBS finance culture positioned upper-middle-class homeowners as neoliberal property investors. As Anglo-American property prices rose, prevailing discourses portrayed the home as an investment asset (rather than as a space of domestic security). Real estate advertising across all media, including property magazines, and specialist websites encouraged homeowners to remortgage and release equity in order to profit from the purchase, letting and/or resale of further properties. Meanwhile, home improvement programmes, print features and supplements did more than promote the aesthetic virtues of renovations and extensions. The likely expectations of future buyers were also emphasized; creative home improvers were therefore potential sellers and entrepreneurs. Improving one's lifestyle was synonymous with the material gains of property investment. In the UK, mortgage equity withdrawal increased from £1.4 billion in late 1995 to £13.5 billion by early 2003. In the US during 2004, 23 per cent of all house purchases were for investment purposes rather than owner occupation (Langley, 2006, p. 291).

These trends reveal that M-M circuits of speculative investment were built into the lifeworlds of upper-middle-class homeowners. In this milieu, debt was a manipulable investment asset rather than a financial burden, and financial risk was equated with opportunity rather than insecurity. Such an outlook expedited an increase in the uncertainties that the (financial) future might bring. However, collective understanding of this tendency was precluded by the popular, mass-mediated assumption that risk could be profitably managed.

Mortgage derivatives

Eventually, the securitization of mortgages and the leveraging of household equity converged with the financial practices of shadow banking. During the early 2000s, commercial and investment bankers found new business by converting consumer and mortgage debt into tradable securities. To finance this operation, banks themselves took on more debt, assuming that the return on securities would exceed the cost of borrowing. Between 2000 and 2005, all major investment banks, to varying degrees, set out to originate, package, distribute and trade mortgage-related financial instruments. Increasingly, mortgage derivatives became a central feature of credit derivative markets. In short, a massive residential property bubble emerged, incorporating massive volumes of household debt. Crucially, mortgage broker salespeople vigorously pushed new subprime loans to individuals and families within Hispanic, Afro-American and white blue collar communities. Print, radio and television advertisements targeted all lower-income earners who aspired to a more comfortable lifestyle (Bruck, 2009, pp. 46–55).

In the US, subprime mortgages grew from US$160 billion in 2001 to US$600 billion in 2006. Nationwide, the latter figure constituted 20 per cent of all mortgage originations (Blackburn, 2008). This trend was expedited by investment banks. They purchased enormous amounts of prime and subprime mortgage debt and repackaged it into collateralized debt obligations (CDO). Each CDO contained thousands of mortgages which were ranked into ten or so tranches. As mentioned earlier, tranches could be categorized as prime, Alt A prime or subprime, according to the risk of default. The last category generated extra revenue from extra risk. Low-income borrowers wanting a foot on the property ladder had to pay an upfront fee, two-yearly loan renewal fees and higher than average interest rates. Banks and mortgage brokers profited from the securitization of these subprime revenue streams. Furthermore, as BBC economics editor Paul Mason noted, "subprime was never confined to the riskiest borrowers: millions of Americans who could have got ordinary mortgages were pushed into taking subprime loans" (Mason, 2009, p. 89). Investment banks maximized subprime-related profit by supplying the mortgage finance required by homeowners, taking over high-performing mortgage brokers and selling off CDOs, either directly to bond market clients or via conduits, SIVs and SPVs (Brummer, 2009, pp. 38–9). Each of these latter entities, to a greater or lesser extent, formed part of the undeclared shadow banking system. Their commercial and speculative activities did not count against the capital requirements expected of progenitor banks (who could thereby maximize their leverage ratios). Conduits, SIVs and SPVs were designed to tailor CDOs and component tranches for a range of purchasers, including those involved in credit derivative markets.

Tranches and CDOs were validated by the credit rating agencies. Their judgments were non-objective and unreasonably generous. *Financial Times* journalist Gillian Tett reveals that investment banks "constantly threatened to boycott the agencies if they failed to produce the wished for ratings, jeopardizing the sizeable fees the agencies earned from the banks for their services" (Tett, 2009, p. 199). Correspondingly, economics writer Alex Brummer recalls that "at the height of the boom the agencies had conferred the highest AAA (triple A) rating on packages of MBS even though they were clueless about the poisonous nature of debt inside these packages" (Brummer, 2009, p. 50). Investment banks insured securitized subprime mortgages with CDSs. This instrument was variously developed in the 1990s by financial innovators at Merrill Lynch, Bankers Trust and J.P. Morgan (Tett, 2009, p. 53). Unlike conventional insurance, CDS contracts were not directly regulated and could be freely traded without transferring ownership of the underlying debt. During the subprime boom, AIG, the world's largest insurance company, mass-produced CDSs for investment banks and related counterparties throughout the shadow banking sector. Under the stewardship of Joe Cassano, each CDS deal with a mortgage-holding bank could be on-sold to any number of third parties. In effect, AIG's CDS division was offering multiple investors an opportunity to gamble on the viability of a single CDO. From 2001 to 2008, Cassano sold over US$500 billion of CDS protection, of which US$64 billion was subprime related. Consequently, AIG had insufficient reserves to cover any prospective collapse in the CDS market (Taibbi, 2009).

America's two largest home mortgage companies, Fannie Mae and Freddie Mac, also joined the subprime bubble. Originally, in 1938, Fannie Mae (the Federal National Mortgage Association) was resourced by government to provide prospective homeowners with low-cost loans from commercial banks. Two years after Fannie Mae was privatized in 1968, Freddie Mac (Federal Home Loan Mortgage Corporation) was established as a competitor. Although answerable to shareholders, both companies were expected to maintain the availability of affordable mortgages to American families. As commercial enterprises, Fannie Mae and Freddie Mac developed, sold and guaranteed creditworthy MBS. After 2000, they started to purchase these securities from investment banks (including some from subprime and near-subprime tranches). During 2007, as the subprime bubble stretched to bursting point, Congress relaxed lending regulations for the two companies. Their reserve capital requirements were lowered and the level of allowed mortgage purchases was raised. Once the MBS market contracted, Fannie Mae and Freddie Mac doubled their market share to 80 per cent, an outcome which severely damaged their financial position (Moseley, 2008, pp. 10–11).

In a world of shadow banking, household securitization and speculative insurance practices, mortgage derivatives offered numerous profit-making opportunities. All major participants contributed to a precarious financial situation. In this respect, Robin Blackburn noted that the sheer complexity of CDOs and CDSs "generates new risks: documentation risk, operational risk, ratings risk, counterparty risk, liquidity risk and linkage risk among them" (Blackburn, 2008, p. 76). From a temporal perspective, it is clear that contributors to the mortgage derivatives market collectively magnified uncertainty about what the future might bring. However, within mediated financial environments of simultaneously unfolding transactions, the consequences of growing uncertainty were not fully appreciated. Temporal awareness of accumulating risk and probable systemic risk was not publicly apparent.

Global connectivities

The complex synergies of shadow banking, household debt securitization and mortgage-based derivatives trading were globally constituted. As Jeff Langley observed in 2006, "mortgage networks have been significantly lengthened such that they typically embrace the residential suburb, high street and a financial centre on the other side of the globe" (Langley, 2006, p. 289).

The global connectivity[2] of securitization, speculative trading and credit expansion was reinforced by general advances in financial technology. The spread of algorithmic trading, for example, increasingly allowed computers to place orders without human intervention. A variety of algorithms became routinely employed: some looked for arbitrage opportunities between various economic indicators, while others sought to implement longer-term trading strategies in search of profits. Some algorithms were designed to automatically generate trading orders from economic data releases (Chaboud et al., 2014). Elsewhere in the capitalist economy, diffusion of sophisticated internet technologies led to an explosion of business websites and web-based interactions with customers, suppliers, employees and investors. Throughout capital markets, proliferating virtual networks of analysts, journalists and investors reflected the growing range of interactive technologies. Discussion lists and bulletin boards were supplemented by personalizable intranets and extranets, online survey and polling tools, and virtual conference facilities. Most importantly, interactive technologies generated a financial blogosphere. Major blogs contained a mix of information, news, commentaries, company analyses and trading recommendations. Contributors included analysts, journalists, investors, former executives and academics (Saxton, 2008).

Financial blogs helped to constitute the informational environments of financial print media and business television channels. These outlets were already interlinked with national and global public news networks. The emergence of financial blogs within a multi-faceted blogosphere further accelerated the 24/7 business news cycle (Rosenberg and Feldman 2008, p. 172). A survey of financial journalists in the UK found that the availability of data online increased the expectation that material would be published quickly, irrespective of print deadlines and broadcast bulletins. In this regard, the editor of a web-based business news service commented that the entire production process of news editing, sub-editing and copy proofing took "about two or three minutes" (Tambini, 2010, pp. 165–6). These pressures exacerbated the problem of uncertainty within global financial markets and networks.

Between 2000 and 2007, financialized capitalism eschewed temporal awareness of its own worsening predicament. And, the likely global ramifications were not publicly thematized. There were no international efforts to regulate shadow banking or stabilize credit markets. The 2007–2008 financial collapse changed this situation. Initially, a worsening slump in CDO/CDS markets became internationally apparent. Shadow banking practices became exposed, and this threatened the entire business model of investment banks. The failure and rescue of Bear Stearns in February 2008 and the demise of Lehman Brothers in September that same year disrupted global credit networks and triggered worldwide falls in stock prices. For the central players involved, the experience of financial collapse was intersubjective, reflexive and inescapable.

The imminence of this scenario was confirmed by a cluster of transnationally linked financial tremors. On 2 August 2007, three German banks declared their exposure to subprime mortgages. IKB Deutsche Industriebank and its affiliates had run up US$10 billion worth of loans from the US mortgage sector. In response, Deutschebank, the Bundesbank and the state-owned KFW group development bank (which had a 38 per cent stake in IKB) provided €3.5 billion of emergency funds. Over the following months, IKB needed two further funding rescues. Saschen LB, a major player in the European shadow banking system, was the financial guarantor of Ormonde Quay, a Dublin-based investment vehicle exposed to subprime loans. When Ormonde ran into major debt that Saschen LB could not cover, a consortium of banks assembled a €1.7 billion rescue package. The third troubled bank, West LB, was also rescued after reporting difficulties from US subprime mortgages (Brummer, 2009, pp. 58–9). On 9 August, French bank BNP Paribas announced that three of its investment funds would be suspended. They held €700 million of subprime-related securities which could not be properly valued or qualified. The suspension announcement immediately affected European stock markets and drove down the BNP share price by 6.5 per cent (pp. 60–1). For the European Central Bank (ECB), these concurrent financial emergencies indicated a credit flow crisis. They immediately placed a €96.8 billion line of credit into overnight money markets and made a one-day pledge to cover the funding needs of financial institutions. Over the four days following 10 August, the ECB delivered three extra credit instalments worth €76 billion. Meanwhile, as the European credit crisis spread into US money markets, the Federal Reserve put together a two-day US$62 billion rescue package. Of this, US$38 billion was directed toward purchasing MBS (to instil confidence in their market value as collateral) (pp. 62–5).

Mediated reflexivities of panic

There was now public evidence of major problems within the Western financial system. As these problems intensified, concurrent events became transparently and simultaneously linked in real-time. The plight of British mortgage lender Northern Rock illustrates the process. Founded as a building society in 1965, Northern Rock became a fully-fledged bank in 1997, a top 100 stock market listing by 1999, and a prominent mortgage lender/trader by 2006. Its mortgage funds and securitization trades were primarily sourced from wholesale inter-bank lending markets (rather than retail and business customer deposits). During 2007, as inter-bank liquidity worsened and wholesale interest rates rose, Northern Rock's business model became unsustainable (Brummer, 2009, pp. 7–15). This became publicly obvious on 13 September, when Robert Peston, business editor of the BBC, announced on a news bulletin that Northern Rock had asked the Bank of England for emergency support (Tett, 2009, p. 228). As Gillian Tett observes, this momentous news had immediate and simultaneous repercussions:

> Within minutes of the BBC bulletin, consumers began logging on to Northern Rock's website and withdrawing their cash. The website then crashed, fuelling panic. The next morning Northern Rock savers flocked to the bank's branch offices, and pictures of terrified savers in a long line in front of the bank beamed on to computers, television screens, Blackberries and mobile phones across the world. By mid-morning a full scale bank run was under way. Never before had so many terrified consumers and investors seen a bank run in action, in real-time. Technology was helping to spread the panic.
>
> (Tett, 2009, p. 229)

On 17 September, the British government publicly guaranteed all remaining Northern Rock deposits. The Bank of England would ensure the continuation of mortgage lending and assist other banks if necessary (Tett, 2009, p. 230). Eventually, on 17 February 2008, Northern Rock was taken into state ownership.

Meanwhile, on Wall Street, financiers and regulators started to recognize the systemic dangers of shadow banking. SIVs, for example, routinely issued huge quantities of notes into the commercial paper and short-term money markets without Federal insurance. These notes were backed by subprime-dependent CDOs and CDSs. As property values fell and mortgage defaults rose, banks themselves wrote down hundreds of billions in non-performing loans. Inevitably, this trend raised the prospect of bank failure. Attention focused upon lender-trader, mortgage-dependent investment banks with thin capital reserves and no commercial arm to fall back on (Mason, 2009, p. 105). On 13 March 2008, Bear Stearns asked J.P. Morgan–Chase for emergency financial support in lieu of bankruptcy. Usually, Bear Stearns bought money from other investors via short-term repurchase agreements, with mortgage-backed bonds as collateral. Over January and February, raising money in this way became increasingly difficult. In response to news that Bear Stearns was in trouble, hedge funds and other investors with counterparty, credit derivative exposure moved to other banks. Furthermore, the cost of purchasing CDSs against Bear Stearns' contracts had increased by 600 per cent (over the previous 12 months). Rumours abounded that the bank was facing default on its short-term loan repurchases (Tett, 2009, pp. 254–5). Bear Stearns also sought help from Tim Geithner of the New York Federal Reserve. Although he could not legally act as lender of last resort, the situation at hand was globally precarious. As Gillian Tett explains, "the repo market investors who had lent money to Bear included some powerful state backed Asian institutions and they were now threatening to pull their loans to *all* American brokers if Bear defaulted on its contracts" (Tett, 2009, p. 258, emphasis in original). In the end, J.P. Morgan–Chase agreed to purchase Bear Stearns at US$2 a share. Thirty billion of their assets would be placed into a special commercial vehicle by the US Treasury and other Federal authorities.

Against this background, William Cohan has detailed the reflexive and communicational dynamics of the Bear Stearns collapse. The trigger point came on 5 March 2008, when respected investor and analyst Ben Sedacca announced on his website that "the great credit unwind is upon us" (Cohan, 2009, p. 3). He explained that banks, mortgage brokers and hedge funds were using CDOs and CDSs to back counterparty transactions in the overnight repurchase loan markets. Sedacca pointed out that growing subprime mortgage defaults were driving up CDS costs and undermining counterparty trust. The most exposed banks were identified as Lehman Brothers and Bear Stearns. Sedacca's judgment was instantly communicated to the financial world and the broader investing public. Crucially, this created the perception that *all* mortgage-related assets were suspect, not just those with high default rates. As Cohan remarks, "the very word 'mortgage' was now a synonym for 'toxic waste' or, as one wag wrote, 'Financial Ebola' " (Cohan, 2009, p. 6). This general perception rapidly pervaded financial websites, emails, cell-phone chatter and the blogosphere. As perception became translated into financial behaviour, the financial stability of exposed institutions weakened. And, evidence that mortgage-exposed institutions could not easily raise funds fed back into the general perception that mortgage-related products were toxic. Bear Stearns was the first major casualty of this reflexive feedback loop. On 6 March, two postings from its Yahoo message board declared that insolvency was at hand. Further such postings were received the next day. One last remnant of myopic optimism appeared on CNBC's *Mad Money* show. On the evening of 6 March, host and hedge fund manager Jim Cramer announced that, regardless of broker sentiment, he was not giving up on Bear Stearns (Cohan, 2009, p. 14). Meanwhile, the rest of Wall Street was seized by rumours that a major European bank would no longer act as a Bear Stearns counterparty on the overnight financing market.

On 8 March, a *Barrons* magazine cover story on the plight of Fannie Mae heightened financial trepidations. On 10 March, Bear Stearns' stock price fell by 11 per cent and former CEO Carl Greenburg appeared on CNBC to rebut claims of a liquidity crisis. At this point, such public relations initiatives were entirely counter-productive; announcements that all was well reinforced perceptions that the bank was in terminal difficulty. On the same day, rumours spread that a Federal regulator was phoning particular banks and asking pointed questions about their exposure to Bear Stearns. Recipients of these calls told their traders to exit all Bear Stearns-related trades. Furthermore, hedge funds with Bear Stearns exposure placed derivative bets on the likelihood of a falling stock price. Rumours of such trades further pressured the stock price and further increased the cost of CDS protection (Cohan, 2009, p. 21). As I have outlined, J.P. Morgan–Chase and the New York Federal Reserve absorbed and redesignated Bear Stearns assets in the face of threatening Asian creditors. These events pointed to a new global template for financially reflexive feedback loops.

The Bear Stearns arrangement proved to be a short-term palliative. Five months later, a concatenation of financial events almost triggered a massive, system-wide collapse. On 7 September, US Treasury Secretary Henry Paulson announced that the Federal government was taking over Fannie Mae and Freddie Mac. They held 50 per cent of the 12 trillion residential mortgage market. On Friday, 11 September, Lehman Brothers reported a US$3.9 billion loss following US$7.8 billion of credit write-downs (Brummer, 2009, pp. 232–3). The likelihood of an enormous financial failure bought together a weekend meeting of senior bankers and regulators. Under the tutelage of Treasury Secretary Henry Paulson, the bankers were, variously, assigned three tasks. They had to measure the capital deficiencies of Lehman's real estate and equity holdings, construct a funding mechanism for the bad assets (so that Lehman could encourage a buyer), and evaluate the risks and consequences of bankruptcy. During these discussions, it was resolved that Bank of America would acquire the ailing Merrill Lynch. Lehman's, however, could find no willing buyer, despite initial interest from Barclay's bank. The unprecedented magnitude of the problem was keenly appreciated. During the 1998 rescue of LCTM, major banks had contributed US$3.5 billion; Lehman Brothers required at least US$30 billion (Ivy et al., 2009, C5). On Sunday evening, 14 September, the US Treasury and Federal Reserve allowed Lehman Brothers to fail. This decision fatally weakened the financial position of AIG. The world's largest insurance group had insufficient reserves to meet the deluge of CDS claims (from banks exposed to worthless CDOs). Eventually, Federal authorities would provide US$125 billion of emergency support (Cohan, 2009, p. 446).

As a global news event, Lehman's bankruptcy sent panic waves through the multi-billion dollar commercial paper and short-term money markets. Thousands of businesses worldwide relied upon these markets to cover routine expenses such as payroll and utility bills. When millions of depositors tried to withdraw funds, worldwide business failures appeared imminent (Ivy et al., 2009, C5). Within 36 hours, collapsing stock markets wiped US$600 billion off global equity prices. The repercussions of Lehman's demise on the US banking system have been itemized by financial writer William Cohan. Apart from the sale of Merrill Lynch to Bank of America and the Federal rescue of AIG, he lists:

> the failure of Washington Mutual; the near-failure of Wachovia; the near-failure of National City Bank; the failure of at least nineteen other financial institutions nationwide; the conversion of Goldman Sachs, Morgan Stanley and American Express into bank holding companies to stave off their demise; and the virtual incapacitation of Citigroup, once the world's biggest, most valuable and most powerful global financial services firm.
>
> (Cohan, 2009, p. 444)

Epistemes of time and financial crisis

The reality of financial collapse was officially acknowledged on 20 September 2008, when the US Treasury announced a plan to purchase up to US$700 billion of worthless securities from troubled banks. The initial document was rejected by the House of Representatives and modified by the Senate before passing into law on 3 October 2008 (Wade, 2008, p. 9). This was the first instalment of the controversial Troubled Asset Relief Plan (TARP), whereby Federal regulators used taxpayers' money to stabilize and reorganize the investment banking system.

Between the fall of Lehman Brothers and the eventual introduction of TARP, the global financial system was afflicted by radical uncertainty. Investment bank business models had failed, and the short-term financial future was beyond calculative prediction. The real-time reflexivities of panic demonstrated that without past- and future-oriented temporalities, globally networked finance was uncontrollable and prone to serious accidents. The real-time myopia of financialized capitalism thus became a matter of historical record. Within the 2000–2006 credit bubble, investors, politicians and regulators did not appreciate the growing uncertainty about what lay ahead. Evolving financial technologies of speculation, whereby the uncertain future was collapsed into abstract risk calculations, obscured the prospect that future happenings could be disastrous. When such happenings did, in fact, transpire, previously unforeseen changes became obvious; financial stability was threatened on a global scale. Among the Anglo-American financial media, this was a belated realization; previously, amnesia and myopia were extant.

Despite historical evidence of boom–bust financial cycles and the inevitability of credit collapses, financial journalists overlooked the system-wide fragility of the subprime housing bubble. This was not a universal condition. Prescient voices and critical commentaries were certainly available.[3] Unfortunately, they were not translated into any proposal for collective action by politicians, regulators or the mainstream media. Dean Starkman's survey of the *Wall Street Journal*, the *New York Times*, the *Los Angeles Times*, *The Washington Post*, Bloomberg News, the *Financial Times*, *Fortune*, *Business Week* and *Forbes* between 1 January 2000 and 30 June 2007 criticized the absence of "investigative stories that confront directly powerful institutions about basic business practices while those institutions were still powerful" (Starkman, 2009, p. 26). Initial, retrospective evaluations of financial media performance all highlighted this concern. Relevant articles and editorials in journalism magazines and academic journals carried the following titles:

"Crisis? What Crisis? But It's Great TV" (Wilson, 2008); "When a Watchdog Doesn't Bark" (Harber, 2009); "Credit Crisis: How Did We Miss It?" (Schecter, 2009); "Five Reasons for Crash Blindness" (Fraser, 2009) and "Waiting for CNBC" (Tkacik, 2009).

In my view, the financial crisis also revealed the allochronistic nature of finance culture. The previously occluded "others" of financialized capitalism – indebted homeowners, small business people, and wage workers – gained recognition in news stories. The failure of self-reifying risk models provided an opening for previously marginalized historical understandings of financial volatility. The jargon-filled abstractions of finance discourse which had pervaded the public sphere suddenly seemed alien to the experiences of socio-economic life. Non-Western constituents of global modernity immediately grasped how the crisis had occurred. It was not just an unscripted global event playing out across television and computer screens. The financial bubble had formed in the Western heartlands rather than the post-colonial world; Wall Street, rather than Asian capitals, appeared to be the source of this particular contagion. The real-time globality of crisis also pointed to a shared sense of contemporaneity. Everyone inhabited a networked world which exuded both danger and opportunity. It did not necessarily follow that the epochality of global capitalism was publicly thematized. That would depend upon the ongoing political ramifications of the global financial crisis.

9
Crises without End

Repercussions from the 2008 global financial crisis continue to unfold. It is thus difficult to demarcate the passage from crisis to its aftermath and beyond. The difficulty arises from the fact that strategies to resolve the crisis have been problematic and counter-productive; the preconditions for a new financial crisis remain extant. This chapter begins with a short overview of the transition from financial crisis to global recession. I then identify the disparate interpretations of unfolding events. Was this a crisis *of* global capitalism or a sectoral crisis within it? After providing an answer to this question, I will argue that official counter-measures at national, international and transnational level effectively reinforced the time conflicts of global capitalism. Rescued, too-big-to-fail investment banks regained power, profitability and access to new technologies of financial arbitrage. The incommensurability between presentist, detemporalized profit-making and long-term rhythms of capital realization was not recognized. Political economies of time conflict were reinforced by the introduction of austerity policies in many countries. And, amidst the after-effects of financial crisis, the time conflicts of social exclusion and worker exploitation were reproduced.

Financial crisis and global recession

As previously mentioned, the Troubled Asset Relief Plan (TARP) allowed US Federal regulators to fund the crippled investment banking system with taxpayer money. The spreading credit crisis forced a similar response in the UK. Since April 2008, the Bank of England had operated the Special Liquidity Scheme whereby overleveraged banks and building societies exchanged mortgage-backed securities for UK Treasury bills. On 27 September, the Prime Minister, the Chancellor of the Exchequer and the Financial Services Authority arranged a merger between HBOS, Britain's largest, debt-ridden mortgage lender, and Lloyds TSB, a retail banking and insurance group with a low-risk business model. On 8 October the government announced a £50 billion bank recapitalization to increase equity, financial reserves and capital adequacy ratios (Augar, 2005). The credit crisis also spread to European financial institutions. From 28 to 30 September, government-financed bank rescues occurred in Belgium, Holland and France. In Germany, the government organized the rescue of a major real estate company. On 1 October, the French Finance Minister proposed the establishment of a European rescue fund (Augar, 2005). On 10 October, during the annual meeting of the International Monetary Fund (IMF) and the World Bank in Washington DC, G7 finance ministers called for the stabilization of financial markets, the restoration of credit flows and the active prevention of further bank failures. As Martin Wolf has noted, this meant that "responsibility for solving the financial crisis rested on the states they represented" (Wolf, 2014, p. 27).

In financially exposed countries, such as Ireland, Latvia, Hungary and Iceland, indebted governments and financial institutions could not generate credit. Without the prospect of future foreign borrowings, fiscal deficits worsened and domestic economies contracted. Larger nation states confronted a worldwide recessionary spiral. In the US, the UK and Europe, massive write-downs of financial assets effectively reduced bank lending and credit lines to large-, medium- and small-scale firms. Cuts in production, massive layoffs and increased unemployment drove down consumer spending, which forced all kinds of businesses to close. Reduced credit flows and falling aggregate demand in large Western countries diminished export returns throughout East Asia. China, Japan, Taiwan, South Korea and Singapore sold less consumer durables, electronic goods and software products to North American and European consumers (Elliott, 2009; Gumbel and Schuman, 2009). Together, these trends sharply reduced world commodity prices for minerals, agricultural products, manufactured goods and various services. This affected poor countries in Africa, Central Asia and the South Pacific, since they were dependent on one or a few of these commodities for export returns. Concurrently, rising unemployment in Western Europe, the UK and North America slowed remittance flows from migrant workers to their home countries (Karshenas, 2009). By April 2009, across all developing regions, the financial crisis had driven more than 50 million people into extreme poverty (Soederberg, 2010).[1]

Interpreting the crisis

Worsening global-economic conditions triggered the sense that history had changed. However, the historical significance of unfolding events was open to conflicting interpretations. For some, financialized capitalism and neoliberalism had run their course. After the collapse of Lehman Brothers, French President Nicolas Sarkozy declared: "Laissez faire is finished. The all-powerful market which is always right is finished" (cited in Callinicos, 2010, p. 5). Others framed the situation as a limited financial emergency, an aberration from standard neoliberal practices.[2] In February 2009, a *Financial Times* editorial entitled "The Consequences of Bad Economics" pointed to the non-transparency of credit derivatives trading and the "inherent instability" of capitalism, but rebuked those who had sounded "the death knell of market capitalism" (cited in Callinicos, 2010, p. 13). Yet, even this limited assessment reflected a historic shift in economic perception. During the credit boom, the Anglo-American business media saw capitalism as dynamic and self-sustaining (Starkman, 2009). The financial collapse compelled an opposing, retrospective realization: the credit boom was only temporary and capitalism was manifestly unstable. Informed discussion about the financial collapse and ensuing recession necessarily involved questions of periodicity and epochality. Were there historical parallels to be drawn? Had the magnitude of events altered the periodization of history? According to Alex Callinicos, the contemporary crisis resembled the 1930s Depression in terms of its scale, systemic nature and associated policy reversals (Callinicos, 2010). The events of 2008 were more than a subject of historical comparison; they also marked a sudden change of historical period: "The scale of the catastrophe is all the more striking because it so closely follows an era of capitalist triumphalism fuelled by the credit boom of the mid 2000s" (Callinicos, 2010, p. 7).

This era of capitalist triumphalism can be traced back to the fall of the Berlin Wall in 1989. However, some contemporary understandings of the 1990s and 2000s, which were then influential, questioned the very relevance of historical periodization. Thus, according to Francis Fukuyama, the fall of communism and the triumph of liberal democracy signalled the end of history (as a supervening contest between opposed worldviews). In November 2008, philosopher and social critic

Slavoj Žizek (2008) declared that this post-historical triumph of liberal democracy was doubly finished:

> The era is generally seen as having come to an end on 9/11. However, it seems that the utopia had to die twice. The collapse of the liberal democratic political utopia on 9/11 did not affect the economic utopia of global market capitalism which has now come to an end.

Žizek's observation moves beyond historical comparisons to reveal the specificity and distinctiveness of the circumstances at hand. Fukuyama's "end of history" thesis had been an ideological marker for Žizek's "global market capitalism"; it was now apparent that a new, world-historical conjuncture was in play. Its geographic provenance, though, was open to debate; Western-based histories of accumulation and crisis could no longer stand for world history as a whole. Thus, Yaga Reddy, former governor of India's Reserve Bank, noted how the crisis originated not in peripheral regions, such as Latin America, Asia or Eastern Europe, but in Anglo-American financial centres that had been considered models for emulation by non-Western elites. Global financial institutions based mostly in the West had simply failed. As Reddy acerbically noted, "fifteen of these institutions accounting for over 70 per cent of cross border finance, suddenly ceased to do business with each other, in spite of having the best mathematical models for risk management and being 'too big to fail' " (Reddy, 2011, p. 45). This course of events led globalization theorist Jan Pieterse to declare that "like a giant oil tanker the world is slowly turning". Globalization was manifestly not a Western preserve; the South and East were entering the world economy. Industries, corporations and financial institutions from these regions would play an increasingly important role (Pieterse, 2009, pp. 221–2).

From a Left-global perspective, Barry Gills (2008) advanced the view that financial collapses, liquidity crunches and worldwide recession constituted the first great systemic crisis of contemporary global capitalism. I share Gill's standpoint with important provisos and nuances. Before discussing these, we need to readdress Peter Osborne's consideration of Marxian crisis theory. As outlined in Chapter 2, Marx regarded a crisis of the capitalist system as a condition of transition to a new mode of production. In contrast, cyclic conceptions of crisis identify regular, periodic instantiations of recession driven by average declines in capitalist rates of profit. These recurring crises sometimes reflected major structural weaknesses of accumulation which were potentially amenable to government intervention. Thus, after the 1930s Depression, financial volatility, unemployment and underconsumption were ameliorated by Keynesian strategies of public credit expansion, counter-cyclical demand management and employment creation (Osborne, 2010). For our purposes, the central question is: did the financial meltdown constitute a structural crisis within global capitalism or was it, as Gills suggests, a crisis of the system itself? In this respect, William Robinson distinguishes between "structural crises", which can only be resolved by a major restructuring of capitalism, and a systemic crisis, whereby the old system collapses and/or is replaced by one that is entirely new. The key point here is that "a structural crisis opens up the *possibility of a systemic crisis*", a scenario that depends upon "social and political forces" and "historical contingencies" (Robinson, 2010, p. 302, emphasis in original). On my reading, a full-blown crisis of financialized capitalism with global-economic ramifications certainly occurred. Global capitalism as an epochal system was not seriously threatened, but the possibility of a larger financial meltdown incorporating the too-big-to-fail banks became apparent. Such a scenario, in a world where the density and scale of real-time electronic networks are rapidly advancing, would be system threatening. Of course, whether or not global capitalism is replaceable by another system is a matter of political intervention and mass consciousness. On this point, Osborne's insight concerning the temporal ambiguity of crisis is vital. In one sense, he argues, instantiations of crisis are a precondition for the possibility of the new. This could involve new forms of social production, new relations of production and new forms of political-administrative organization. Public comprehension of these possibilities would depend on struggles for "the reappropriation of the collective powers of social labour" (Osborne, 2010, p. 21). Progress in this regard raises the prospect that a given conjuncture of crisis may precipitate radical changes to the capitalist system.

In another sense, a crisis may be characterized by its incapacity to usher in the prospect of the new. Thus, official attempts to ameliorate a structural crisis of capitalism may simply restore the earlier conditions of capital accumulation which had become unsustainable. The preconditions for the next crisis are thereby established and a process of repetition unfolds (Osborne, 2010). Osborne's temporal acuity informs my own interpretation of the financial crisis. During 2008, the real-time presentism of financialized profit-making was increasingly at odds with temporalities of capital accumulation based on the interlinkages conjoining production, commodity exchange and aggregate demand. Financial collapse, the liquidity freeze and self-reinforcing recessionary spirals openly disrupted, and continue to threaten, the capital realization process on a global scale. As I will show, this crisis precipitated an intractable, recurring crisis of crisis management at national, international and transnational levels. There were, and are, few policy instruments at hand to broadly synchronize intra-economic and extra-economic time reckonings and temporalities. The renewal of M-M profit circuits and the imposition of austerity programmes further undermined the temporal autonomy of wage workers and the socially excluded poor.

Reproducing the time conflicts of financialized capitalism

After the fall of Lehman Brothers, massive government intervention was required to prevent further bank runs, stabilize the financial system and reverse the recessionary spiral of declining liquidity and economic contraction. The key question was what form government intervention should take. With regard to US banking policy, economists Simon Johnson and James Kwak (2010) have argued that two major options were available. With the "takeover" option, the government assumes ownership of failing financial institutions in order to delete toxic assets and restructure banking operations in accordance with the principles of transparency and prudential asset management. Old financial managers lose their jobs, shareholders are wiped out and remaining losses are carried by creditors and taxpayers. Certain banks will be closed; those that are restored to profitability may be kept or returned to the private sector. The new purpose of banking, I would add, is to provide credit for businesses and infrastructural projects, with the assistance of fiscal stimulus packages. To this end, elected governments rather than financial interests will set the temporal parameters of macroeconomic policy. The "blank cheque" option compels the government to provide money for surviving financial institutions; systemic collapse is prevented by investing new capital, overpaying for bank assets and insuring these assets at below market rates. Critically, banks are kept afloat in their existing form; managers keep their jobs, shareholders retain some of their stake and creditors receive some protection. In effect, the government's blank cheque to the banking sector is paid for by the taxpayer. Yet, if certain banks recover, the benefits are confined to managers, shareholders and major creditors (Johnson and Kwak, 2010). In this scenario, resurgent banks develop new M-M circuits of speculation and counterparty trading.

On 13 October 2008, Treasury Secretary Henry Paulson held a meeting with representatives from nine surviving banks: Bank of America, Bank of New York Mellon, Citigroup, Goldman Sachs, Merrill Lynch, Morgan Stanley, State Street and Wells Fargo. They received their first TARP instalments and were promised a blanket government guarantee for the insurance of bonds and debt instruments (Johnson and Kwak, 2010). Over the next 12 months, the sum total of bank bailout funds from the Federal Reserve, the Treasury and the Federal Deposit Insurance Corporation (FDIC) exceeded US$12 trillion (Prins, 2009). In one sense, this signalled the demise of the highly leveraged investment banking model which had dominated American and global capitalism. Goldman Sachs and Morgan Stanley, for example, became bank holding companies temporarily dependent upon taxpayer-funded largesse. Eventually, however, they benefitted enormously from cheap bailout money, reduced competition and the knowledge that the government would not let another major bank fail. As the largest banks returned to profitability and resumed speculative practices (outside the housing sector), second-tier banks could not obtain liquidity. Consequently, it became harder for farmers, manufacturers, construction firms, retailers and start-up businesses to obtain bank loans (Johnson and Kwak, 2010). The Federal restoration of financialized capitalism undermined the objectives of President Obama's US$800 billion fiscal stimulus of February 2009. The package, as such, was in any case criticized on neo-Keynesian grounds. According to Joseph Stiglitz, "it was too small, too much of it (about a third) went to tax cuts, too little went to help states and localities and those that were falling through the holes in the safety nets, and the investment program could have been more effective" (Stiglitz, 2010, p. 63). Thus, M-M profit circuits were sustained and the realization of capital prevented.

President Obama's implicit support for the "blank cheque" option propounded by the Treasury, the Federal Reserve and senior investment bankers effectively diluted his financial regulation initiatives. Thus, the Financial Reform Act of July 2010 did not re-separate investment from commercial banks and placed no limit on the overall size of banking conglomerates. Large investment banks were not required to spin off internal hedge funds or direct derivative trading operations through established open exchanges. The Reform bill's major organizational creation – the Consumer Financial Protection Bureau – was merely a branch of the Federal Reserve framework, which was dominated by former investment bankers (Dennis, 2010; Unattributed, 2010). Thus, Wall Street continued to dominate the US political economy, even as bankers were openly vilified by congressional representatives and the White House.

From this summary, we need to re-examine the issue of over-the-counter (OTC) derivatives trading: a cardinal feature of M-M circuits and financialized capitalism. The largest investment banks had established a manifestly fragile un-regulated trading system for securitized debt packages, including mortgage derivatives and credit default swaps (CDSs). Yet, the initial TARP instalments went toward covering the costs of OTC CDSs. Insurance giant AIG, for example, used its funds to provide for CDS counterparties, especially in Europe. Effectively, US taxpayers contributed to the recapitalization of European banks. This course of events convinced the UK, the US, European Union governments and the G20 that OTC derivatives trading should be forced into regulated exchanges. The Obama administration pledged to introduce legislation that would require mandatory record keeping and direct all derivatives trading through regulated counterparties (CCPs). At the April 2009 London G20 conference, governments unanimously supported the principle of OTC regulation. The September conference in Pittsburgh produced a communiqué declaring that "all standardized OTC derivatives contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by the end of 2012 at the latest" (Morgan, 2012, p. 405). Translating these commitments into rule-based policy frameworks was, and is, fiercely resisted by financial interests. Business management professor, Glenn Morgan, summarizes the gravity of the situation:

> To force everything onto regulated exchanges would have closed down large areas of business for big banks. In spite of the strong words at the G20, April 2009 summit, no major political leader has actually pushed for this complete ban. The anticipated push-back by the financial institutions, the interdealer brokers and some of the clients, together with the support of many economists and commentators, for the idea that the OTC market was efficient, seemed too powerful even in the immediate aftermath of the crisis to take on directly.
>
> (Morgan, 2012, p. 405)[3]

Morgan proceeds to detail the "push-back by financial institutions". In September 2009, a grouping of 15 major banks promised the US Federal Reserve that they would clear outstanding interest derivative trades and CDS contracts by the year's end. Behind the scenes, bank lobbyists fought against the use of CCPs. As of December 2010, Wall Street's largest banks and financial organizations had yet to place 90 per cent of eligible trades into clearing houses. Banks also drew out complex negotiations with industry associations, such as the International Swaps and Derivatives Association (ISDA) and US regulatory organizations, namely, the Securities Exchange Commission (SEC) and the Commodities Futures Trading Commission (CFTC). Meanwhile, bank trading desks resorted to regulatory arbitrage by directing speculative activities toward jurisdictions with lower regulatory standards and/or longer time scales of introduction. Thus, the City of London, a central player in global OTC markets, was not subject to legal compliances and remained attractive to financial derivatives traders. Furthermore, banks exploited the inconsistent and unsynchronized nature of transnational regulation among bodies such as the Financial Stability Board, the OTC Derivatives Supervisors Group (OSD) and the Bank for International Settlements (in particular, their Committees on Payment and Settlement Systems) (Morgan, 2012, pp. 410–12).

In sum, banks largely maintained a business model that had directly contributed to the 2008 financial crisis. Morgan concludes that "in spite of all the contestation, law has been reshaped to only a minimal extent and the power of financial institutions, despite its weakening in the aftermath of the crash, has been reasserted" (p. 411).

Alongside the reconstruction of financialized capitalism, new financial technologies were allowing endemic time conflicts to deepen further. Beunza and Stark's previously cited study of dealer-arbitrageurs at a Wall Street investment bank found that micro-computing, network connectivity and mathematical formulae enabled market participants to create novel associations across different assets within shortening time spans: a process accelerated by the availability of robotized, automatic systems. However, trading decisions were electronically dependent on constant, clock-recorded streams of price information. Delays or disruptions in the information flow to a trading desk could, and did, generate major losses. As Buenza and Stark observed, delegating trading decisions to a robot in that situation would have courted disaster (Beunza and Stark, 2004). From this research, I suggested that the conflict between clock time and real-time was irreducible and that the use of networked real-time to "game" clock time was unending; such stratagems ultimately depended upon clock-based sequentiality. After the financial crisis, further advances in high-frequency algorithmic trading (HFT) took the clock time versus real-time conflict to a new and more dangerous level. From 2005 to 2011, HFT in the US equity market increased from less than 20 per cent to between 66 and 75 per cent of turnover by volume. Over the same period, HFT in European equity markets grew from a tiny share to over 35 per cent. A similar growth occurred in Asian markets, albeit from a lower base. HFT also became influential in debt and foreign exchange markets and accounted for 50 per cent of turnover in some futures markets (Haldane, 2011, p. 4). Within equity trading environments, institutional investors, such as mutual funds, pension funds and insurance companies, employed execution algorithms at ever-advancing levels of sophistication. By 2012, large share orders could be divided into equally sized parts and electronically programmed to anticipate fluctuations and cycles in trading volume. Apart from institutional investors, proprietary trading algorithms employed electronic market-making strategies whereby securities were automatically purchased at the best bid and sold at the best offer. As millions of bid-offer spreads were rapidly translated into millions of executed trades, market liquidity was sustained. Proprietary algorithms also exploited differences between quoted prices of the same shares across different markets as well as between equity derivatives and the underlying shares. Statistical and other arbitrage practices became routinely automated, as were newer trading techniques involving the anticipation of large, not yet executed, trades. Controversially, proprietary algorithms could be employed to place multiple orders without executing them. The resulting rise or fall of prices could then be quickly and profitably exploited. As of 2012, US algorithmic trading was dominated by investment banks, hedge funds and an emergent cluster of specialist HFT firms (McKenzie et al., 2012, pp. 283–5).

Together, and in competition, they exploited an M-M profit circuit dependent upon ever-increasing trading speeds and the unending contraction of sequential time. From 2001 to 2011, the average speed of order execution on the New York Stock Exchange fell from 20 seconds to 1. On some trading platforms, the lower limits of trade execution reached 10 millionths of a second. By this stage, Andrew Haldane from the Bank of England was suggesting that "trading technologists are involved in an arms race". New frontiers of speed were opening up a world of zero latency in which trading converged on its natural limit, the speed of light (Haldane, 2011, p. 5).

The race for ever-quicker trading speeds magnified the importance of spatial distance. High-frequency traders needed to receive price information and send new orders (or cancellations) to the matching engines of share markets as early as possible. Thus, HFT firms rented space for computer servers near the data centres of trading venues to gain millisecond advantages over outlying competitors. McKenzie et al. (2012) surmised that "those economic and technical connections between exchanges have turned the US markets into what is essentially a large, highly complex, spatially distributed and potentially unified technical system". This would be the template for equity trading elsewhere for years to come (McKenzie et al., 2012, p. 287). As competition between rival trading algorithms reduced the human element, share prices oscillated sharply, regardless of underlying company performance. In an environment of radical uncertainty, sudden price movements could emerge without warning or obvious cause. The size and duration of future fluctuations were beyond calculative rationality, as were the likely repercussions. These conditions underlay the “Flash Crash” of 6 May 2010. Following a period of intense, high-frequency trading in particular shares, the Dow Jones Industrial Average plummeted by 600 points, and then 400 points, before recovering 15 minutes later. About US$1 trillion was lost in half an hour, an event without precedent in share market history. Subsequently, expert dissensus over the likely causes led Haldane to conclude that “only one clear explanation emerges; that there is no clear explanation” (Haldane, 2011, p. 2). For our purposes, though, the “Flash Crash” exemplified the worsening conflict between clock time and real-time and between presentism and temporality.

The volume, flux and near-real-time speed of price movements undermine the business rationale for trading decisions, especially when major orders are placed but not executed. As trading speeds accelerate into the realm of nanoseconds, the dispersal of trading venues and data banks exposes the fact that clock time cannot be absolutely synchronized across different locations. In this situation, the algorithmic drive toward real-time undermines the chronological reliability of clock time and the temporal ground for ascertaining the difference between past, present and future in financial trades.[4] General over-reliance on machine trading at the expense of human cognition erases memory, futurity and learning capacity from financial markets. Consequently, small, untraceable pricing anomalies and technical malfunctions will continuously generate disastrous results. If a future “Flash Crash” coincides with and/or is precipitated by another financial crisis, the global ramifications could be unmanageable. Since 2008, the proliferation of social media technologies has added a socio-psychological intensity to the real-time reflexivity of unfolding global events, especially those involving fear, panic and unpredictable behaviour.

Time conflicts and political economies of crisis management

As official attempts to remedy the financial crisis reproduced the time conflicts of financialized capitalism, the burden of crisis shifted to governments, national polities and their activities. In the US, the UK and Western Europe, debt-ridden banks were recapitalized out of tax revenues and the sale of government bonds to financial institutions. In so doing, governments incurred rising levels of interest-laden debt and a diminished capacity to manage public finances. In short, the bank debt which had triggered the financial crisis morphed into a sovereign debt crisis (McNally, 2011, pp. 3–4). Financially indebted countries dominated by foreign currencies had few resources for large-scale credit creation. This was not necessarily a pressing difficulty if foreign lenders and local investors were able to exploit short-termist profit-making opportunities. As Michael Hudson and Jeffrey Sommers have observed, this had been the prevailing tendency throughout Eastern Europe and the former Soviet Union after 1990. The newly independent state of Latvia, for example, eschewed investment strategies which might have advanced industry and agriculture and stimulated aggregate demand. Instead, Latvia became a debt-financed, capital gains economy. American economic advisors, transnational state institutions and local political elites facilitated currency arbitrage activities, state asset sales and tax avoidance schemes. Latvian ministers obtained loans from banks in neighbouring Western countries which were denominated in euros or other foreign currencies such as the Swedish krona. After 2000, major growth in the finance, insurance and real estate sectors attracted foreign capital inflows and allowed major Latvian banks to issue generous loans. Between 2002 and 2007, Latvian gross domestic product (GDP) growth was among the world's highest, although the local credit boom also drove up the cost of food, housing and social services for ordinary Latvians (Hudson and Sommers, 2010). After Lehman Brothers fell, foreign lending stopped, domestic credit disappeared and real estate values collapsed. The Latvian government faced the prospect of debt servicing foreign banks for years to come. To this end, the European Commission offered a financial assistance package in January 2009. Latvian ministers were warned by letter not to promote export industries or to stimulate the economy through increased spending. Meanwhile, the IMF advised Latvia to force down local wages and cut public expenditures. As Hudson and Sommers (2010) pointed out, this was a self-defeating policy course with international ramifications:

> Bailout time has arrived. From North America to Europe, banks are asking the IMF, EU and national governments to bail them out of the bad loans they have made. The governments of Latvia and other Baltic countries are borrowing to pay private sector foreign debts. This borrowing is to be repaid by intensifying the tax burden and lowering

> wage levels, shrinking the domestic market and thus making it even harder to "earn their way out of debt". (p. 261)

As Latvia's experience demonstrates, already-indebted governments could only respond reactively to the rapid and multiple after-effects of the financial crisis. The tempo of events was initially determined by financial decision makers within foreign and domestic banks, insurance companies and real estate firms. When the IMF and the European Commission instructed besieged Latvian ministers to heed external creditors and institute national austerity measures, state temporal authority was effectively relinquished. The short-term requirements of post-crisis debt servicing overruled the long-term temporalities of macroeconomic recovery and development.

Within the European Monetary Union (EMU), unfolding sovereign debt crises were embedded within a complex and fragile governance structure. Historian Niall Ferguson (2010) has noted that in 1999 the euro's launch left national fiscal policies uncoordinated: a growing problem with the arrival of new member states. Furthermore, the newly established European Central Bank (ECB) was prohibited from directly bailing out any country with an excessive external deficit. At the same time, such a country had no mechanism for exiting the Monetary Union. These difficulties were not apparent before the bailout of investment banks and the restoration of their speculative activities. Afterwards, however, the largest banks took on derivatives positions against the most indebted European Union economies: Greece, Spain, Portugal and Ireland. Within unfolding real-time environments, investors and risk analysts calculated whether or not indebted countries could service their external debts.[5] If governments required IMF and/or private bank loans, investors and analysts calculated whether or not conditionality provisions would be met. As had been the case during the subprime housing bubble, investment banks took out CDSs on their original positions. These positions and swaps were the vehicles for unsupervised counterparty trading. As the sovereign debt crisis of each country unfolded, the ECB and ruling elites of major economies preserved the portfolios of private banks by demanding stringent, country-specific structural adjustment programmes. The inevitable results were uncontrollable recessionary spirals, worsening poverty, social dislocation and mass political protests. James Galbraith has argued that this general post-crisis situation is more fragile than that in the US:

> In a successful financial system there must be a state larger than any market. That state must have monetary control – as the Federal

> Reserve does without question in the US. Otherwise the markets play divide-and-conquer against the states. Europe has devoted enormous effort to creating a single market without enlarging any state, and while pretending that the Central Bank cannot provide new money to the system. In so doing, it has created markets larger than states and states with unbearable debts, which now consume them.
>
> (Galbraith, 2010, p. 2)

The unequal struggle between markets and states identified here raises wider concerns about the interrelationships between markets, states and democratic polities, within and outside the EMU. In this regard, an outline of Wolfgang Streeck's critical analysis will allow us to explore the time conflicts at stake.[6] His June 2012 Adorno lectures and associated publications argued that a delayed and irresolvable crisis of democratic capitalism had arrived. Financial markets were dictating "what states presumed to be sovereign and democratic may still do for their citizens and what they must refuse to do" (Streeck, 2012, p. 6). Streeck traces this crisis to the late 1960s and 1970s, when inflation grew rapidly in Western countries. Declining economic growth undermined the Keynesian social democratic class compromise between capital and labour. The working classes accepted capitalist markets and property rights in exchange for political democracy, near-full employment and social security. As growth faltered, unions mobilized to protect living standards and bargaining rights. It was thus difficult for Western governments to moderate union wage demands without rescinding the principles of Keynesian social democracy. Consequently, they resolved to preserve union rights and full employment through the use of expansive monetary policies.

Streeck describes the ensuing inflationary spiral as "a monetary reflation of distributional conflict: on one side a working class demanding both employment security and a higher share of their country's income; on the other a capitalist class striving to maximize the return on its capital" (Streeck, 2012, p. 6). From 1979, in the US, the UK and other Western countries, neoliberal governments resolved to quell inflation with high-interest monetary policies. Resulting unemployment, falling real wages and government/employer attacks on unions eroded the remnants of class compromise. Stagnant growth, stalling tax revenues and the rising costs of unemployment assistance created fiscal shortfalls. Governments began to borrow to accommodate demands for benefits and services and to secure social peace. The struggle between capitalist imperatives and the social need for wealth redistribution moved from the labour market to the political arena; electoral pressure replaced union demands. Governments then had to reconcile growing debt and interest repayments with the maintenance of public spending (amidst competing claims for social assistance). Throughout the 1990s, large private creditors pressured governments to cut public budgets and remove entitlements to welfare provision. In the US under the Clinton administration, austerity measures produced a budget surplus from 1998 to 2000. Public resentments arising from social immiseration were ameliorated by financial deregulation and generous bank lending policies. Individual debt replaced public debt, and private lending took the place of state-led demand aggregation in sustaining businesses and jobs in construction and other sectors (Streeck, 2012, p. 7). The 2008 financial crisis deleveraged private credit throughout major Western societies just as governments were recapitalizing banks from tax revenues and the sale of interest-bearing bonds to financial institutions.

Effectively, therefore, individual debt and sovereign debt both increased coterminously. Streeck skilfully explicates the multi-layered nature of the new situation at hand:

> Since 2008 distributional conflict under democratic capitalism has turned into a complicated tug-of-war between global financial investors and sovereign nation states. Where in the past workers struggled with employers, citizens with finance ministers, and private debtors with private banks, now financial institutions wrestle with the very states which they had only recently blackmailed into saving them.
>
> (Streeck, 2012, p. 7)

This “complicated tug-of-war” is structurally uneven; financial markets can charge differentiated interest rates to different states. Indebted governments are thus pressured to impose austerity and structural adjustment programmes on their citizens. Less indebted states must prevent others from declaring bankruptcy by providing financial support; a default would increase interest rates on the bonds held by the lending government. Under these circumstances, the political manageability of democratic capitalism deteriorates:

> In the current crisis, democracy is as much at risk as the economy, if not more. Not only has the “system integration” of contemporary societies – the efficient functioning of their capitalist economies – become precarious, so has their “social integration”. With the arrival

> of a new age of austerity, the capacity of national states to mediate between the rights of citizens and the requirements of capital accumulation has been severely affected.
>
> (Streeck, 2012, p. 7)

The preceding account highlights the temporal predicament of democratic capitalist states; their capacity for memory and futurity has been truncated. In this context, Streeck notes that in Europe, four years after the 2008 financial crisis, "no one knows what will happen next; the issues change from month to month, sometimes from week to week, but nearly all return at some point or another". This situation is seen to be complex and intractable: "too many things have to be tackled at once; short term fixes get in the way of long term solutions; long term solutions are not even attempted because short term problems take priority; holes keep appearing that can only be plugged by making new holes elsewhere" (Streeck, 2014, p. 10). At the same time, the memories of an economic past when governments had more temporal authority cannot be acted upon. As Streeck notes, "in the wake of the financial and fiscal crisis the debt state that supplanted the tax state has to convert itself into a state dedicated to fiscal consolidation completing the neoliberal farewell to the European state system and to the political economy of the Keynesian founding period" (Streeck, 2014, p. 97).

One could argue here that the detemporalized presentism of the financial markets has colonized executive states and disconnected them from the quotidian temporalities of national citizenship embedded within domestic routines, serial working hours, transport schedules, civic association and popular culture, and from the distinctive temporal practices of democracy embedded within legislative sessions, judicial processes and election campaigns. Meanwhile, national economies fracture and social experience becomes polarized. Propertied elites and the upper middle classes with access to funds deny coeval recognition to those citizens who are structurally unemployed or in precarious work. It seems, then, that the crisis of democratic capitalism is complex and unending; governments have no further policy resources with which to buy time and secure social peace. The restoration of financialized capitalism has incapacitated political possibilities for the new, and increased the possibility that a further financial crisis will be beyond amelioration.

Although Streeck's critique is incisive, it does not reflect upon the positioning of democratic capitalism within global capitalism. As we have seen, the unfolding financial crisis revealed unprecedented degrees of world-economic interdependence, inter-networked connectivity and mediated reflexivity. Crucially, however, the political economies of crisis response and the time aspects involved were markedly divergent as well as globally co-extensive. As American, British and European governments resuscitated ailing banks, the Chinese state and provincial authorities instituted a massive neo-Keynesian stimulus programme. Its world-economic significance reflected the changing contours of a transnational capitalism which nevertheless remains subject to the time conflicts of financialization. My remarks here will draw from Sarah Cook's analysis of China's macroeconomic recovery strategy (Cook, 2012) and Jerry Harris' discussion of the integration between Chinese and global capitalism (Harris, 2012). Reduced credit flows and falling aggregate demand within Western countries had rapid and severe repercussions within China. Major export producers collapsed, production slumped and domestic business enterprises went bankrupt as millions of migrant and urban-based workers lost their jobs. Central state authorities countered these developments by recourse to huge reserves, a current account surplus and an unleveraged banking system. By mid-2010, gross national product (GNP) had increased sharply and 6.4 million jobs had been created in urban areas. These were the results of a 4 trillion yuan stimulus programme implemented in November 2008 and March 2009. Expenditures centred upon research and development, industry assistance, transport and communication networks, rural infrastructures and energy conservation. As Cook outlines, these expenditures were backed by an array of complementary policies: "interest rates were successively lowered . . . credit controls relaxed and reserve ratios reduced, taxes cut, rebates provided to exporters, funds set up to pay wages owed to laid-off workers in bankrupt enterprises and a number of initiatives introduced to assist or retrain laid-off migrant workers and unemployed college leavers" (Cook, 2012, pp. 144–5). Overall, the Chinese state was able to respond proactively to the domestic impacts of the financial crisis and maintain the temporal horizons of an already established state-led development strategy. It thus seems apparent that China's political economy of crisis management was unaffected by the real-time pressures and detemporalized presentism of financialized capitalism.

A different scenario, though, might well eventuate after the next financial crisis. Harris' analysis provides two reasons for this assessment. First, China's absorption within global capitalism is advancing. As inward flows of transnational investment sustain the industrial heartlands, "outward bound Chinese capital, which forms joint ventures abroad, is dependent on the surplus value produced in global assembly lines and is immersed in world spanning financial investments"

(Harris, 2012, p. 221). Another financial crisis would therefore damage the Chinese export sector *and* the domestic economic underpinnings of state and private corporations committed to outward investment. Second, insulation against the incursions of finance capital has weakened. Since the mid-2000s, major state-owned banks have sold stakes to global investors. An initial public offering for the Bank of China was arranged by UBS and Goldman Sachs, while those for China Construction Bank and the Industrial and Commercial Bank of China were arranged, respectively, by Morgan Stanley and Credit Suisse First Boston. As of 2010, major transnational financial corporations (Blackrock, Fidelity HSBC, J.P. Morgan, Vanguard, UBS and Invesco) held multi-billion stock investments in China's largest banks and energy and telecommunication enterprises (Harris, 2012). Although the detemporalized presentism of financialized capitalism has not undermined the long-term horizons of Chinese state banks, corporations and sovereign wealth funds, this conflict of time in a world of economic interdependence must be acknowledged. China's capacity to counteract the scale and rapidity of any future financial crisis is problematic.

Let us now consider the political economies of crisis management in terms of the time conflicts between transnational state institutions and national polities.

In November 2008, leaders of the world's 20 largest economies arrived in Washington DC to prepare a joint action plan involving the International Monetary Fund (IMF), the World Bank, other multilateral development banks, the United Nations Development Programme and the newly created Financial Stability Board (FSB). At the World Economic Forum of January 2009, corporate, supra-national bodies, nation-state elites and their advisors tried to develop a shared understanding of global crisis events. In April, the G20 summit in London sought to repair the global financial system and counteract the effects of recession on poor, developing countries.

According to development economist Susanne Soederberg (2010), the first of these objectives was not addressed because summit participants overlooked the "New Financial Architecture" initiatives of 1999. By then, the East Asian currency crisis and the Long Term Capital Management hedge fund crisis had highlighted the need for prudent management of the world banking system. Consequently, central bank governors, the Bank of International Settlements and G7 finance ministers established working parties to monitor the capital reserve positions of major banks.[7] There was, however, no support for capital controls, financial turnover taxes or quantitative restrictions on the borrowing and lending of financial institutions. In this respect, Soederberg remarks that "the architects of the [New International Financial Architecture] NIFA had sought to facilitate market transparency without imposing state led regulations" (p. 225). Ten years later, at the April 2009 G20 summit, open criticisms of the prevailing financial architecture made no reference to these earlier, modest initiatives. Despite frequent use of the word "regulation", government leaders and officials from supra-national bodies never advocated the introduction of a state-led, rule-based system involving legal structures. Instead, financial lobbyists at the summit pushed for a voluntary, market-led approach involving more frequent consultation between private and public sector actors (Soederberg, 2010). Crisis management and mitigation in the developing world was delegated to the IMF and related organizations. Funds were trebled to US$750 billion and a new Flexible Credit Line (FCL) was created to address the needs of particular countries. The recently established FSB would work alongside the IMF to provide national economic risk warnings and appropriate remedial actions. Despite public rhetoric about the urgency for development assistance, IMF-related initiatives did not alter the neoliberal framework of lending and conditionality (Soederberg, 2010; Deacon, 2012).

The preceding developments can now be summarized as follows. From October 2008 to April 2009, constituent elements of the transnational state (supra-national institutions, financial-corporate advisors and lobbyists, and large nation-state elites) worked to restore financialized circuits of profit-making and ameliorate the effects of global recession. The scale and complexity of the crisis compelled the transnational state to accommodate ruling elites from large, emergent economies, such as Brazil, India, Russia and China. However, new, expanded decision-making bodies, such as the G20, simply reinforced the time conflicts between the transnational state and various national polities. The sense of emergency which pervaded transnational state gatherings precipitated fast, collusive decision making on vital matters at the expense of all other deliberative bodies, at international, national and local levels. The World Economic Forum, the IMF, the World Bank, financial-corporate lobbyists and ruling elites from major nation states circumvented the concerns of those worst affected by financial meltdown and global recession.

This was not, however, a politically accepted arrangement. Bailouts of investment banks in the US, Western Europe and the UK had sparked popular resentment. In Belem, Brazil, in January 2009 at a World Social Forum gathering of 120,000, leading figures declared that a global crisis had provided a historic opportunity to develop emancipatory initiatives on a global scale (Robinson, 2010). Most significantly for our purposes, a coalition of developing country leaders, left-liberal economists and groups within the United Nations challenged the expertise and legitimacy of transnational state institutions. The course and outcome of these developments have been outlined by Nick Buxton, a writer and development activist from the Transnational Institute (Buxton, 2010). In June 2009, Miguel D'Escoto Brockmann, Nicaraguan priest and President of the UN General Assembly, chaired an extraordinary UN summit on the Global Economic Crisis and its Impact on Development. Previously, he had delegated a commission of experts, chaired by Joseph Stiglitz, to produce a report on the international monetary and financial system. Other contributors included Pedro Paez, an Ecuadorean Finance Ministry official involved in the Bank of the South, and François Houtart, a major participant in the World Social Forum. The Commission's report advocated grants rather than loans for recession-hit developing countries, the abolition of IMF and World Bank policy conditionalities, the use of IMF Special Drawing Rights to fund development programmes, and the creation of a Global Economic Council. Stiglitz himself emphasized that the neoliberal imposition of financial and market liberalization in many developing countries had accelerated the spread of financial crisis and recession (Buxton, 2010). Miguel D'Escoto declared that such countries should have the collective right to address their predicament and seek remedial action. Here, the Commission detailed a macroeconomic alternative involving capital controls, fair trade initiatives, a moratorium on national debt repayments, and radical reform of the international financial architecture. Together, these initiatives and declarations threatened transnational state prerogatives. Buxton recounts how American and European Union diplomats personally attacked D'Escoto and encouraged their ministers to boycott the proposed summit. Without the attendance of Western political elites, this world-representative gathering received no global media coverage. During given sessions, American and European Union diplomats criticized the summit's usurpation of supra-national institutions and official inter-state forums (Buxton, 2010).

Financial crisis and the time conflicts of worker exploitation

We now turn from the international and transnational displacements of the financial crisis to readdress the global time-related patterns of worker exploitation and social immiseration. As outlined in Chapter 6, Ankie Hoogvelt's concentric schema identified a 20 per cent core of the world's population as securely remunerated with access to funds, and a fluid surrounding layer of 20–30 per cent as reliant upon forms of employment vulnerable to business competition, technological innovation, capital mobility and lowest denominator wage pressures. A larger outer circle incorporated those who subsisted outside of the global economic system (2006). After September 2008, waged workers and their families lost jobs and/or became precariously employed. Those within the second layer who were directly or indirectly dependent upon subcontracted work from transnational supply chains were pushed into deteriorating informal economies. From a time-epistemic perspective, the financial crisis further contracted the temporal autonomy of workers, families and communities. And, the worsening circumstances of the informal poor were not coevally recognized by official economic analyses.

In underdeveloped regions, rising food and fuel prices magnified the socio-economic effects of the financial crisis. In the year to June 2008, global food prices rose on average by 51 per cent; between January 2007 and July 2008, oil prices trebled. The Food and Agriculture Organization (FAO) increased its world estimate of undernourished people from 850 million people in 2005 to 963 million in 2008. A Hunger Watch survey of how global food prices affected domestic terms of trade, food consumption and child under-nutrition in the Central African Republic, Ethiopia, Liberia and Sierra Leone found that "households in all the case study areas resorted to coping strategies common in the annual hunger season" (Swan et al., 2010, pp. 107–18). The researchers thought it likely "that the food, fuel and financial crises have combined to substantially undermine progress made in combatting hunger and possible increase in the number of undernourished children" (p. 115).

A larger and more recent field study from sites in Bangladesh, Cambodia, the Central African Republic, Ghana, Indonesia, Jamaica, Kazakhstan, Kenya, Mongolia, the Philippines, Senegal, Serbia, Thailand, Ukraine, Vietnam, Yemen and Zambia was undertaken by researchers from the World Bank and the Sussex Institute of Development Studies (Heltberg et al., 2013, pp. 705–18). They drew upon reports, interview transcripts and focus group discussions to determine the socio-economic effects of food, fuel and financial crises from 2008 to 2011. The extent and severity of local impacts reflected individual positionings within labour markets, families and communities. Agricultural and informal sector workers "were affected the most and the longest and struggled to recover" because of "reduced remittances" (pp. 709–10).

Food insecurity worsened across households in South Asia and sub-Saharan Africa. Increased indebtedness and asset sales were commonly experienced across all research sites. In most countries, women in particular were concentrated in low-paid, low-skilled occupations, burdened by unpaid household and care work and subject to gender discrimination. After the financial crisis, these vulnerabilities were exposed. In South East Asia, factory closures disproportionally affected women workers, and those newly employed in the informal sector faced long hours for low pay as family relationships deteriorated. Modest social safety nets for the unemployed, children and the elderly were available in Serbia, Ukraine, Kazakhstan and Mongolia. In other countries, the poor required support from kin, occupational and community networks, which weakened as local incomes contracted. The study found that "formal social protection was inadequate for a global shock on the scale, complexity and magnitude experienced by people living in poverty in these places across 17 countries" (p. 716). The researchers' general findings attest to social polarization and diminishing temporal autonomy among the poor and denials of coevalness emanating from official statistical reports:

> Despite the narrow employment base of export production in developing countries, formal sector workers fuel rural economies through remittances and provide a customer base for the informal sector: even temporary labour shocks in the formal economy have lasting impacts on poverty. The first wave of coping responses adopted by poor people (incurring debt, foregoing health care, diversification) led to the second wave (selling assets or increased competition in the informal sector). In many surveyed countries, poor people were living through this second round of negative impacts while national economies were showing strong signs of economic recovery.
>
> (Heltberg et al., 2013, p. 716)

This summation accords with the testimonies of informal urban workers on the specific impact of financial crisis and global recession. Zoe Horn from Women in Informal Employment: Globalizing and Organizing (WIEGO) coordinated focus group discussions with home-based workers, street vendors and waste pickers in South Africa, Malawi, Kenya, Peru, Thailand, Indonesia, Pakistan, India, Columbia and Chile. The initial phase of research during June and July 2009 reported that home-based workers producing for global supply chains experienced a sharp decline in work orders. Street vendors experienced a significant drop in local consumer demand and growing pressure from competitors. Waste pickers struggled to cope with falling demand and selling prices. Most respondents reported being forced to overwork and reduce expenditure on basic items and services (including food and healthcare). Zorn concluded that the global recession was "pushing informal workers and their families further into impoverishment" while "the informal economy remained largely absent from public and media attention" (Horn, 2009, pp. 2–3). These and other studies broadly reveal that waged workers and their dependents were pushed into the informal sector[8] as informal workers experienced worsening life conditions.

Meanwhile, the real-time operations of transnational corporations reinforced the clock-based exploitation of subcontracted workers and further threatened their temporal autonomy. The evolving relationship between Apple, Hon Hai Precision Industry Ltd (Foxconn) and their Chinese workforces illustrates the continuity of these time conflicts and their politicization. Apple's profits grew from US$1 billion in 2005 to US$41.7 billion in 2012; Foxconn was by then the world's largest electronics contractor, with a workforce of 1.4 million in China alone (Chan et al., 2013; Sandoval, 2013). Their internal business units competed for contracts from ICT corporations to produce orders for iPads, iPhones and various hardware components according to specifications of price, product quality and time-to-market. Apple, meanwhile, tracked demand worldwide and adjusted production forecasts on a daily basis.

For workers, this meant low wages, variable hours, changing shifts and a just-in-time production regime driven by computerized engineering devices (Chan, 2013). Hong Kong Chinese field researchers, who interviewed Foxconn workers, managers, government officials and labour rights activists across different factory complexes, found that "all workers' operations up to the minutest movements" were "ever more rationalized, planned and measured". Assembly line workers specializing in one specific task performed "repetitive motions at high speed, hourly, daily, and for months on end" (Chan, 2013, p. 89). Interviews with production managers from Shenzhen revealed that Foxconn adapted to the effects of the 2008–2009 financial crisis by cutting prices on electronic components and reducing wage expenditure to maintain high-volume orders. This was not a costless exercise; the proportion of Foxconn's revenue remaining after deductions for wages, raw materials and administrative expenses fell from 3.7 per cent in first quarter 2007 to 1.5 per cent in third quarter 2012. However, Apple's operating margins for almost the same period grew from 18.7 to 39.3 per cent. These changes were seen to indicate "Apple's increasing ability to pressure

Foxconn to accept lower margins while acceding to Apple's demands for technical changes and large orders" (Chan et al., 2013, p. 105).

As Chapter 10 will indicate, the Apple–Foxconn network of real-time synchronicity between supply/production and production/demand became vulnerable to labour disruption. The suicides of 18 young Foxconn employees during 2010 also triggered worker unrest and forced wage concessions from management. It is sufficient here to note that in the world's industrial heartlands, the financial and associated political economies of crisis management did not perturb the conflict between the real-time operations of transnational corporations and the clock-based exploitation of production line workers.

Part V

Crisis, Collective Opposition and Ruptures of Time

10
Communication, Synchronicity and Counter-Power

Part IV provided a bleak diagnosis of global capitalism. National, international and transnational attempts to resolve the global financial crisis helped to re-establish the preconditions for another such crisis. Time conflicts which were constitutive of financialized capitalism, national and pan-regional economies, worker exploitation and social exclusion were reproduced. And, crucially, the interrelatedness of these conflicts was tightened. Thus, the detemporalized presentism of the financial markets also afflicted those governments caught between the requirements of debt servicing and the forced conditionalities of austerity policies. The effects of such policies throughout many countries, along with the worldwide repercussions of the financial crisis itself, swelled the number of coevally unrecognized others within informal social economies. Subcontracted labour within global supply chains remained subjected to the real-time–clock time tourniquet of Taylorist production. On this account, the crisis of global capitalism derives precisely from the incapacity of financial, corporate-transnational and national elites to create new ways of understanding the global circumstances which prevail. Publicly thematizing the recurring pathologies of financialized and global capitalism seems to be precluded by the mediations of real-time enabled by global television, internet platforms and, more recently, social media networking. In this part, I assess whether the repeating cycle of time conflict–crisis–crisis amelioration–time conflict can be ruptured by networks of collective opposition. That such a prospect can be contemplated stems from the protests, occupations and labour militancy that occurred from 2010 to 2012. Food riots in African cities, anti-austerity campaigns in Southern Europe, the global Occupy movement emanating from Wall Street, anti-regime protests throughout the Middle East, and strike activity in China and elsewhere represented a major coincidence of transnational activism. Its political efficacy and potentiality is the subject of this chapter. I will outline the multiple expressions of resistance and determine whether or not new and powerful synchronicities of political action were in play. In this context, enthusiastic endorsements of social media's political networking capacity will be contrasted with more sceptical evaluations. I will then discuss the necessary components for a synchronized coalition against global capitalism. Briefly, these are: organized labour with the leverage to disrupt global supply chains; alliance building among the formally and informally employed; a globally networked protest movement specifically directed against financial oligarchy; and anti-austerity populist movements with sufficient electoral support to claim the offices of national government. My discussion here will be complemented, in Chapter 11, by a set of time principles which could help rupture the crisis patterns of global capitalism and its attendant mediations of time.

Crisis and counter-power

During 2007 and 2008, increases in worldwide commodity prices, including food staples, triggered widespread civil disruption. Across Africa, mass disturbances occurred in Guinea, Mauritania, Morocco, Senegal, Cameroon, Mozambique, Burkina Faso, Côte d'Ivoire, Ethiopia, Egypt, Madagascar, Somalia and Tunisia. In many cases, other grievances were expressed, including dissatisfaction with economic policies and government corruption. These factors contributed to popular uprisings in Tunisia, Egypt, Libya and other Middle Eastern countries in late 2010 and early 2011 (Berazneva and Lee, 2013). Meanwhile, across Spain, a major strike on 29 September 2010 in opposition to changes in labour laws channelled popular opposition to cuts in social, cultural and educational programmes. These austerity measures were promised by government to global financial institutions just as public funds were bailing out Spanish banks. During May 2011, a week before the national elections, the *Indignados* movement (or *movimiento 15M*) called for mass occupations of urban plazas. In Madrid and Barcelona, major encampments formed committees to discuss issues of education, health, migration, national finances, proposals for alternative budgets and movement fundraising. Transnational links were forged with participants from workers' movements in Argentina, Chile, Italy and Greece. This eruption of anti-austerity populism coincided with student protests in Santiago, London and Quebec, and inspired the Occupy Wall Street movement (Castañeda, 2012; Foran, 2014). In September 2011, the occupation of New York's Zuccotti Park, declarations against financial elites (the 1 per cent) and the creation of a media-communications hub sparked hundreds of similar initiatives nationally and worldwide. The Occupy movement was also inspired by the popular overthrow of Tunisia's leader Ben Ali in December 2010 and by mass demonstrations in Cairo's Tahrir Square in January–February 2011 (Kerton, 2012; Gibson, 2013). In 2010, a wave of strikes by workers in Chinese factories coincided with protests by Bangladeshi garment workers in a major export-processing zone, and a general strike of public sector workers and mineworkers in South Africa. In India, workers occupied a major Hyundai factory and instigated go-slows against the German car parts supplier Bosch (Silver, 2014). Less prominently, trade unions, non-governmental organizations (NGOs) and informal worker organizations at local and national levels developed transnational solidarities. In February 2011, a General Council Meeting of the International Trade Union Confederation (ITUC) adopted a resolution calling for a range of actions to support those in precarious and informal work worldwide. These included substantive demands for socio-legal protection, higher minimum wages, training opportunities, and the regulation of temporary work and labour migration agencies. Additionally, ITUC affiliates and regional organizations were required to advance the rights of precarious workers. In March 2011, Women in Informal Employment: Globalizing and Organizing (WIEGO) held a workshop in Bangkok for national and pan-regional organizations representing home-based workers, waste pickers, and street and market vendors. In June 2011, the steering committee of the International Domestic Worker Network (IDWN) successfully lobbied for the introduction of the International Labour Organization's (ILO) Domestic Workers Convention at the International Labour Conference (ILC). The steering committee was composed of women representatives from domestic workers, unions and networks across Asia, Africa, Latin America, the US and the Caribbean (Bonner and Spooner, 2011).

The preceding synopsis is not exhaustive, but it conveys the worldwide concurrence of militant events, activities and movements. The actual relationships among them, however, were complex, uneven or not developed at all. Most of the cases outlined received global media coverage. Some activities and events were linked, consecutively and simultaneously, by social media networking. The early Occupy movement drew from the encampment practices of Spain's *Indignados* movement and the tactical mobilizations of Cairo's Tahrir Square protestors. The proliferation of Occupy itself was mediated through online forums, open source software and social networks such as Facebook, blogs and Twitter (Kerton, 2012; Pickerill and Krinksy, 2012). However, the political depth of such linkages cannot be assumed. To be inspired by recent protest actions or the real-time simultaneity of unfolding events elsewhere will not necessarily generate political coalitions based on shared strategic objectives.

Some events and activities unfolded autonomously, notwithstanding their high media profile. Beverly Silver notes that labour unrest in China, India, Bangladesh and South Africa received prominent coverage in the *Financial Times* (London) (Silver, 2014). In China, the attempted suicides of 18 Foxconn workers focused world media attention on China's employment regime and the spread of labour militancy. Articles within the print editions and web portals of major Western newspapers referred to a "wave of strikes", "migrant worker riots", "strikes and worker protests" (Dongfang, 2010, 2011). Major NGO reports on factories, plants and dormitory conditions by China Labour Bulletin and China Labor Watch were, and are, freely available online for journalists, activists and specialist researchers worldwide. Pertinent examples include *Tragedies of Globalization: The Truth behind Electronic Sweatshops (*China Labour Watch, 2012) and *A Decade of Change: The Workers Movement in China 2000–2010* (China Labor Bulletin, 2012). Yet, there was no direct political or social media linkage between labour militancy in China and the eruptions of protest actions elsewhere. Obviously, Party control of Chinese internet infrastructures would have restricted opportunities for such real-time solidarity. My point here is that concurrent instantiations of counter-power do not infer their coalescence.

Alliance building among organizations representing informal workers, special-purpose NGOs and international union confederations occurred independently of protest, occupation and strike activities. However, the future potential for such transnational solidarities of action was evident at local level, especially during the Tunisian and Egyptian uprisings. In the former context, activists from the General Union of Tunisian Workers (UGTT) organized strikes, rallies and sit-ins. On 14 January 2011, riots in the poorest areas of Tunis helped to topple the Ben Ali regime. In Egypt, the mass protests of late January and early February included professionals, students, women's groups, bus drivers, telecom workers, plant and factory labourers and garbage pickers from Cairo's slums. In both uprisings, popular demands from workers and the informal poor for lower bread prices, food security and the general alleviation of poverty merged with pro-democracy declarations and protest actions (Mason, 2012; McNally, 2012).

The worldwide instantiations of counter-power outlined here were not coordinated attacks against global capitalism, and they did not rupture the prevailing logic of worsening time conflicts and the repetition of crisis. Nevertheless, as I will explain, temporalities of hope involving new solidarities and new forms of political organization have become evident. To determine their efficacy, it will first be necessary to critique over-optimistic interpretations of the political situation which emerged from 2010 to 2012. Such an interpretation is evident in John Foran's aptly named "Beyond Insurgency to Radical Social Change: The New Situation" (2014):

> Radical social change in the sense of a deep transformation of a society, community, region or the whole world in the direction of greater economic equality and political participation and accomplished by the actions of a strong and diverse popular movement, is clearly in the air we now breathe. The signs are everywhere: the events of 2011 were of a world-historical order.
>
> (Foran, 2014, p. 6)

Foran's reference to a "strong and diverse popular movement" infers a singularity of purpose and overlooks the possibility that a diversity of political currents might, to a large extent, *lack* purposive unity. This inference rests on the view that contemporary manifestations of political militancy reflect the subjective experiences and cultural idioms of the alter-globalization movements of the late 1990s and early twenty-first century. Thus, the Zapatistas, the World Social Forum, the Arab Spring uprisings and Occupy all translate experiences of exploitation and exclusion within globalization into feelings of anger, love and hope. A shared commitment to social justice, human dignity and direct democracy generates political cultures of opposition and creation. Foran further argues that a coalescence of social movements and anti-neoliberal electoral coalitions, such as those in South American nations, possess "the best chances for making radical social change in this new situation" (p. 5). This begs the question of how such a scenario would affect the power structures and crisis tendencies of global capitalism.

For Alain Badiou, the riots and uprisings of 2010–2011 signalled more than the prospect of radical social change; a rebirth of history had already transpired. After noting the "development of globalized capitalism", the "action of its political servants" and the "unlimited power of a financial and imperial oligarchy", he refers to "the present moment" as "the first stirrings of a global popular uprising" (Badiou, 2012, p. 5). Badiou's assessment is based upon a three-level schema of riot situations. An immediate riot, fronted by exuberant youth, erupts in its own locality or social space. Collective subjectivities are "confined to a rage with no purpose other than the satisfaction of being able to crystallize and find hateful objects to destroy or consume" (p. 25). Such actions spread, by imitation, to similar locations elsewhere (i.e. other poor housing estates, major streets and shopping plazas). Without rooted political organizations, immediate riots will incorporate opportunistic and premeditated criminal behaviour. Eventually, rioters from different localities may construct an enduring central site which will attract multi-faceted crowds with various grievances against the police, local principalities, city authorities, state agencies and major businesses. Crowd participants experience the intensity of compact presence, and the rage of pure rebellion is succeeded by the declaration of shared demands. According to Badiou, this process generates mass events and an historical self-consciousness which extends beyond the inchoate experience of rebellion:

> a riot becomes historical when its localization ceases to be limited, but grounds in the occupied space the promise of a new long term temporality; when its composition stops being uniform, but gradually outlines a unified representation in mosaic form of all the people; when, finally, the negative growling of pure rebellion is succeeded by the assertion of a shared demand, whose satisfaction confers an initial meaning on the word "victory".
>
> (Badiou, 2012, p. 35)

Whether or not such events transpire with full temporal significance depends upon the involvement of poor and marginalized populations. Their visibility creates the sense of a "break in time – a break in which the inexistent appears" (p. 70). In lieu of this possible outcome, political demonstrations, occupations and strike activity can be understood as latent historical riots. The transition from latency to actuality, though, is not automatic. Badiou remarks that Western countries "have not experienced an historical riot for forty years" (p. 28). However, such events in Tunisia and Egypt are seen to have universal significance, just as immediate riots in Western countries are proliferating. Thus, for Badiou, the prospect of an historical riot can be contemplated:

> My view is that an era has opened, if not of their possibility, then at least of the possibility of their possibility. By this I mean an

> eventual rupture creating the unforeseen historical unfolding of some immediate riot.
>
> (Badiou, 2012, p. 28)[1]

This prognosis, valid or not, does not identify the structures of power that might be challenged and negated by a yet to be foreseen historical riot. The very idea of an "eventual rupture" necessarily requires a depiction of its hegemonic object, including its strengths, vulnerabilities and crisis tendencies.

Badiou's observations about riots and historicity appear cautionary alongside Barry Gill's and Kevin Gray's celebratory account of "people power in the era of global crisis" (Gills and Gray, 2012, p. 205). In a thematic *Third World Quarterly* article, they announced that "one world order is passing away, imploding, declining, while another, yet inchoate, is inexorably emerging making its forces felt across the social landscape of the world" (p. 208). Here, it seems that the rebellions and protests of 2010–2011 have triggered a global-epochal shift. Yet, the coalition of forces involved and their actual impact upon the soon-to-pass world order are not specified. That a new world order is "inexorably emerging" rests upon the dual claim that "the dialectic between oppression and liberty" unfolds open-endedly and that "the urge for liberation, for human freedom from the structures of oppression and exploitation, is a deeply embedded, perennial human impulse and feeling" (p. 207). Aside from these propositions, the contemporary interface between global capitalism and counter-power eludes depiction.[2]

No such absence appears in Beverly Silver's analysis of transnational labour militancy during 2010 and 2011. Throughout capitalism's world history, she argues, working classes have been made, unmade and remade. Correspondingly, labour activism has emerged, and declined cyclically, over time and space in the context of capitalist expansion, technological advancement and changing institutional settings. Against this backdrop, Silver emphasizes the dual basis and geographic simultaneity of recent collective actions:

> the protests were an outcome of both the creative and destructive impacts of capitalist development on the world working class. On the one side, there was the widespread and militant labour unrest in sites of rapid industrial expansion, such as China, Vietnam, Bangladesh and India; on the other side, the widespread protests against austerity and the breakdown of the welfare state most notably in European countries.
>
> (Silver, 2014, p. 60)

One must appreciate here that cycles of labour activism will not produce the same outcomes each time. Thus, Silver doubts that contemporary labour unrest will "push the world's elites away from neoliberalism towards a new set of labour-friendly social and developmental compacts analogous to mid-twentieth century compacts" (2012, p. 59). Indeed, the evidence thus far reveals a converse scenario; financial, corporate and political elites have pushed austerity policies in many countries, notwithstanding China's giant stimulus package and labour law reform. For Silver, these conditions suggest that "the wave of unrest in 2010–2011 was no mere flash in the pan; but rather a sign that the steam is building up toward a long period of growing, worldwide and explosive anti-capitalist challenges from below" (2012, p. 60). How the situation unfolds turns on whether "differently located working classes will converge in solidarity or split along racial, ethnic and citizenship divides" (p. 67). Silver's analysis is incisive but incomplete. The likelihood of "explosive anti-capitalist challenges from below" presumes a coalition between organized labour and protest movements with the capacity to pressurize global capitalism at multiple points, simultaneously. The nature and structure of this coalition require a preliminary discussion.[3] It will certainly be necessary to advance alliance formations between the formally and informally employed amidst the occupational spread of precarity. Silver's commitment to a "process that transforms today's precarious workers into tomorrow's stable working class" belies a less than mutual conception of the solidarities that ought to eventuate (p. 63).

Social media synchronicities

Before depicting the coalitions and alliances that might disrupt global capitalism, I will evaluate the strategic and tactical significance of social media. This is important because optimistic accounts of the 2010–2011 uprisings, protests and occupations highlight the benefits and underplay the shortcomings of social media technologies. Such is clear in Paul Mason's February 2011 blog post and subsequent book, *Why It's Kicking Off Everywhere*. He identifies three central agents of the Arab Spring uprisings, Spain's *Indignados* movement and the Occupy actions: organized labour, under-employed graduates and the urban poor. They used Facebook to create flexible connections within and between groups and YouTube, Twitter and interlinked photographic sites for real-time organization and news dissemination. As multi-purpose cell phones caught scenes of protest and police repression, SMS texts were shared and posted to Twitter or microblogs. At the same time, bloggers provided commentary, updates, image montages and links for fellow activists.

Mason argues that these real-time communication technologies have increased the potency of political activism on several fronts. First, horizontal networks with a multiplicity of individual nodes can expose and challenge hierarchical states. Irrespective of spin or propaganda, "the instantly networked consciousness of millions of people will set it right: they act like white blood cells against infection so that ultimately the truth, or something close to it, persists much longer than disinformation" (Mason, 2012, p. 77). Second, socially networked activists can alter and refine the organizational format of revolt. The way in which rioting is directed and official internet shutdowns are avoided changes rapidly. Thus, during the 2009 Iranian uprising, protesters were "using email, blogs and SMS to evolve the protests in real-time". As street protests were repressed, activists launched "cyberattacks on government websites while putting psychological pressure on members of the repressive forces by naming them and disseminating their details". The regime responded in kind by searching Facebook for activist identities and by cyber-attacking activist networks (p. 78).

Third, Mason claims, on the basis of André Gorz's writings, that the spread of social media activism is creating an alternative network of relations which will bypass and undermine prevailing machineries of power:[4]

> The network, in short, has begun to erode power relationships we had come to believe were permanent features of capitalism: the helplessness of the consumer, the military style hierarchy of boss and underlings at work, the power of mainstream media empires to shape ideology, the repressive capabilities of the state and the inevitability of monopolization by large corporations.
>
> (Mason, 2012, p. 80)

Fourth, Mason suggests that the sheer immediacy of networked activism is of double historical significance. The "capacity to achieve elements of instant community, solidarity, shared space and control" recalls the worker cooperatives who launched the 1871 Paris Commune and bespeaks the "creation of new meanings and narratives beyond the head-to-head confrontations with the old order on its own terms" (2012, pp. 84, 139).

The latter scenario brings to light a "now" time whereby the prospect of the new radically alters taken-for-granted temporal understandings and experiences. Jason Adams (2012) argues that these conditions of collective self-consciousness are precipitated by capitalist technologies and time reckonings:

> While today's accelerated capitalism attempts to intensify the accumulation process through constantly revamped social media and smartphone technologies with each new innovation, it also enables movements like Occupy to reverse it, to mobilize these technologies against the ordering of time. Accelerated capitalism produces a "counter-temporality": the increased capacity of people to engage in the creation of rather than response to situations.
>
> (Adams, 2012, p. 16)

This teleological standpoint ignores the possibility that "accelerated capitalism" might produce ideologies of detemporalization as well as counter-temporal sensibilities. In the former case, networks of counter-power will need to rupture hegemonic constructions of time. Whether or not this transpires is a matter of political struggle and contingency rather than technological preconceptions.

In contrast to Mason and Adams, Jodi Dean observes that social media can debilitate radical critique and social change. Enthusiastic engagement with ever-new devices, applications, web practices and websites "displaces critical attention from their setting in communicative capitalism" (Dean, 2010, p. 28). Thus, Facebook is, primarily, a commercial social network rather than a vehicle for political solidarity. Its business model monetizes third party access to user-generated content, normalizes corporate surveillance of consumers and allows corporate blogs to "tap niches and build brand awareness through more direct interactions with potential customers" (p. 34). In this environment, one cannot assume that "networked media practices necessarily accompany a guerrilla politics of minoritarian disruption" (p. 37).[5] Dean suggests, conversely, that "networked communication and entertainment" advances solipsism without addressing "society writ large" and the "broadly shared symbolic identities" therein (pp. 72–3). I would add that the systems of power that might be vulnerable to minoritarian (or majoritarian) disruption are not addressed either. Furthermore, as Dean clearly implies, social media lifeworlds can exclude shared understandings of past and future:

> I can tweet my current location, update my friends on my current mood, check what's trending. I don't have to settle on any one direction or theme. I can live in the momentary.
>
> (Dean, 2010, p. 73)

From my perspective, this is a crucial insight. It suggests that the ideological, technological and reflexive constructions of real-time enabled by global television and the early internet have been reinforced and individuated by social media. In sum, clicking, linking and networking do not produce symbolic identities, temporal awareness or political solidarity; communicative activities instead contribute to the flows of communicative capitalism.

Positive assessments of networked activism and sceptical critiques of hyper-mediated communicative practices need not be mutually exclusive. Taken together, Mason, Adams and Dean disclose both the liberatory and the oppressive ramifications of real-time social networking. During major protests and uprisings, political mobilizations, synchronicities of action, marketing stratagems and repressive surveillance practices unfold rapidly across a multiplicity of virtual arenas.[6] I now turn to consider the conditions under which social media activism might effectively engage with global capitalism.

Coalition building, simultaneity and rupture

The rebellions, protests and uprisings of 2010–2011 were historically significant, but they did not rupture global capitalism. Yet, the optimistic accounts of Foran, Badiou, Gills and Gray, Mason, and Adams together suggested that a global-epochal shift was under way. The real-time simultaneity and synchronicity of networked protest was creating new temporalities. Publicly inexistent others were effecting a rebirth of history. Here, it is pertinent to ask, if these scenarios were *not* unfolding, what would bring them about? What are, in fact, the preconditions for rupturing the recurring crises and detemporalized presentism of global capitalism? My reply will outline the necessary components of a global counter-power with the resources to make history *and* productively exploit the time conflicts of global capitalism.

To these ends, organized labour must expand its capacity to disrupt just-in-time supply chains. Chinese workers' collective actions against Foxconn provide a salutary illustration. In 2012, metal-processing and assembly workers at Foxconn Taiyuan in north China's Shanxi province erupted in protest. They were manufacturing iPhone casings and other components for final assembly at a larger Foxconn complex in adjacent Henan province. A shift in production requirements from iPhone 4S to iPhone 5, and the associated speed-up to meet Apple's delivery time, gave workers the leverage to advance their collective interests. This occurred after a security officer assaulted two workers at Foxconn Taiyuan. A subsequent riot involving tens of thousands of workers spread throughout the factory complex. They used cell phones to send real-time images to local media outlets. Although senior government officials intervened, the tumult caused shipping delays for Apple just as consumer demand for the new iPhone 5 was peaking (Chan et al., 2013, pp. 108–9). This course of events suggests the potentiality of simultaneous and synchronized actions against transnational corporate supply chains. Successful strategic outcomes will also require multi-level alliances among organized labour, the precariously employed and the wageless poor. Here, Guy Standing's *A Precariat Charter* (2014) establishes some important guiding principles. All forms of work, waged or otherwise, should be equally respected; exploitation, coercion and poverty traps occur within and beyond standard workplaces. For alliance-building purposes, the spread of labour instability within global capitalism must be addressed directly. As Standing notes, "the precariat is not a 'proto-proletariat' that is becoming like the proletariat" (p. 18).[7] Without devaluing the hard-won rights and protections of unionized workers, the marginalized poor must be recognized and represented from where they stand. From my perspective, the strategic purpose is to combine the numerical, associational power of the precariously employed and wageless poor with coordinated labour campaigns against the structural weak points of just-in-time global supply chains.

Next, a coalition of counter-power should involve the reformation of a global protest network explicitly focused upon the delegitimization of financialized capitalism. Occupy's initial strength derived from the juxtaposition of a remote, uncaring 1 per cent with the 99 per cent of general humanity against a backdrop of tax-funded bank bailouts and economic polarization. This polemic was encapsulated in a manifesto (The Declaration of Occupation of New York City, 29 September) and politicized by the physical construction of multiple, virtually synchronized local assemblies. Occupy's eventual weakness stemmed from the proliferation and dissipation of causes associated with socio-economic injustice and the absence of a coordinated long-term strategy once media attention evaporated.

A resurgent movement needs to establish an accessible research hub from which to map the reach of financial elites within transnational ruling class formations. Profiles of global banks and financial institutions would include interlocking boards of directors, biographies of key figures, investment patterns and evidence of influence over nation states and transnational state institutions. Involvements in interest-rate fixing, derivatives speculation, tax evasion, money laundering and corporate bankruptcies could be highlighted. Meanwhile, specialist wikis and real-time news sites could record significant financial events and help synchronize targeted protest activities. In this context, strategies of occupation should intermesh with other counter-power actions and objectives. This lesson can be drawn from Nick Dyer-Witheford's contemporaneous critique of the Occupy movement:

> The outrage at capital's inequity and excess is unmistakeable but so too are the difficulties in and struggles over platform and demands. More important perhaps is that, for all its ubiquity, the limits of Occupy are the boundaries of the squares, plazas and parks it has seized. These are sites of public assembly, but not sites of production. To the extent Occupy stays within them, it remains a symbolic protest, stopping nothing. It does not interrupt the extraction and circulation of value. Therefore, it can be repressively tolerated. The press speculates on whether Occupy can last the winter. But the issue is not maintenance, it is movement – either containment as a waning signifier, slowly deserted by a briefly captured 24/7 media cycle, slipping into the various black holes yawning beneath an alternative urban lifestyle experiment, or expansion outwards.
>
> (Dyer-Witheford, 2012, p. 4)

Clearly, networked global protests against financialized capitalism ought to complement labour militancy against global supply chains and collective actions by precarious workers and the otherwise marginalized poor. A counter-power coalition also necessitates an alliance of populist anti-austerity movements with the capacity to develop prefigurative forms of socio-economic cooperation and the electoral mandate to claim local and national state power. The election of Venezuela's Hugo Chavez in 1998, Bolivia's Evo Morales in 2005 and Ecuador's Rafael Correa in 2006 fits these requirements. Chavez's ascension to power grew out of spontaneous protests against government austerity measures introduced in 1989. In Bolivia, in 1999, a coalition of peasant activists and union groups began to organize against water privatization in the city of Cochabamba. Massive popular protests, a general strike and highway blockades sparked broader revolts against an International Monetary Fund (IMF) structural adjustment programme. Eventually, a nationwide popular front allowed Morales to win presidential office. In Ecuador, Correa's election was enabled by the combined efforts of a national indigenous movement, electrical, petroleum and public sector workers, urban community groups, women's organizations and human rights activists (McNally, 2011; Collins, 2014).

In Greece, during 2004, the Coalition of the Radical Left (SYRIZA) drew together more than 10 left-wing groups and associated activist networks to form a parliamentary front. In the 2007 election, it obtained nearly 5 per cent of the vote and 13 seats. In early 2010, after austerity cuts to jobs, pensions and public sector wages, a series of general strikes and mass demonstrations shifted public opinion against the IMF, the European Central Bank (ECB) and the European Commission (McNally, 2011). Consequently, when SYRIZA campaigned as an official political party in the two general elections of May and June 2012, its share of the vote rose to 16 per cent and then 26 per cent (Stavrakakis and Katsambekis, 2014). After the January 2015 election, SYRIZA's leader Alexis Tsipras became Prime Minister of a coalition government. In June 2015, Spanish academic and anti-eviction activist Ada Colau was sworn in as Mayor of Barcelona. Her party, Barcelona in Comú, was backed by Podemos, a nationwide party with roots in the *Indignados* movement (Kassam, 2015, p. 11). Outside of public office, anti-austerity populism has also emerged in Italy, Portugal, Ireland and the UK.

Ernesto Laclau's *Populist Reason* (2007), the theoretical template for anti-austerity populism,[8] alludes to its global significance (Hancox, 2015). The central preconditions for this kind of politics can be briefly summarized. First, a sharpening antagonism occurs between governing elites and the populace, such that the differences between major political parties are subsumed into their allegiance to a political class with a singular economic ideology. Second, the heterogeneity of longstanding political struggles is integrated within the formation of a unified oppositional cause. The equivalency of different activist causes and campaigns precludes the creation of political hierarchies and the top-down imposition of strategic priorities. Third, constructions of popular identity against ruling elites are infused with democratic terminology (i.e. "democracy", "the people", "public", "commons", "citizen", "participation", "self-government"). On the basis of these precepts, Laclau reflects upon the radical potentiality of populist movements:

> what is crucial for the emergence of the "people" as a new historical actor is that the unification of a plurality of demands in a new configuration is constitutive and not derivative. In other words, it constitutes an *act* in the strict sense, for it does not have its source in anything external to itself. The emergence of the "people" as a historical actor is thus always transgressive *vis-à-vis* the situation preceding it.
>
> (Laclau, 2007, p. 288)

Laclau recognizes the difficulties of translating the "equivalential logics" of popular struggle into collective acts of creation under the "conditions of global capitalism" (p. 232). For my purposes here, a crucial requirement emerges. Two or more anti-austerity governments need to gain national office. This would increase the equivalence of points of struggle at an international level, delegitimize the collusions between financial institutions and the transnational state, and inspire the creation of new anti-austerity projects.

The coalitional components outlined here are necessary rather than sufficient conditions for building a counter-power against global capitalism. Göran Therborn has identified other potentially oppositional forces. These are empowered indigenous peoples, especially in Andean America and India, and landless peasants and agricultural labourers throughout Africa, Asia and Latin America (Therborn, 2014). To this we can add the prospect of further national and pan-regional uprisings against authoritarian regimes. From the preceding discussion, one can posit minimal thresholds for the advancement of counter-hegemonic struggles against global capitalism. To reiterate, the necessary coalitional components are: worldwide labour militancy against the weak points of global supply chains; transnational alliances among unionized workers and groups representing precarious workers and the marginalized poor; a global protest network committed to the delegitimization of financialized capitalism; and anti-austerity movements with the capacity to obtain government office. The tactical imperative of this coalitional formation is to coordinate networked simultaneities of action such that new temporalities of hope and solidarity can, indeed, be created. Strategically, this coalition of forces must prepare for global capitalism's next financial crisis by organizing political interventions and policy alternatives[9] which will rupture the logic of crisis repetition as it occurs.

11
Toward a Time Manifesto

The previous chapter identified the coalition of political forces necessary for establishing a counter-power to global capitalism. Disrupting the fragile just-in-time networks of supply chain capitalism, forging solidarities between organized labour, precarious workers and the informal poor, fashioning anti-austerity political projects, and sustaining a networked protest culture against financialized capitalism must occur simultaneously. This is a key precondition for sustaining oppositional solidarities and for effectively exploiting the likely repercussions of a future financial crisis. It will also be necessary to rupture the real-time reflexivities and detemporalized presentism endemic to global capitalism. To help coordinate these objectives, I provide a set of time principles that move beyond familiar homilies about remembering the past, creating new futures, slowing down the pace of life and respecting other cultural histories. The central principles are succinctly formulated as calls for action centred upon the four epistemes of time: epochality, time reckoning, temporality and coevalness. Taken together, these calls will enable the construction of a more substantive and programmatic time manifesto.

Advance global-epochal consciousness

Global capitalism's capacity to erase or ex-nominate its own historicity is of epochal significance. As Alain Badiou has remarked, "we have entered a period of a-temporality and instantaneity" such that time is a "political construction" rather than a "shared individual experience" (Badiou, 2008, p. 105). Rupturing this construction necessarily requires a collective sense of globality which extends beyond the general nomenclature of globalization and the linear periodicity denoted by the locutions of pre-, early, modern, advanced or late capitalism. The naming of "*global* capitalism" bespeaks a plurality of historical experiences arising from local, intertwined legacies of cultural narrative, imperialism and anti-colonial struggle. Thus, oppositional coalitions must nurture a two-level epochal awareness which stresses global capitalism's universal structure as well as the multi-perspectival standpoints of those who confront its material reach and power. Such an accomplishment will enable serious public reflections on the epochal *finitude* of global capitalism – a necessary precursor to the rupture of the system. Global capitalism's relentless drive toward inter-networked simultaneity throughout every aspect of life constitutes a new form of Chronos, in the name of progress. Under these conditions, Cairotic interruptions of Chronos necessarily entail a consciousness of global epochality and the continuities/discontinuities of world history.

Reclaim tempo

From a time-reckoning perspective, it is crucial to remove the capacity of real-time to subsume and "game" chronological time (and the calendar-clock sequentialities it contains). This tendency allows capitalists to drive the tempo of work and worker exploitation as financial institutions and the transnational state set the tempo of reactive government decision making. Popular control of tempo is inherent in the principles of democratic representation, consensus decision making and prefigurative public assemblies. Contesting the real-time logics of finance capital requires a reclamation of tempo such that variously scaled economic structures develop *over* sequential time rather than against it.

Re-temporalize real-time

From standpoints opposed to global capitalism, the "now-ness" of simultaneous and synchronized political events opens up new temporalities of experience and possibility. However, this cannot be assumed. The media coverage accorded to ill-formed or isolated oppositional groups will simply reproduce the detemporalized presentism of global capitalist hegemony. An effective re-temporalization of real-time first requires a clearly articulated defence of temporal autonomy and temporal pluralism (on behalf of workers, citizens, community groups and governments). Sustained construction of new temporalities in the course of struggle will enable new memories of past political struggles to be activated for a future which is now in-the-making. This entails an appreciation of those futural horizons which impelled previous world-oppositional movements. In this respect, it is important to recall the world historical moment when anti-colonial movements effected the collapse of former Western empires.

Thematize coeval recognition

Coalition formation among different oppositional movements requires the institutionalization of coeval reciprocities among union organizations, cooperatives of precarious workers and the unemployed, village-based membership groups, poverty action NGOs and those committed to anti-austerity political movements. To this end, the repertoires of coeval communication advanced by Johann Fabian in *Time and the Other* (1983) can be employed to accommodate the disparate temporalities of gender, language, ethnicity and religion within coalitions of counter-power. On this basis, oppositional coalitions and the populaces they represent must demand coeval recognition from transnational corporations and the transnational state (including national elites and national governments). The preliminary imperative is to position subordinated groups, classes and organizations within power structures as recognizable opponents with a modus operandi rather than as excommunicated others. Political manifestations of this demand include the recognition of independent trade unions, democratically elected anti-austerity governments, and transnational activist organizations. These frontline vantage points of coeval conflict within global capitalism must be established if oppositional coalitions are to be sustained. Such advancements in coeval recognition will form the basis of future coeval conflict and the prospective rupture of global capitalism's logic of crisis repetition.

Notes

1 Epistemes of Time in Global Context

1. It is instructive to position this understanding of temporality within philosophical debates concerning "A" series and "B" series time. This dichotomy was famously proposed by Cambridge philosopher John McTaggart at the turn of the nineteenth century. In the "A" series, events are categorized according to whether they exist in the past, present or future. Some events are occurring now, others have already occurred, while others still lie in the future and are yet to occur. In this context, the status of an event continually changes according to the criteria of past-ness, present-ness and futurity. These criteria are inherently relational rather than chronological. Against this, events in the "B" series occur sequentially and can be positioned along a chronological continuum. In this conception of time, the "before–after" distinction is fundamental and inescapable. The "A" and "B" series appear incompatible, yet they mutually implicate each other. On the one hand, "A" series time accommodates the basic idea of change, whereby the interplay of human experiences, events and social structures unfold contingently. From this perspective, the "B" series is merely a row of events. On the other hand, the past-ness, presentness and futurity of an event can only be determined from the standpoint of a given moment in chronological time. From this "B" series perspective, "A" series time seems to be secondary to the "before–after" distinction. Faced with these incommensurate yet equally plausible vantage points, it is tempting to advance a nuanced position along the lines of "I am a moderate/strong 'A' or 'B' series supporter". Such is evident in Alfred Gell's *The Anthropology of Time* (1992, pp. 149–55). Alternatively, these incommensurate understandings of time can be regarded as a paradoxical and useful starting point for anthropological and philosophical accounts of time, nature and duration (see especially Hodges, 2008, pp. 399–429).

   My argument here is this. First, time is not a singular construct or unified field; one cannot expect to erase all discrepancies between different time-related perspectives. Second, the "A" series–"B" series distinction is but one aspect of a larger and more variegated intellectual canvas. Temporality is an episteme of time distinguishable from those of epochality, time reckoning and coevalness. Third, within lifeworlds and social structures, these epistemes of time play out indivisibly and in a global context.
2. Fabian's threshold for coeval communication requires careful specification. Within the ethnographic practices of cultural anthropology, co-temporal and multi-temporal intersubjectivities may be difficult to accomplish. Different collective memories and modes of futurity may be incommensurate even if they are openly articulated within a shared present. Mutual and shared invocations of historicity and historical narrative will not necessarily lead to coeval solidarity. For further discussion on these matters, see Kevin Birth's "The Creation of Coevalness and the Danger of Homochronism" (2008, pp. 3–20).

Birth also points out that emphasizing cultural difference conflicts with the philosophical search for universal, transcendental elements in the human experience of time. I have not the space here to try to reconcile the two approaches. I have identified coevalness as an episteme of time in order to comprehend the changing polarities of time-related experience within the global.

4 Global Mediations of Time

1. Of course, live television news pre-dates the arrival of global networks. Jane Feuer in *The Concept of Live Television: Ontologies as Ideology* (1983) argued that something live occurs when the time of an event recorded by the camera is congruent with transmission and viewing times (as opposed to "live on tape" replays). Feuer went on to textually critique ABC's *Good Morning America*, in which a studio news anchor brings together live interviews with opinion leaders, public figures and ordinary citizens from dispersed locations. Technologically and ideologically, *Good Morning America* constructed a sense of national unity out of diversity. Against this background, the distinctiveness of the globally networked television news which unfolded during the 1990s and early 2000s becomes apparent. The real-time immediacy of 24-hour rolling news is not anchored by geographic space. Rather, news and current affairs are delocalized, such that the "now-ness" of coverage collapses the geographic separation between here and there. The kinetic choreography of the screen is self-validating. Rolling trailers and headlines, screen-within-screen interviews and camera footage generate a powerful telepresence which precludes access to the real. Rather than apprehending reality, the screen becomes its spectral substitute.
2. Initially, globally networked television catered to wealthy and upper-middle-class professionals of different nationalities. This demographic was globally mobile and required continual proximity to global news channels with updating political, corporate and financial news within hotels, resorts and flight entertainment systems. Meanwhile, on national television channels, prime-time bulletins were partly comprised of "breaking news" packages from global news providers. Thus, a global perspective on news became synonymous with live-ness and immediacy.
3. It is also true that diverse contra-flows have come to shape the real-time ecology of satellite television news; various diasporas can draw upon particular channels to reaffirm linguistic and cultural ties. It is important here to appreciate the global significance of Al Jazeera. During the US invasion of Iraq, Al Jazeera successfully challenged an enormous real-time orchestration of power and propaganda organized around spectacular narrative forms integrated within military and corporate public relations campaigns designed for 24-hour news channels and websites (Compton, 2004, p. 3). In response, Al Jazeera provided 24-hour rolling news with on-the-spot stories and footage from Baghdad, Mosul, Basra and the Kurdish zone. Although Al Jazeera's counter-construction of globally televised news events is of historic importance, there were, and are, inbuilt limits to the counter-construction of global *economic* events as they unfold.

4. Earlier historical conjunctures of capitalism also confronted worldwide networks of opposition. Examples include international socialism, anti-colonial nationalisms, the non-aligned movement and Third World guerrilla insurgencies. During the late 1960s and 1970s, worldwide movements of people from national new Left milieus began to question the global-human dimensions of superpower statecraft, military, technology, international economics, population growth and environmental depletion. Thus, large numbers of domestically based peace, feminist, environmental and indigenous peoples' organizations started to form international alliances (Buckman, 2004, pp. 112–13). The 1980s saw the emergence of major protests against World Bank–IMF structural adjustment programmes and the Third World-directed lending policies of Western banks. This became a truly global issue after 1989, when former Eastern bloc economies became incorporated within global capitalism. Globalization then became the ideological mantra of global elites, and oppositional movements expressed their global solidarities in a specifically self-conscious way. Contemporary formulations, such as "globalization from below", "after-globalization" and "anti-corporate globalization", indicated that capitalist ideology did not monopolize the global imaginary.

5 Capital Realization, Financialization and Time Conflict

1. This is because real-time is subsumed by the homogeneous a-historical concept of timeless time. Castells' argument here rests upon his prioritization of spatial flows over historical time and the space of places, that is, "Space shapes time in our society thus reversing an historical trend, flows induce timeless time, places are time bounded" (Castells, 1996, p. 466).
2. Harvey himself has stated that this text was the foundation of his subsequent writing. This perspective is given further credence by other scholars (Harvey, 2000).
3. See Bank for International Settlements, Central Bank Survey of Foreign Exchange and Derivatives Market Activity, BIS, Basle. By 2000, production-based derivatives comprised less than 1 per cent of the total dollar volume of trades. See Francesca Taylor (2000) *Mastering Derivatives Markets* (New York: Prentice Hall). Both of these sources are quoted in LiPuma and Lee (2005).

6 Capitalism, Worker Exploitation and Time Conflict

1. Glennie and Thrift's critique of Thompson's essay rests on the insight that socio-temporal experiences can be intertwined with the chronological markers of clock time. Clock time, as an abstract calculus of worker exploitation, equates not so much with the early English factory system as it does with the later formation of Fordist production systems. This standpoint helps us to appreciate Postone's crucial distinction between abstract time and concrete time. On this matter, I dispute Christian Fuchs' claim that "abstract time is clock time" and that it was introduced into Western Europe in the

fourteenth century, as exemplified in the cloth industry (Fuchs, 2014, p. 101). Fuchs quotes Postone to the effect that the 60-minute hour had replaced the day as the fundamental unit of labour time by the end of the fourteenth century. However, this shift in time reckoning did not become the organizing principle of production, distribution and exchange until the late nineteenth century. With regard to contemporary capitalism, Fuchs simply equates worker exploitation with the commodification and acceleration of clock time (pp. 106–9). This is undoubtedly true, but leaves out workers' concrete experiences of temporality and historical change in contradistinction to the imposition of the clock time disciplines associated with exploitation. From *this* perspective, workers do not just battle employers through the categories of clock time and over the availability of non-work time; they also advance the right to invest their time with temporal meaning. Fuchs' remarks about high-speed, high-risk financial speculation (pp. 109–10) overlook the conceptual distinction between clock time and inter-networked real-time. In my view, it is the relationality between these two forms of time reckoning which centrally contributes to global capital's exploitation of the global worker.

7 Political Economies of Time Conflict

1. For Harvey, the term "fix" has a double meaning. It refers, literally, to the physical form and location of a capitalist investment and, metaphorically, to the idea that capitalist crises can be resolved through temporal deferral and geographic expansion (Harvey, 2005, p. 115; Jessop, 2006, p. 147).
2. As already argued, Harvey's conception of temporality is narrowly equated with chronological time frames. In my iteration, temporality also incorporates qualitative understandings of the relationality between past, present and future.
3. Harvey's theoretical elaboration of the spatio-temporal fix can be found in *The Limits to Capital*. An important difference between Harvey's and Jessop's understanding of the spatio-temporal fix is that the latter foregrounds the forms and periods of capitalism associated with such an arrangement. The institutionalized class compromise of Atlantic Fordism and the Keynesian welfare state are cases in point (Jessop, 2006, p. 163).
4. Harvey's observations exemplified what he called "the current condition of global capitalism" (Harvey, 2005, p. 1). However, in contrast to Robinson, Hardt and Negri, and following Arrighi, he accorded a central role to the economic hegemony and territorial imperialism of the US (compared with the transnational corporation).
5. This strand of political economy derives from Jürgen Habermas, *Legitimation Crisis* and Claus Offe, *Contradictions of the Welfare State*. Jessop's writings on the capitalist state draw upon Offe's critical perspectives and substantive insights.
6. Harvey's argument in *The New Imperialism* (2005) that global capitalism requires "accumulation by dispossession" is analogous to my reconstruction of Johannes Fabian's "denial of coevalness". I maintain that this formulation, which was originally a critique of Western imperialism, can be recast as an encapsulation of global capitalism's modus operandi. This standpoint

cannot be accommodated within Harvey's conceptualizations of time and temporality.

7. There are other trajectories of nation-state development. One notable case concerns the transition from white settler colony to white settler Dominion in Australia, New Zealand, Canada and South Africa.
8. This usurpation of state temporal authority was presaged by what Naomi Klein has called "the shock doctrine", whereby recalcitrant governments, intellectuals, collective organizations and much of the citizenry were traumatized into cooperating with the new economic orthodoxy. The primary objective was to forge a "blank slate" for the imposition of neoliberal policy regimes. Most notably, in Latin America, the 1973 military overthrow of Chile's Allende government and the imposition of a macroeconomic framework inspired by Milton Friedman was accompanied by a comprehensive purge of Left developmentalist culture. Eventually, Chile, Argentina, Uruguay and Brazil, formerly showcases of developmentalism, were run "by US-backed military governments and were living laboratories of Chicago School Economics" (Klein, 2007, p. 87).
9. As outlined in Chapter 3, my outline of the transnational state draws from William Robinson's writings on this subject. As a general category of analysis, the transnational state directly reminds us that state structures need not be integrated with a given national territory and that the cohesion of nation states cannot be simply assumed. My argument here is that time conflicts between the national state and the transnational state are constitutive of global capitalism.
10. Scheuerman (2004) also argues, more generally, that these intra-temporal incongruities are sharpened by "the ever faster pace of economic and social life" (pp. 45–6). I prefer his more specific focus on "contemporary capitalism" and its relation to "the rule of law" (p. 45).

8 Time, Communication and Financial Crisis

1. Meanwhile, as Simon Johnson and James Kwak report, waves of mergers and acquisitions in the US produced "a handful of megabanks with hundreds of billions or trillions of dollars in assets". As investment banks such as Goldman Sachs and Morgan Stanley expanded operations, the likes of Citigroup, J.P. Morgan-Chase and the Bank of America became huge amalgams of investment and commercial banking (Johnson and Kwak, 2010, p. 86).
2. Writing in September 2008, as the financial bubble was collapsing, Robert Wade remarked upon the unprecedented globality of unfolding events. He stated that this was not "the latest in a long line of crises driven by bubble dynamics". Rather, "the asset bubble was propagated across the world through securitization technology and the originate and distribute model of banking which only came to fruition in the 2000s" (Wade, 2008, p. 11).
3. Dean Starkman identifies "three journalism outsiders" who were able to "unearth the looming mortgage crisis". They were Mike Hudson, Gillian Tett and Richard Lord (Starkman, 2014, pp. 211–40). For a prescient critique of US investment banking practices, see Naomi Prins, *Other People's Money* (2004).

9 Crises without End

1. Soederberg cites this statistic from a 2009 IMF publication entitled "Development Committee Communiqué, Joint Ministerial Committee of the Boards of Governors of the Bank and the Fund on the Transfer of Real Resources to Developing Countries".
2. Bob Jessop has tracked the emergence of a dominant crisis interpretation in liberal market economies since the initial emergency measures:

   > this is a crisis *in* finance-led accumulation or at the most, *in* neoliberalism. As such, it can be resolved through a massive, but strictly temporary, financial stimulus, recapitalization of the biggest (but not all) vulnerable banks, promises of tighter regulation and a reformed (but still neoliberal) international economic regime. This will allegedly permit a return to neoliberal "business as usual" at some unfortunate, but necessary cost to the public purse, some rebalancing of the financial and "real" economies and, in the medium term, cuts in public spending to compensate for the costs of short term crisis management.
   >
   > (Jessop, 2012, p. 33, emphasis in original)

   Few Anglo-American economists in universities, financial institutions, business media and government advisory bodies moved beyond these parameters. See Philip Mirowski (2014), especially pp. 157–324.
3. In the US, congressman Barney Franks briefly pushed for a ban on OTC products and a requirement that derivatives be traded on regulated exchanges. This stringent regulatory threshold was resolutely opposed by bank lobbyists. Morgan points out that central clearing parties (CCPs) "differ from regular exchanges in that prices are not publicly posted but continue to be negotiated bilaterally and products need not be as standardized as on regulated exchanges" (Morgan, 2012, p. 406).
4. Einstein's general theory of relativity holds that at the speed of light the synchronization of clocks across spatial distance is impossible. See Galison (2004).
5. Goldman Sachs was a case in point (Pekarek and Lufrano, 2012, p. 24).
6. Streeck's formulation of "democratic capitalism" indirectly refers to Western liberal democratic societies. Their positioning within global capitalism is not closely examined.
7. In June 1999, the G7 summit in Kohn, Germany tried to standardize commercial and investment bank dealings with hedge funds, regulate offshore financial centres and contain short-term lending to developing economies. The "New Financial Architecture" (NIF) also sought to establish codes of conduct in the areas of accounting, auditing, insurance payments, bankruptcy, procedures and settlements (Soederberg, 2010). Soederberg's concern here is not so much the non-implementation of these proposals; it is that the underlying *principles* of the NIFA were never acknowledged by the G20 even in the wake of a major financial collapse.
8. In the case of India, Indira Hirway and Seeta Prabhu's cross-sector study on the impact of financial crisis and global recession found that workers shifted from regular to casual or temporary jobs. The process was most sharply experienced by those employed in auto-parts manufacturing, gems

and jewellery businesses. Also affected were workers in garment production and engineering (Hirway and Prabhu, 2012). Similarly, Enrico Marelli and Marcello Signorelli show how the financial crisis and global recession damaged employment prospects in Europe. From 2008 to 2010, the percentage of national workforces unemployed for more than 12 months rose rapidly. The figures for selected countries were: Lithuania 1.2–7.4; Estonia 1.7–7.7; Latvia 1.9–8.4; Ireland 1.7–6.7; Spain 2.0–7.3; and Greece 3.6–5.7 (Marelli and Signorelli, 2013).

10 Communication, Synchronicity and Counter-Power

1. This qualified prognosis for Western countries contrasts with that provided for countries whose historical riots have recently occurred. Badiou argues that revolts in Tunisia, Egypt and other Arab countries have stirred and altered historical possibilities. After the tumult of riotous events, the (just established) conception of political action becomes dormant and awaits a new sequence in its development. This can be termed an “intervallic period” (Badiou, 2012, p. 39).
2. Gills and Gray (2012) do identify a “crisis of globalized, financialized and oligarchic capitalism” as well as a “world-historical and civilizational crisis in which the environmental limits of ‘limitless growth’ are fast approaching”. However, they do not explain how global forces of rebellion and liberation are engaging with these world crises to create a new world order. In this regard, the thresholds of political success need to be outlined.
3. An initial tabular framework for such a discussion can be drawn from Tattersal’s (2007) analysis of labour-community coalitions. Along one axis, she distinguishes between ad hoc support, mutual support and deep coalitions. The other axis categorizes the salient features of such coalitions, that is, common concern, structure, organizational commitment, organizational capacity, culture and scale.
4. Specifically, Mason draws from Andre Gorz’s *Farewell to the Working Class* (1982).
5. Dean is referring here to uncritical endorsements of “hacktivism” within critical media theory. Her criticism can equally be made against over-optimistic proponents of social media activism such as Mason and Adams.
6. How these tendencies play out in practice is vividly described in Linda Herrera’s *Revolution in the Age of Social Media* (2014). She explains how during the Egyptian popular insurrection, social media forums, mobile telephony and YouTube were the terrain for major power struggles involving protest groups, the military, the Muslim Brotherhood, the US State Department and senior managers from Facebook and Google.
7. Standing (2014) declares, conversely, that “the precariat is a class in the making, in that those in it have distinctive relations of production, relations of distribution (sources of income) and relations to the state, but not yet a common consciousness or common view of what to do about precarity” (p. 31). This is, in my view, an overstatement. The occupational, socio-cultural and global diversity of precarious lifeworlds renders the formation of a cohesive precariat class unlikely. The critical requirement is to forge alliances of

organized labour, the precariously employed and the wageless poor without privileging any organizational standpoint.

8. The theoretical significance of this work has become more evident in retrospect. The first edition was published in 2005, three years before the global financial crisis. My distillation of Laclau's argument is necessarily simplified. The provenance of his ideas in the context of a global counter-power coalition is my primary concern here.
9. Elaboration upon such alternatives would be the subject of another book. However, in the context of my discussion here, Robin Blackburn's (2011) argument for a public utility finance system is a promising starting point.

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