Borderless worlds? Problematising discourses of deterritorialisation

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We live, we are constantly told, in an era of revolutionary changes. In contrast to the revolutions of earlier times, our contemporary revolutionary movements are technological and informational, economic and geographic. They promise utopian futures and limitless freedoms, though the utopian future they envisage is a technologically enveloping design for digital living, and the limitless freedom they project is the freedom of unleashed markets and a borderless world of friction-free capitalism.[1] Instead of liberation by social and nationalist movements, it is socio-machinic networks, collectives of corporations and computers, that will overthrow the oppressive ancient regime of the state and deliver us from taxes and territory. Instead of soil, we will have software. Instead of territorial being stuck in place, we will have telemetrical becoming on the world wide web. Our capitalist technoculture already proclaims this promise of transcendence: 'Where do you want to go today?' (Microsoft); 'Solutions for a small planet' (IBM); 'Is this a great time or what?' (MCI-World Com).

Deterritorialisation, the French critic Paul Virilio declared some time ago, is the question for the end of this century.[2] The term is one amongst many others – globalisation, glocalisation, postcolonial, postnational, transnational, third space, cyberspace – that have been coined to try to describe the rearranging and restructuring of spatial relations as a consequence of the technological, material and geopolitical transformations of the late twentieth century.[3] Deterritorialisation is the name given to the problematic of territory losing its significance and power in everyday life. Territory, the concept suggests, is no longer the stable and unquestioned actuality it once was. Rather than it being an assumed given, its position and status are now in question.

Historically delimited in the process of state formation and nation building, the concept of territory is contextually dependent upon the development of state bureaucratic powers (agencies empowered with instruments of visualisation and survey), military institutions and technology capabilities (especially the logistical systems enabling spatial

occupation and movement), identity regimes and socialisation structures (like schools, churches and civil society networks), and telecommunication systems (like national literacy and media institutions).[4] Rather than territory we should really speak of culturally contextual and technopolitically contingent territorialities or regimes of territoriality. Territory, therefore, should never be conceptualised in isolation for it is part of a complex of state power, geography and identity. Put somewhat differently, territory is a regime of practices triangulated between institutionalisations of power, materialisations of place and idealisations of 'the people'.

To speak of deterritorialisation in contemporary discourse is to speak of a generalised dismantling of the complex of geography, power and identity that supposedly defined and delimited everyday life in the developed world for most of the twentieth century. It is to speak of a new condition of speed and informationalisation, of the transgression of inherited borders, the transcendence of assumed divides, and the advent of a more 'global' world. Though regimes of territoriality are constantly in flux and under negotiation, discourses of deterritorialisation tend to ascribe a unique transcendency to the contemporary condition, defining it as a moment of overwhelming newness.[5] Such functionally anti-historical notions of deterritorialisation find a variety of different expressions in political, economic and techno-cultural knowledge.

Politically the idea of deterritorialisation is a central notion in the Clinton administration's consciousness of change. President Clinton's first inaugural address declared that '[c]ommunications and commerce are global; investment is mobile; technology is almost magical; and ambition for a better life is now universal...There is no longer division between what is foreign and what is domestic – the world economy, the world environment, the world AIDS crisis, the world arms race – they affect us all'.[6] In office, Clinton's administration moved to define a so-called 'Clinton Doctrine' that responded to the challenges of globalisation, borderless worlds and 'the Information Age' (a concept that was central to the administration's rhetoric and self-image) by promoting free trade agreements like the NAFTA, pursing technological initiatives like a national information superhighway, and pushing the enlargement of the world community of so-called 'market democracies'.[7]

Economically, deterritorialisation is held to be a consequence of an unstoppable globalisation of previously discrete national markets and economies. The Clinton administration's former Labour Secretary Robert Reich proclaimed the coming irrelevancy of corporate nationality as previously national champions restructure themselves into global webs of production, sub-contracting, strategic alliances and sales. '"American" corporations and "American" industries', he declared, 'are ceasing to exist

in any form that can meaningfully be distinguished from the rest of the global economy. Nor, for that matter, is the American economy as a whole retaining a distinct identity...'.[8] Reich's work is a strategic response to such deterritorialisation, a 'work of nations' agenda emphasising educational training, infrastructural investments, and skills development for state administrators to promote and cultivate upon their territorial patch of the global economy.

Kenichi Ohmae's work suggests organisational strategies for transnational business managers to take advantage of what he sees as the coming borderless world and the death of the nation-state.[9] In Ohmae's idealised world 'multinational companies are truly the servants of demanding consumers around the world'.[10] 'Old-fashioned bureaucrats', however, keep trying to hinder the natural development of a borderless world. 'They create barriers and artificial controls over what should be the free flow of goods and money.'[11] Inflating observations of the Japanese marketing strategy of global localisation, the borderless organisational possibilities of global telecommunications, the emergence of a transnational 'foreign exchange' market, and the increasing importance of foreign direct investment as an economic development strategy for states, Ohmae envisions a world where national interest has lost much of its meaning and where the 'national soil' refers not to identity but to the supportive environment needed by companies trying to grow their businesses.[12] He celebrates this emergent condition of statelessness and nationlessness, declaring in conclusion that he would happily begin paying a third of his taxes to an international fund dedicated to solving the world's problems, a third to his local community and the last third to his country which, he adds, 'each year does less and less for me in terms of security or well-being and instead subsidises special interests.'[13]

This striking disillusionment with the state and disenchantment with national territory and soil is evident also in the digital culture that has grown up around the spread of informational technologies in the advanced industrial world.[14] Lurking within this culture is a strong desire to delink from territory, detach oneself from soil, and leave the physical world of territory, trouble and taxes behind.[15] Information, as the digerati are wont to declare, just wants to be free.[16] In their hubristic 'Magna Carta for the Knowledge Age' sponsored by Newt Gingrich's Progress and Freedom Foundation, the neoliberal digerati Esther Dyson, George Gilder, Jay Keyworth and Alvin Toffler proclaim that the 'central event of the twentieth century is the overthrow of matter.'[17] The longstanding power of territorial matter is being undermined by emergent telemetrical power. Existing notions of politics, territoriality and communal identity are under challenge and will eventually be replaced by a new informational civilisation. 'The

meaning of freedom, structures of self-government, definition of property, nature of competition, conditions for cooperation, sense of community and nature of progress will each be redefined for the Knowledge Age – just as they were redefined for a new age of industry some 250 years ago.'[18] Yet the transcendent truths of 'the American idea' remain relevant. In keeping with the Progress and Freedom Foundation's mission to create 'a positive vision of the future founded in the historic principles of the American idea',[19] the 'Magna Carta' conceptualises cyberspace within the terms of classic American exceptionalist myths of the frontier and exploration. Cyberspace is a land of knowledge with a 'bioelectronic frontier' demanding discovery and colonisation. Exploring this frontier is 'civilisation's truest, highest calling'.[20] Although declared to be universal and borderless, cyberspace is nevertheless represented as quintessentially American.

Like Ohmae, the digerati see state bureaucracies, old-fashioned border builders, as a threat to progress on the bioelectronic frontier. Governments in the cybernetic knowledge age need to get out of the way of the pioneers of the information age. Their industrial policy should focus on 'removing the barriers to competition and massively de-regulating the fast-growing tele-communications and computing industries'.[21] Freed from the constraints of the old spatial order, cyberspace promises to open up closed markets and liberate repressed peoples, to unify an increasingly free and diverse world. In another irony lost on the neoliberal digerati, the future of human freedom supposedly lies in cyberspace, that most machinic and surveillant of domains.[22]

These different examples of discourses of deterritorialisation are, of course, sweepingly superficial representations of the complexity of boundaries, territory and the world map at the century's end. Seriously flawed though they are as conceptualisations of the contemporary world, the confident hyperbole of these discourses nevertheless has considerable ideological power and rhetorical force. This paper seeks to problematise such discourses of deterritorialisation in a general way by examining one of the more precise articulations of the phenomenon of deterritorialisation, the so-called 'end of geography' in the domain of financial markets. On the face of it, the case of global financial integration would seem to be a particularly strong instance of deterritorialisation. Rather than understanding the issue, however, as a mere confirmation of an unproblematised deterritorialisation, this paper makes three arguments about deterritorialisation discourses generally, using the case of global finance. The first argument is that discourses of deterritorialisation are ideological discourses that do not describe actuality but seek to discursively constitute and represent certain complex tendencies as both inevitable and positive developments in contemporary capitalist society. Discourses of deterritorialisation, in other words, are part of the self-interpretation of contemporary informationalised

capitalism. They combine elements from many longstanding Western discourses (con)fused in a contradictory and unstable unity. For example, digital culture discourses combine a strong humanistic inheritance emphasising human freedom, liberation and fulfilment; a capitalist discourse concerning the virtues of open and transparent markets; and a discourse of technophilia which celebrates technological systems as wondrous entities that enhance human capacities and capabilities.

The second argument is that what we are dealing with is not deterritorialisation alone but a rearrangement of the identity/border/order complex that gives people, territory, and politics their meaning in the contemporary world. Deterritorialisation is not qualitatively and overwhelmingly new. Further, there is no pure transcendence of the existing complex of nationality, territoriality and statism but a rearranging of their practical functioning and meaning in a globalising and informationalising capitalist condition. The human practices organising borders, states and territories are co-evolving with socio-technical networks and informationalised capitalist relations of production and consumption. It is not simply that there is no de-territorialisation without re-territorialisation, but that both are parts of ongoing generalised processes of territorialisation.

The third argument is that the consequence of de- and re-territorialisation at the century's end is the creation of a world political map that is paradoxically more integrated and connected yet also more divided and dislocated as a result of the uneven development of the trends and tendencies associated with informationalisation and globalisation. While transformations in markets and telecommunications are creating a global village, this village is characterised by a functional global apartheid that separates and segregates certain affluent and wired neighbourhoods from other deprived and disconnected zones and neighbourhoods.[23] The development of borderless worlds does not contradict but actually hastens the simultaneous development of ever more bordered worlds characterised by stark inequalities and digital divides. The concept and practice deconstruct themselves.

Finally, the paper concludes by going beyond these arguments to question how political geographers can and should approach the technological systems that underpin many claims of deterritorialisation.

The End of Geography? Deterritorialisation and Financial Markets

One of the traditional markers of state sovereignty and territorial power is the ability of a government to print its own money and control its own financial destiny. While this power was not realised by many states, financial markets were nevertheless considered to be predominantly and

undeniably territorial until the last few decades. Since the early 1970s a number of developments and tendencies have thrown the state territorial character of financial markets into question. The first of these developments was the breakdown of the Bretton Woods system of pegged exchange rates in 1971 and 1973. This ushered in a new era of floating exchange rates and stimulated the development of an extensive foreign exchange sector dedicated to managing, monitoring and profiting from the daily fluctuations of national currencies. Transnational corporations were forced to develop their own foreign exchange departments. Financial services companies became increasingly important to the conduct of international business and trade. In many instances transnationals began to borrow money outside their home country to fund their overseas projects. American transnationals in Europe, in particular, started to engage in this practice. The largest and most significant foreign exchange market that developed in the early 1970s was the so-called 'eurocurrency market', a market of and for state currencies beyond the territory of the state. The original eurocurrency market was a eurodollar deposit account made up of Chinese and Soviet government dollar deposits looking for a safe haven from hostile US government regulations. Subsequently, the market developed into a series of deposit, credit, bond and foreign exchange markets, all with the common characteristic of being beyond the national regulatory restrictions governing the currencies they were handling. The Bank of England allowed British banks to take deposits and make loans in dollars in 1958. The London subsidiaries of American banks were also allowed to do this. The eurodollar market began to grow in the 1960s as a consequence of the movement of dollars abroad by US banks to avoid restrictive financial regulations (such as the Interest Equalisation Tax and Regulation Q) and to finance the expansion of American transnationals in Europe. These markets grew tremendously after the oil price rise of 1973 and the influx of petrodollars from OPEC members looking for high rates of return, something the euromarkets could offer because they were not subject to the same reserve requirements and interest-rate restrictions as national markets and financial institutions. By the end of the 1980s the size of the eurodollar market was estimated at $2.8 trillion.[24]

A second important development was the deregulation of financial markets in the late 1970s and 1980s as a consequence of the political triumph of neoliberal ideologies in Great Britain under the rule of Margaret Thatcher and in the United States under Ronald Reagan. The abolition of many rules restricting access to certain financial centres and regulations governing national financial markets helped create a more open, international and nominally more transparent financial system in the 1980s. The best example of this tendency was the 'Big Bang' deregulating business

practices in the City of London in 1986, though other reforms, such as rules governing the Tokyo Stock Exchange, were also significant.

A third development was the introduction of electronic information technology into finance and the consequent development of a whole series of new capabilities. On-line transaction processing, electronic wire transfers, automatic transaction machines and electronic data interchange radically altered the space-time relationships governing the financial sector, integrating regional financial markets, encouraging global 24 hour trading horizons, and enabling faster transactional and response times. As Martin notes, 'Market participants no longer have to be in the same centre, the same country or even the same continent for trading to take place: in terms of contact between financial firms and institutions, new information technologies allow propinquity without proximity.'[25]

A fourth development was the innovation and development of a series of new financial products as a consequence of conditions created by the synergy of deregulation and technological change. It was now possible for groups of banks from different countries to come together to syndicate loans to institutions, corporations and countries. Financial markets became increasingly securitised as a global equity and bond markets developed in the 1980s. Most famously, a plethora of derivative markets were created which built upon the structure of currency, equities, bonds and debt markets. Disintermediation also became possible as corporations cut banks out of the lending and borrowing process.[26]

A final development was the emergence of a series of new actors in the international financial system. With financial deregulation, financial services companies became vital players in the world economy. Institutional investors also began to play a key role in shaping the geography of money. Pension and insurance funds carried enormous financial weight in the marketplace. In the 1980s mutual fund managers became key players in conditioning flows of investment capital across the globe. Particularly significant for central banks was the emergence of a transnational elite of speculators and hedge fund managers searching for opportunity in the gap between the economic performances of national economies and the political commitments of governments.

Clearly, all of the developments were radically restructuring the scalar relations, power relationships and time-space logics conditioning the geography and territoriality of finance in the late twentieth century. Some commentators, however, went further and proclaimed the 'end of geography'. O'Brien defined this as 'a state of economic development where geographical location no longer matters in finance, or matters much less than hitherto'.[27] The deterritorialisation of finance for O'Brien is a multidimensional process. The last few decades were characterised by the

erosion of national financial sovereignty. 'Financial market regulators no longer hold full sway over their regulatory territory; that is, rules no longer apply solely to specific geographical frameworks, such as the nation-state or other typical regulatory jurisdictional territories.' Information technology and worldwide electronic networks now made it possible for financial firms to decentralise their operations and not be as locationally dependent as they once were. Stock markets are also deterritorialising with some markets generating virtual trading floors in cyberspace and not even requiring actual physical trading floors. 'Stock markets are now increasingly based on computer and telephone networks, not on trading floors. Indeed, markets almost have no fixed abode.'[28] Finally, the emergence of the array of new financial products and choices is interpreted as part of the denationalisation of financial services and the advent of a new era of 'global choice' for consumers.

O'Brien's argument about global financial integration marking the 'end of geography' is, however, both overstated and poorly conceptualised. Despite making grand claims about the end of geography, he concedes that differences between markets and products are not about to disappear and that geography will remain an important reference point in the international financial system. His argument, rather, is that we are *naturally moving towards* the end of geography. The end of geography is represented as an inevitably tendency and process driven by information technology and regulatory change. He comes close to technological determinism when declaring that '[t]o a great extent the end-of-geography story is a technology story, the story of the computerisation of finance.'[29] But deregulation is also crucial to his claims for it provides greater ease of access and transparency in pricing and information. 'Transparency encourages the end of geography by revealing the cost of regulatory barriers – both discriminatory ones, imposed by national and other laws, and non-discriminatory ones, imposed by customs, cultures and market practices.'[30] The end-of-geography thesis, thus, is implicitly a thesis about markets and how global financial markets are manifestly destined to approximate the 'perfect market' – a market characterised by full transparency, no friction of integration and perfect information – conjured up by contemporary finance theorists.[31]

The argument that global financial integration leads to the end-of-geography is a conceptualisation flawed in three distinct ways. First, despite the erosion of national economic sovereignty, states are still central to the operation and functioning of the world financial system. While many smaller states are at the mercy of world financial markets, the co-ordinated actions of the G7 states still set the rules for the world financial system.[32] End-of-geography discourse which represents deregulation and technological change as both natural and inevitable processes is often a

stalking horse for normative discourse on why geography *qua* state power *should* end. O'Brien's argument comes close to this. 'Money', according to O'Brien, 'being fungible, will continue to try to avoid, and will largely succeed in escaping, the confines of the existing geography'.[33] According to this reasoning, the efforts of national states to restrict the free movement of money are ultimately doomed to fail. Free markets are held to be more efficient and rational than regulated ones. Regulations only create distortions in the marketplace and inhibit the natural development of perfect markets. Deregulation is the most rational and sensible policy option, for global financial integration is an ineluctable process.[34]

In this instance deterritorialisation discourse is a part of neoliberal ideology. It strives to denaturalise and limit the power of states while naturalising and bolstering the virtues of markets. The contemporary world financial system, however, is not the product of natural forces and tendencies but of a new working relationship between states and markets promoted, in part, by the states themselves. The hegemony of neoliberal ideology in the 1980s in the United States and Great Britain helped make the integration of financial markets seen in that decade possible. Martin notes that a new 'bankers' bargain' between the state and finance capital replaced the former 'social bargain' between the state, labour and national capital resulting in the state ceding considerable power to financial markets organised at a supra-state level. This move, which expressed itself in the state's inclination towards financial interests and its deregulation of financial institutions, tilted power towards financial markets and reduced the bargaining power of the state. As Martin notes, '[i]t is a bargain that has encouraged more risky activity, raised the likelihood of panics and bankruptcies, and rendered government ever more captive to the sentiments of the market. The loss of national autonomy to global finance is thus not some benign outcome or necessity of world market forces, but has a political origin.'[35] End-of-geography discourse tends to naturalise the deterritorialisation of financial markets and obscure the complicity of certain political forces within states with this tendency.

Second, end-of-geography discourse fails to demonstrate how deterritorialisation is in actuality also a reterritorialisation. Geography is not so much disappearing as being restructured, rearranged and rewired. Global financial integration has, in fact, produced a new geopolitical complex of territory, technology, states and markets on a global scale. At the pinnacle of this complex are a series of integrated global financial centres. As Sassen, Thrift and others have noted, the development of a globally integrated financial system has not rendered place less significant but more significant.[36] Even O'Brien concedes that face to face contact is extremely important at the upper levels of the global financial system. Thrift argues

that international financial centres have become centres of social interaction on an expanded scale. Rather than these centres dissolving into an electronic space of flows, the volume and speed of such flows 'may make it even more imperative to construct places that act as centres of comprehension'.[37] In pointing out how global financial markets are not perfect markets Clark and O'Connor underscore how national regulations make a difference in conditioning markets. 'There is, in effect, a robust territoriality to the global financial industry.'[38]

Third, the end-of-geography discourse fails to acknowledge and engage the construction of new geographies of financial exclusion across the planet. The de-territorialisation of national financial spaces and the creation of an integrated global financial space has changed the rules of world economic affairs for both developed and developing economies. In order to attract capital and foreign direct investment to spur economic development, states have to present themselves before a geo-financial panopticon of market makers and market analysts.[39] They have to adopt neoliberal creeds in their economic management philosophy, undertake certain structural reforms deregulating 'national monopolies' and privatising state assets, and be prepared to be evaluated on a daily basis by the 'electronic jury' of interlinked international markets.[40] States that do not play by these rules are effectively excluded from global investment capital. While the changes of the last decade have enabled certain developing states who have followed neoliberal nostrums to obtain considerable investment capital, this has come at a cost. Global financial capital tends to be impatient capital and exceedingly volatile. In times of crisis, capital will take flight to 'safer' and more 'predictable' markets, devastating national economies and development strategies in the process. The economic and social dislocations caused by this process are considerable, destroying economic resources and investments built up over years in a few days or less. As a consequence of the 'emerging market contagion' of 1997–98, income inequalities between the developing and developed world have widened considerably.

Policies of discrimination and 'red-lining' credit exclusion also operate at more local level, creating multiple classes of 'financial citizenship' in many states.[41] 'Happy' neoliberal discourse on the convenience of 'electronic trading' and 'internet banking' elide the world where certain groups cannot even obtain access to ordinary credit facilities and regular banking services.

Borderless Worlds for Whom?

The superficialities of deterritorialisation discourse in financial markets have their equivalents in digital culture. For example, MIT media technologist Nicholas Negroponte describes the revolution unleashed by

computers as a world transforming qualitative transition from a world of 'atoms' (large, heavy, inert mass) to a world of 'bits' (microscopic, light digital code).[42] The *atomic mass of territory is eclipsed by the light* flexibility of telemetricality. In the warp drive of an informationalisation powered by Moore's law (the doubling of computer capacity every eighteen months), the world economy will become a 'seamless digital workplace'.[43] 'A self-employed software designer in Peoria will be competing with his or her counterpart in Pohang. A digital typographer in Madrid will do the same as one in Madras.' 'Bits', Negroponte assures us, 'will be borderless, stored and manipulated with absolutely no respect to geopolitical boundaries'.[44]

Discourses touting the inevitable borderlessness of a coming informationalised world tend to be discourses *peddling* neoliberal visions of what informationalisation should create, namely a 'friction-free market'. Such discourses also tend to hyperbolise the 'borderlessness' and 'global' character of the information age, presenting images of its penetration into the smallest Italian villages or the remotest monasteries as signs of a 'globality' that is ultimately parochial to 'virtual capitalism' and its 'virtual class'.[45] Finally, these discourses dismiss the tremendous informational inequalities across the world and within states, a world where most people do not even have access to a POTS (plain old telephone service).[46]

'Borderless world' discourses need to be problematised by old political economy questions: Who benefits? What class promotes the discourse of 'borderless worlds'? For whom is the world borderless? Martin and Schumann provide the context for some answers in their description of a 80:20 world where one fifth of the world's population will be sufficient to keep the world economy running while four-fifths will be excluded from its high-speed lanes of power and privilege.[47] The top 20 per cent are the 'wired technological classes' connected across the planet to each other and disconnected from the rest living in the same territorial state as themselves. The majority will remain trapped in the 'space of places' pacified by entertainment industries or uneasily contained by prisons and the police. Robert Reich provides a similar vision of a one-fifth/four-fifths society where the successful one-fifth ('symbolic analysts') are 'secessionists' living in similar gated communities across the globe and resolutely seeking to avoid territorial taxes in order to pay for Reich's 'work of nations' agenda.[48] Luke pushes this further, provocatively suggesting that for the top fifth 'nodality' is displacing 'nationality' as identity, community, sovereignty and territory are re-configured by the vast informational networks of cyberspace.[49] In *the coded* environment of network places, connectivity spaces, and digital domains, these national *citizens* are reinventing themselves as freelance 'netisens', hyper-individualised 'digital beings' net-working on the world wide web.[50] The 'borderless world' is

their self-interpretation, the utopian community imagined for them by informational capitalism. Yet this cyber-community of fantasy and play is also a harsh performative workplace where work for even the most privileged and rewarded requires routine 'overwork'.[51]

Such visions of the geo-economics and geopolitics of an emergent cyberspatialised world dominated by transnational informational capitalism or what Eisenstein terms the 'cyber-media complex of transnational capital'[52] are themselves simplified and overstated, complicitious in some cases with the technologically deterministic hyperbole of that which they seek to criticise. Nevertheless, such visions do underscore the fact that contemporary transnational informational capitalism is deepening inequalities across the globe and rearranging, not abolishing, borders, boundaries and territories. For all peoples across the world processes such as class, gender, race, educational opportunity, wealth, citizenship and political power are perpetually producing borders. 'Borderless world' discourses are the fantasies of the few that can dream of becoming digital in a world where just being is a persistent struggle for so many.

Theorising the Techno-Political

For political geographers interested in conceptualising the changing world political map, discourses of deterritorialisation are significant as signs and symptoms of geopolitical change. They are the language of the latest round in the ongoing re-configuring of boundaries and territoriality in the modern world system. As such, they need to be treated as important ethnographic clues to the discursive formations characterising the contemporary geopolitical condition and world order. They provide insight into the consciousness of certain elites – economic, technological, cultural and political – and the fantasies that live large in their geoeconomic and geopolitical imaginations. They are, in addition, ideological expressions of material interests linked to the changing structure of what is now a deeply informationalised capitalism. Such discourses need to be contextualised within the histories, geographies and political economies of struggles over boundary processes and regimes of territoriality. Their rhetoric of 'newness' and metaphors of 'waves', 'impacts', and 'revolutionary change' needs to problematised for its overstating of and implicit normalisation of technologically deterministic visions of change. Specific spatial tropes within these discourses like 'borderless worlds', 'the death of distance' and the 'end of geography' need to be deconstructed to reveal their situated seeing of geography and the blindness to other geographies that make this situated seeing possible, a task geographers have begun to do.[53]

Discourses of deterritorialisation are also a window into an under-studied problematic in contemporary political geography, namely the long relationship between technological systems and the world political map. Driving most contemporary claims of deterritorialisation is a 'skein of networks' (Latour) comprising complex technical systems from micro-radio communications and satellite transmission systems to transcontinental optical cable lines.[54] These in turn enable everything from ebusiness on the Internet to 24 hour television broadcasting and deep space navigation. These telecommunications networks, as Hillis notes, have a long history and are much more than 'tools' or 'conduits' for the transmission of information.[55] Rather, they are socio-technical networks that envisage, enframe and in-site 'worlds'. In Latour's terms, they are 'actor-networks' that combine humans and machines in co-evolving arrangements of mutual constitution and dependence.[56] Actor-networks have important techno-political geographies that are often invisible or neglected. Political geographers have been slow to theorise the implications of such deeply geopolitical actor-networks as radar, trans-continental bombers, inter-continental ballistic missiles and space travel programmes in the past. Today's spy satellite systems and global television networks, overwhelmingly owned and dominated by a few Western states and transnational corporations, have also not received the attention they deserve. Neither has the Internet which, while a supposed 'global network' is dominated by US-centric traffic and dependent upon thirteen root-name servers, only three of which are located outside the United States.[57] Such invisible actor-network geopolitics has multiple visible geopolitical implications and consequences, such as the ability to monitor foreign policy crises in near real time and the capacity to co-ordinate rapid military responses across many different locations.

Any consideration of 'the changing world political map' on the eve of the twenty first century must recognise that there are multiple world political maps, state-centric maps produced by the territorialities created by the inter-state system but also dynamic maps of flow produced by the telemetricality created by informational capitalist corporations and well funded state institutions. New types of atlases are required to visualise these techno-political geographies of the info-sphere and a critical geopolitics of cyberspace is needed to deconstruct the latest manifestations of techno-political discourse. Characterised not by a transcendence of territoriality but by centralised routing stations, interconnected nodes, dense concentrations of flows, and sharp digital divides, this geopolitics of cyberspace is layered upon, wired across and embedded within existing territorial relations of power. Documenting the multidimensional spatiality and complex regime of boundaries and territorialities produced by an informational capitalist world

economy, a networked transnational civil society, and informationally rich and digitally disadvantaged states is one of the great challenges facing political geography in the twenty-first century.

NOTES

1. L. Bryan and D. Farell, *Market Unbound: Unleashing Global Capitalism* (New York: Wiley 1996); E. Dyson, *Release 2.0: A Design for Living in the Digital Age* (New York: Broadway 1997); B. Gates, *The Road Ahead*, revised edition (New York: Penguin 1996); T.W. Luke, 'Running flat out on the road ahead; Nationality, sovereignty and territoriality in the world of the informational superhighway', in *Rethinking Geopolitics*, G. Ó Tuathail and S. Dalby (eds.) (London: Routledge 1998) pp.274–94; A. Toffler, and H. Toffler, *Creating A New Civilisation: The Politics of the Third Wave* (Atlanta: Turner Publishing 1994).
2. P. Virilio and S. Lotringer, *Pure War* (New York: Semiotext(e) 1983).
3. M. Crang, P. Crang and J. May (eds.), *Virtual Geographies* (London: Routledge 1999).
4. A. Giddens, *The Nation-State and Violence* (Berkeley: University of California Press 1987); A. Paasi, *Territories, Boundaries and Consciousness* (New York: Wiley 1996).
5. G. Ó Tuathail, 'Political geography III: Dealing with deterritorialisation', *Progress in Human Geography* 22 (1998).
6. W. Clinton, Inaugural address, 1993. Available from http://www.whitehouse.gov
7. M. Walker, *Clinton: The President They Deserve* (London: Vintage 1997).
8. R. Reich, *The Work of Nations: Preparing Ourselves for Twenty First Century Capitalism* (New York: Knopf 1991) p.77.
9. K. Ohmae, *The End of the Nation State* (New York: Free Press 1995) and *The Borderless World* (New York: Harper Business 1990).
10. *Borderless World* p.x.
11. Ibid. p xii.
12. Ibid. pp.204–8.
13. Ibid. p.215.
14. A. Kroker and M. Kroker (eds.), *Digital Delirium* (New York: St. Martin's Press 1997).
15. J.D. Davidson and W. Rees-Mogg *The Sovereign Individual* (New York: Simon and Schuster 1997); K. Robins, *Into the Image* (London: Routledge 1996).
16. K. Auletta, *The Highwaymen: Warriors on the Information Superhighway* (New York: Random House 1997); J. Brockman, *Digerati: Encounters with the Cyber Elite* (New York: Hardwired 1996).
17. E. Dyson, G. Gilder, J. Keyworth and A. Toffler, 'A Magna Carta for the Knowledge Age', *New Perspectives Quarterly* 11/4 (1994) pp.26–37.
18. Ibid. p.27.
19. Ibid. p.26.
20. Ibid. p.28.
21. Ibid. p.33.
22. J. Brook and J. Boal (eds.), *Resisting the Virtual Life* (San Francisco: City Lights 1995).
23. J. Brecher and T. Costello, *Global Village or Global Pillage?* (Boston: South End Press 1994); S. Dalby, 'Globalisation or global apartheid? Boundaries and knowledge in postmodern times', *Geopolitics* forthcoming; R. Falk, *On Humane Governance* (University Park, PA: Pennsylvania University Press 1995).
24. R. Martin, 'Stateless monies, global financial integration and national economic autonomy: the end of geography?' in S. Corbridge, R. Martin and N. Thrift (eds.), *Money, Power and Space* (Oxford: Blackwell 1994) p.258.
25. Ibid. p.262.
26. A. Leyshon, 'Dissolving difference? Money, disembedding and the creation of 'global financial space', in P.W. Daniels and W.F. Lever (eds.), *The Global Economy in Transition* (Harlow: Longman 1996) pp.62–80.

27. R. O'Brien, *Global Financial Integration: The End of Geography* (New York: Council on Foreign Relations 1992) p.1.
28. Ibid. p.1.
29. Ibid. p.8.
30. Ibid. p.19.
31. G. Clark and K. O'Connor, 'The informational content of financial products and the spatial structure of the global finance industry', in K. Cox (ed.), *Spaces of Globalisation* (New York: Guilford 1997) pp.89–114.
32. P. Hirst and G. Thompson, *Globalisation in Question* (Cambridge: Polity 1996).
33. O'Brien, *Global Financial Integration*, p.2.
34. Martin (see note 24) pp.270–71.
35. Ibid. p.271.
36. S. Sassen, *Global Cities* (Princeton NJ, Princeton University Press 1991); N. Thrift, 'On the social and cultural determinants of international financial centres: the case of the city of London', in S. Corbridge, R. Martin and N. Thrift (eds.), *Money, Power and Space* (Oxford: Blackwell 1994) pp.327–55.
37. Thrift (note 36) p.337.
38. G. Clark and K. O'Connor (note 31) p.90.
39. G. Ó Tuathail, 'Emerging markets and other simulations: Mexico, Chiapas and the geofinancial panopticon', *Ecumune* 4 (1997) pp.300–17.
40. S. Gill, 'The global panopticon? The neoliberal state, economic life, and democratic surveillance', *Alternatives* 20 (1995) pp.1–49; and A. Herod, G. Ó Tuathail and S. Roberts (eds.), *An Unruly World? Globalisation, Governance and Geography* (London: Routledge 1998).
41. A. Leyshon and N. Thrift, *Money/Space: Geographies of Monetary Transformation* (London: Routledge 1997) pp.225–59.
42. N. Negroponte, *Being Digital* (New York: Knopf 1995).
43. D. Tapscott, *The Digitial Economy: Promise and Peril in the Age of Networked Intelligence* (New York: McGraw Hill 1996).
44. Negroponte (see note 42) p.228.
45. A. Kroker and M. Weinstein, *Data Trash: The Theory of the Virtual Class* (New York: St. Martin's Press 1994).
46. H. Schiller, *Information Inequality* (New York: Routledge 1996); W. Wresch, *Disconnected: Haves and Have-Nots in the Information Age* (New Brunswick: Rutgers University Press 1996).
47. H. Martin and H. Schumann, *The Global Trap* (London: Zed 1997).
48. Reich (see note 8).
49. T.W. Luke, 'From Nationality to Nodality: How the Politics of Being Digital transforms Globalisation'. Paper presented at the APSA meeting, 3–6 Sept. 1998.
50. M. Castells, *The Rise of the Network Society* (Oxford: Blackwell 1996).
51. W. Greider, *One World, Ready or Not: The Manic Logic of Global Capitalism* (New York: Simon and Schuster 1997); J. Schor, *The Overworked American* (New York: Basic Books 1992).
52. Zillah Eisenstein, *Global Obscenities: Patriarchy, Capitalism and the Lure of Cyberfantasy* (New York: New York University Press 1998).
53. Stephen Graham, 'The end of geography or the explosion of place? Conceptualising space, place and information technology', *Progress in Human Geography* 22/2 (1998) pp.165–85; David Newman and Anssi Passi, 'Fences and neighbors in the postmodern world: boundary narratives in political geography', *Progress in Human Geography* 22/2 (1998) pp.186–207; Anssi Paasi, 'Boundaries as social processes: Territoriality in the world of flows', *Geopolitics* 3/1 (1998) pp.69–88; David Newman, 'Geopolitics Renaissant: Territory, Sovereignty and the World Political Map', *Geopolitics*, 3/1 (Summer 1998); H.W. Yeung, 'Capital, state and space: contesting the borderless world', *Transactions, Institute of British Geographers* NS 23 (1998) pp.291–309.
54. Bruno Latour, *We Have Never Been Modern* (Cambridge, MA: Harvard University Press 1993).

55. Ken Hillis, 'On the margins: the invisibility of communications in geography', *Progress in Human Geography* 22/4 (1998) pp.543–66.
56. Latour (see note 54). See also Mike Crang, Phil Crang and Jon May (eds.), *Virtual Geographies* (London: Routledge 1999).
57. V. Shannon, 'What's lurking behind those slow downloads', *International Herald Tribune*, 27 May, p.6. This report is based on the study *TeleGeography 1999* by the Washington-based research firm TeleGeography Inc.