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Geographical Knowledges/ Political Powers

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MY OBJECTIVE IS TO UNDERSTAND the role geographical knowledges play in processes of social and ecological change. The long history of commercial expansion that has been with us since at least 1492 if not before (and which we now refer to as ‘globalisation’) depended upon the accumulation of certain kinds of geographical knowledge. This was as true for the Renaissance (when mapping of the world was crucial to the project of human command over it) as it is today. Reciprocally, geographical understandings affect the paths of political economic development and environmental transformation (through, for example, the recognition of environmental constraints, the identification of new resources and commercial opportunities, understandings of cultural diversity). Even if the knowledge is erroneous, substantial unintended consequences can follow. The Portuguese in their early explorations sought, among other things, an imagined Christian kingdom of Prester John on the other side of Islam. The effects on global history of this erroneous idea were substantial. How, then, does this dialectical relationship between political-economic and socio-ecological change on the one hand and geographical knowledges on the other actually work?

I begin with two observations. The plural ‘knowledges’ is used because it is dangerous to presume there is some settled way of understanding a unified academic field of knowledge called ‘Geography’. A ‘discipline’ that ranges from geographical information systems, palaeoecology and

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desert geomorphologies to urban political economy, postmodernist and queer geography obviously has an identity problem. The presumption that there is some yet-to-be discovered 'essentialist' definition of Geography's subject matter is suspect. Whenever some group of geographers has attempted to impose an essentialist definition on their subject matter (in the way economists typically do), the results have been disastrous. The plurality of perspectives within the discipline should be embraced as a source of strength rather than of weakness.

Secondly, there is a significant difference between geographical knowledges held in different institutional settings (e.g. state apparatuses, the World Bank, the Vatican, the media, the public at large, NGOs, the tourist industry, multinational corporations, financial institutions, etc.) and the geography taught and studied within departments that operate under that name. The tension between Geography as a distinctive discipline and geography as a way of assembling, using, and understanding knowledge of a certain sort in a variety of institutional settings is important. Geographical knowledges are widely dispersed throughout society. They deserve to be understood in their own right (e.g. how the tourist industry or cable television create and promote a certain geographical imaginary). Different institutions, furthermore, demand different kinds of geographical knowledge (the tourist industry does not highlight the geography of social distress). In practice, only a very small portion of the geographical knowledges available and actively used in society is found within the discipline of Geography. We need a 'critical sociology' of geographical knowledges in society at large in order to understand their role in socio-ecological change.

This need remains pressing. The most recent phase of globalisation has been powered by a neo-liberal, free market agenda in which privatisation and the opening up of markets world-wide to entrepreneurial and multinational capitalism has become a dominant moving force backed by the military and commercial power of the United States. With the collapse of the Berlin Wall, the triumph of the free market seemed complete. Highly mobile finance capital has become more dominant at the same time as revolutions in transport and communications and in information technologies have broken down many spatial barriers. Geographical differences would seem to be of less rather than greater consequence in this situation.

Yet this is not the case. Geographical structures and relations have certainly been profoundly altered. The seemingly fixed geographical configuration of political-economic powers has become fluid. The result has

been a re-territorialisation of the world and uneven geographical developments of all sorts (everything from increasing social and geographical inequalities of wealth and power, patchwork quilts of political instability, a resurgence of local nationalisms, to localised environmental stresses). Geographical differences have become more rather than less significant because highly mobile capital is in a position to take advantage of them. In addition, geopolitical stresses and tensions (even regional wars) are as widespread as ever. As a result, many of the major institutions of global capitalism (everything from the International Monetary Fund, the World Bank, the G7, etc.) have had to adjust their views. But they have also encountered a rising tide of criticism (from the NGOs, the Churches, to say nothing of the street protesters in Seattle, Washington, Bangkok, Melbourne and Genoa) of the soulless commercialism of multinational capitalism, its injustices, and its insensitivity to local cultural differences. The problem of applying universal concepts of justice, need and dignity across the variegated spaces and complex geographies of cultural and political-economic divergence has, however, no easy solution. The United States now seeks, against the tide of much global public opinion, to impose by military force a new territorial order upon the Middle East in the name of universal principles of liberty and freedom.¹ How, then, are we to understand the complex relationship between universal claims about rights, property, freedom, democracy and the market, and the geographical particularities with which the world abounds?

I. Cosmopolitanism, Liberalism, Geography

Proponents of global governance frequently argue for a 'cosmopolitan ethic' as a way to ground principles of action. But what kind of geographical knowledge is presupposed here? Nussbaum, a powerful advocate for cosmopolitan perspectives, complains that because the US population is 'appallingly ignorant of the rest of the world' it 'is unable to look at itself through the lens of the other, and, as consequence, (is) equally ignorant of itself'. In order to conduct any adequate global dialogue, she argues, 'we need knowledge not only of the geography and ecology of other nations—something that would already entail much revision of our curricula—but also a great deal about their people, so that in talking with them we may be capable of respecting their traditions

¹ D. Harvey, *The New Imperialism* (Oxford: Oxford University Press, 2003).

and commitments. Cosmopolitan education would supply the background necessary for this deliberation.’ Cosmopolitanism without a ‘sound’ and ‘proper’ understanding of geography and anthropology is, she implies, an empty ideal.²

But Nussbaum leaves the nature of the necessary geographical and anthropological knowledges unspecified. In the vigorous debate that surrounded her proposals, no one, interestingly took up this question. Kant, whose founding arguments on a cosmopolitan ethic are frequently invoked, did teach Geography and Anthropology. But a study of his notes and writings on these topics reveals a serious problem. Not only is his geography unsystematic and incoherent (in marked contrast to the rigour of his philosophical works), but it is also prejudicial in the extreme. ‘Humanity,’ he says, ‘achieves its greatest perfection with the white race. The yellow Indians have somewhat less talent. The negroes are much inferior and some of the peoples of the Americas are well below them.’ The Hottentots are dirty and you can smell them from far away, the Javanese are thieving, conniving and servile, sometimes full of rage and at other times craven with fear, the Samoyeds are timid, lazy, superstitious and given to strong drink, Burmese women wear indecent clothing and like to get pregnant by Europeans . . . It goes on and on in this vein.³

Geographical knowledge of this sort appears deeply inconsistent with Kant’s universal ethics and cosmopolitan principles. Most Kant scholars therefore dismiss his geography as irrelevant. Yet Kant held that geographical and anthropological knowledges were ‘a condition of possibility’ of all other forms of empirical understanding and that they mediated the application of ethical principles to the world. Kant’s geography immediately poses, therefore, the following problem: what happens when universal ethical ideals get inserted as principles of global governance into a world in which some people are considered inferior and others are thought indolent, smelly, or just plain untrustworthy? Either the smelly Hottentots, the thieving Javanese, and the indecent Burmese women have

² M. Nussbaum with respondents, *For Love of Country: Debating the Limits of Patriotism* (Boston, Mass.: Beacon Press, 1996).

³ I. Kant, *Anthropology from a Pragmatic Point of View*, trans. V. L. Dowell (The Hague: Martinus Nijhoff, 1974); I. Kant, *Geographie (Physiches Geographie)*, trans. M. Cohen Halimi, M. Marcuzzi and V. Seroussi (Paris: Bibliothèque Philosophique, 1999); J. May, *Kant’s Concept of Geography and its Relation to Recent Geographical Thought* (Toronto: Toronto University Press, 1970); and see D. Harvey, ‘Cosmopolitanism and the Banality of Geographical Evils’, *Public Culture*, 12, No. 2 (2000), 529–64 (repr. in J. Comaroff and J. L. Comaroff (eds.), *Millennial Capitalism and the Culture of Neoliberalism* (Durham, NC: Duke University Press, 2001), for further elaboration of this argument.

to reform themselves for consideration under the universal ethical code (thereby flattening out all kinds of geographical differences), or the universal principles operate across different geographical conditions as an intensely discriminatory code masquerading as the universal good. Which way Kant leaned is not entirely clear but if his essay on Enlightenment is anything to go by, Kant would tend to the former view since only 'mature' individuals are equipped to engage in dialogue in the public sphere.

This same problem, it turns out, bedevils the philosophy and practices of liberalism. Liberal theory (and its contemporary neoliberal derivative) claims 'to be transhistorical, transcultural, and most certainly trans-racial'. The individualism it contemplates is deracinated, universal, given over to a cosmopolitanism of reason and rational action. The facts of geography and anthropology are occluded if not actively repressed (as, for example, in economic theory), because they are judged as irrelevant to the universality of its conception. How, then, asks Mehta, could eminent liberals, such as J. S. Mill deny representative governance to India and justify imperial tutelage while upholding liberal ideals?⁴ As in Kant's case, we find that the devil resides in the otherwise occluded anthropological and geographical details. The benefits of self-governance could be denied to 'savages' or 'barbarians'. In extreme cases, as with many indigenous populations, their existence could be erased and their territory mapped as empty and open for settlement by those colonists who could justify their rights to property by properly mixing their labour with the land. The second modality, which became more general in India, was to treat the indigenous population as not yet educated or 'mature' (the Kantian phrase is *apt*) enough to justify inclusion in the liberal regime of power and rights.⁵

A politics of geographical exclusions is therefore embedded in liberal (and neo-liberal) theories and practices. 'Infantilising' whole peoples, for example, is a common enough trope. Rockefeller appealed to it as the basis for neo-colonial interventions in Latin America in the early years of the twentieth century. It was registered within the liberal tradition at the turn of the twentieth century as 'the white man's burden'. It continues to be expressed, though less openly, in contemporary languages of development aid, of peace corps missions and the whole discourse of 'backwardness' and 'underdevelopment'. It has recently been resurrected in Robert

⁴ U. Mehta, *Liberalism and Empire: A Study in Nineteenth-Century British Liberal Thought* (Chicago: University of Chicago Press, 1999), p. 51.

⁵ *Ibid.*, p. 32; See also D. Chakrabarty, *Provincializing Europe* (Princeton: Princeton University Press, 2000).

Cooper's appeal for a new 'liberal imperialism'. He divides the world into 'postmodern' (read 'civilised') states (like those of Europe) that prefer collaboration to competition, 'modern' (read 'barbarian') states (like Pakistan or China) that operate competitively out of self-interest and 'pre-modern' (read savage) states (like Afghanistan and Somalia) that lack coherent organization. The task for the postmodern states is to educate and lead the others into a global rule of law. Cooper had difficulty in deciding if the United States was postmodern or modern but the US has now fashioned its own imperial answer to that question. The justification for invading oil-rich Iraq moved from the shaky ground that it was a threat to world peace and security to the ethical imperative to free the Iraqi people from a sadistic dictator. In reality, of course, it had everything to do with the complex geopolitics of oil.⁶

Geographical knowledges ('the details') can be used to orchestrate exclusionary politics. Mehta, in making this point, oddly complains that the whole question of space and geography 'rarely gets raised to the level of theoretical attention'. Yet many of us, in Geography in particular, have written extensively on this problem.⁷ Awareness of this literature might have saved Mehta some trouble since his argument begins to go awry when he seeks to incorporate the geographical details into his thesis. Liberals, he notes, 'have failed to appreciate that territory is both a symbolic expression and a concrete condition for the possibility', (a very Kantian phrase) 'of (or aspirations to) a distinct way of life'. Edmund Burke, we are told, has the answer. He did not eschew universals; he held that 'territory or place is a fundamental condition of collective and individual political identity'. In his impassioned attacks upon the British imperial presence in India, Burke used the facts of geography to deny the legitimacy of British occupancy. But there is much that is problematic in Burke's position: the appeal to permanence and the supposed 'integrity' and 'finitude' of place-based experience, the absolute spaces within which such senses of belonging have their provenance and, above all, his insis-

⁶ R. Cooper, 'The New Liberal Imperialism', *Observer*, 7 Apr. 2002; Harvey, *New Imperialism* (2003).

⁷ See R. Dodgshon, *Society in Time and Space: A Geographical Perspective on Change* (Cambridge: Cambridge University Press, 1998); D. Gregory, *Geographical Imaginations* (Oxford: Blackwell, 1996); D. Gregory and J. Urry (eds.), *Social Relations and Spatial Structures* (London: Macmillan, 1985); D. Harvey, *Justice, Nature and the Geography of Difference* (Oxford: Blackwell, 1996); R. Sack, *Conceptions of Space in Social Thought: A Geographic Perspective* (London: Macmillan, 1980); R. Sack, *Human Territoriality: Its Theory and History* (Cambridge: Cambridge University Press, 1986); N. Smith, *Uneven Development* (Oxford: Blackwell, 1984); E. Soja, *Postmodern Geographies* (Oxford: Blackwell, 1989).

tence that the 'singularities' of place and geography can be negotiated only by 'mature' adults (whoever they are) engaging in 'free' conversations. Furthermore, Burke's doctrine of 'entailed inheritance', privileges a relationship to the land that, in its own way, is just as exclusionary as anything that Mill invented. Mehta concludes:

Human beings are not born blank slates; instead they inherit a mass of predispositions from an unfathomable past bounded by the variations of time and place. It is the emplacement within these points of reference that gives to individuals, and to communities, a sense of their integrity and self-understanding from which alone life can be, and is, richly experienced—indeed, from which alone moral action is possible.⁸

Read as an absolute conclusion this is nothing short of appalling given the emphasis upon integrity, unfathomability and, above all, that it is from this exclusive position *alone* that moral judgement and action is possible. This denies all forms of critique based in universal principles (such as justice or human rights). Exclusionary communitarianism and even fascist violence cannot be condemned, as long as it is embedded in place. Mehta's conclusions are close to those of Heidegger, whom he considers to be 'deeply Burkean'.⁹ There is, it seems, no other way to compensate for Kantian and liberal failings except by leaping straight into the Heideggerian fire. Mehta, taken with Burke's attack upon imperial rule in India, fails to see that Burke's favouring of entailed inheritance (the 'rights of true-born Englishmen') over universal rights provided, as Arendt points out, 'the ideological basis from which English nationalism derived its curious touch of race feeling' as well as 'its later obsession with inheritance theories and eugenics'.¹⁰

What appears so dramatically with Kant and with the postcolonial critique of liberalism has widespread ramifications for contemporary politics. Geographical knowledge in the public domain (particularly in the United States) is either lacking or of a similar prejudicial quality to that which Kant portrayed. Stereotypes about geographical 'others' abound and prejudicial commentary can be heard daily in casual conversations even in elite circles. It then becomes all too easy for the US to portray itself as the bearer of universal principles of justice, democracy and goodness while in practice operating in an intensely discriminatory way. The easy way in which various spaces in the global economy can be

⁸ Mehta, *Liberalism and Empire*, p. 215.

⁹ *Ibid.*

¹⁰ H. Arendt, *Imperialism* (New York: Harcourt Brace Janovich, 1968 edn.), has a very different view on Burke which Mehta ignores entirely.

‘demonised’ in public opinion (Cuba, China, Libya, Iran, Iraq, to say nothing of the ‘Evil Empire’ of the ex-Soviet Union, to use Ronald Reagan’s favourite phrase or the ‘axis of evil’ that grounded President Bush the younger’s quest to shape a new world order by military power) illustrates all too well how geographical knowledge of a certain sort is mobilised for political purposes while sustaining a belief in the US as the bearer of a global ethic. ‘Rogue states’ (to use a classificatory system adopted by the State Department) need to be brought into line. If the rest of the world fails to conform to US standards of behaviour (those of ‘the kindest, gentlest nation on earth’ as President Bush the elder put it as bombs rained down on Iraq), then it deserves to be persuaded, cajoled, sanctioned or bombed into conformity. The devil, it seems, lies in the geographical details rather than in the noble universal ethical principles. And the danger then arises, as with Mehta’s use of Burke, that the recalcitrance of geographies will ground resistance to predatory neoliberalism through the construction of exclusionary and racist localisms and nationalisms (abundant signs of which can be seen across Europe).

So what kind of geographical knowledge would be adequate and appropriate to a cosmopolitan ethic or to liberal purposes? The question is as deep as it is broad. But there are abundant signs of how significant the relationship might be. A recent poll in the US showed that the more knowledgeable people were about the conditions and circumstances of life in a given country the less likely they were to support US military interventions or economic sanctions against it. Interestingly, the poll was commissioned by Exxon which wanted the economic sanctions against Iran lifted to open up oil flows. Improved geographical knowledge about Iran was seen as a means to this political end.¹¹ Conversely, there may be a vested interest for certain kinds of political-economic power in leaving the mass of the population in a chronic state of geographical ignorance (or at least feeling no impulsion to cure existing states of ignorance) in order to have a free hand in international policy. Biased or ‘empty’ geographical knowledges, deliberately constructed and maintained, are particularly useful since they provide a licence to pursue narrow and self-serving (even sometimes nefarious) interests in the name of universal goodness and reason. It has, as Neil Smith so cogently shows, been the hallmark of US policy towards the world throughout the whole of the

¹¹ First International Resources, Inc., *Economic Sanctions Survey* (First International Resources Inc., One Parker Plaza, Fort Lee, New Jersey, 07024, (2000)).

twentieth century, to disguise its imperial practices behind a veil of geographical ignorance and obfuscation.¹²

Cosmopolitanism bereft of geographical specificity remains abstracted and alienated reason, liable, when it comes to earth, to produce all manner of unintended and sometimes explosively evil consequences (which can provoke whole populations to revolt against the universal principles to which they are expected to comply). A hefty dose of geographical enlightenment is, we might conclude, a necessary precondition for any kind of reasoned global governance. Kant's principle that geographical and anthropological knowledges are necessary preconditions for the discovery and application of all other forms of knowledge to the world appears appropriate. Liberating the dialectic between cosmopolitanism, liberalism and geography is a critical precondition for the achievement of any juster and saner socio-ecological order for the twenty-first century.

II. Sites for the production of geographical knowledges

What kinds of geographical knowledges are available to us and why do they assume the form they do? In order to answer this we need first to know how, why and where geographical knowledges are produced and this depends in turn on specific institutional settings. Consider, then, some of the primary sites for the production and use of geographical knowledges. A preliminary list would include (1) states and empires (2) the military (3) supranational institutions (like the UN, the International Monetary Fund and the World Bank) (4) non-governmental organisations (like Amnesty International and Greenpeace) and the institutions of civil society (such as trade unions and churches) (5) businesses, commerce and financial interests (6) multinational corporations (7) specific industries that trade in geographical knowledge (such as tourism) (8) the media, film, and cultural products (novels and poetry) and the institutions (like museums) which assemble and catalogue information and artefacts, (9) institutions of education and research, and (10) local popular knowledges (often cosmological and/or stereotypical) about other places and peoples. Each one of these sites produces geographical knowledge of a special character and some produce vast arrays of it in the course of

¹² This thesis is brilliantly pursued in N. Smith, *American Empire: Roosevelt's Geographer and the Lost Geography of the Twentieth Century* (Berkeley, CA: University of California Press, 2003).

their daily functioning. There are innumerable special niches within each site wherein particular kinds of geographical knowledges can flourish and be turned to a variety of practical uses. I consider three of these general sites briefly in order to illustrate something of the variety of geographical knowledges that get produced.

1. States

If nation states are 'imagined communities' as Benedict Anderson argues, then they must be geographically imagined. This means everything from mapping boundaries to the cultivation of some sense of national identity within those boundaries in order to ground legitimacy and power. This has often taken a lot of hard work over a long time, even in a case like France (initially highly fragmented, even linguistically). Conversely, the inability to produce a coherent geographical imaginary (as, say, in the case of Nigeria after decolonisation) exacts a political price in terms of internal instability and lack of national cohesion. In the case of Finland, Paasi suggests, most of the population had little idea of their national identity at the beginning of the nineteenth century (their geographical awareness was largely circumscribed by the parish and neighbouring communes). It took the collective efforts of linguists, folklorists, musicians, historians, writers, geographers and map-makers to inculcate that sense of national belonging that came to prevail at the end of the century. Such efforts often entail the depiction of outsiders as not belonging to this distinctive space; they may be depicted as inferior for cultural-historical or environmental reasons. If external enemies do not actually exist then it is often the nefarious task of geographical representation to imagine and create them. This is particularly so, as Arendt points out, in societies founded upon liberal principles of individual self-interest, making the US one of the most paranoid nations on earth when it comes to conjuring up external threats.¹³

But the state has long been involved with geographical knowledge production at another level. Its interests in governmentality (law, administration, taxation, planning, and social control), have led it, particularly from the eighteenth century onwards, to become a primary site for the

¹³ B. Anderson, *Imagined Communities: Reflections on the Origins and Spread of Nationalism* (London: Verso, 1983); A. Paasi, *Territories, Boundaries and Consciousness: The Changing Geographies of the Finnish-Russian Border* (New York: Wiley, 1997). On the US case see Arendt, *Imperialism*, and R. Hofstadter, *The Paranoid Style in American Politics and Other Essays* (Cambridge, Mass.: Harvard University Press, 1996 edn.).

collection and analysis of a rather different kind of geographical information. Governmentality rests, as Foucault reminds us, on a certain set of precepts concerning individuality and objectivity. Individuating, counting and locating with the aid of maps and territorial divisions are primary operations in everything from census surveys to social security administration.¹⁴ Geographical 'facts' are generated by a variety of means and analysed accordingly. Furthermore, different facets of the state apparatus develop specialised expertise and data banks on, say, agriculture, forestry, transportation, fishing, industry, and the like. In so far as the state is itself organised hierarchically, it typically produces geographical knowledges at different spatial scales (local, regional, national). The effect is to fragment the geographical knowledges held within the state apparatus, even while preserving a certain hegemonic attitude (of 'objectivity and 'facticity') as to how that information is to be collected, analysed and understood. The state, through planning mechanisms, likewise institutes normative programs for the production of new geographical configurations and in so doing becomes a major site for orchestrating the production of space, the definition of territoriality, the geographical distribution of population, economic activity, social services, wealth and well-being. Normative geographical principles of spatial planning, land use, location, administration and development then become normalised within the state apparatus. The production of geographical forms on the ground is responsive to how geographical knowledges function as a branch of governmentality within the state apparatus.

In their external relations (commercial, political, military) states typically produce a whole series of institutions to guide their geopolitical and military strategies. In the United States, for example, the State Department, the CIA and the Pentagon shape, manipulate and on occasion pervert geographical knowledges in support of their conception of 'the national interest'. They draw upon expertise from think-tanks, international relations and area studies programmes in the academy which in turn rely upon them for funding. The effect is to create a kind of 'foreign policy establishment' (with organisations like the Council on Foreign Relations a central player) in which geographical knowledges are assembled, analysed and put into motion.¹⁵ When taken across all states

¹⁴ G. Burchell, C. Gordon, and P. Miller (eds.), *The Foucault Effect: Studies in Governmentality: with Two Lectures and an Interview with Michel Foucault* (Chicago: Chicago University Press, 1991).

¹⁵ N. Smith, *American Empire* (2003).

world-wide this process produces a variety of competing geographical visions concordant with distinctive geopolitical positions.

2. Supranational institutions

Sometimes viewed these days as arms of a putative system of global governance, a host of international institutions like the World Bank, the IMF and the WTO, and a variety of UN-based organisations with acronyms like ILO, WHO, UNESCO, FAO, UNDP, produce geographical knowledges (often of a specialised sort on topics such as world health, agriculture, labour, the status of children, the environment, and the like). Traditions of governmentality pioneered within the state apparatus live on in these institutions, giving a certain objectivity and individuality to data forms and frameworks (often very economistic) of analysis. Much of the information gathered uses the state as the primary container of geographical information. Since 1950, these institutions (dominated by the USA and the advanced capitalist powers) have been oriented towards the twin goals of modernisation and (capitalist) economic development on the world stage. Development required hard economic data: hence the economistic tone of the reporting. The Cold War and the struggle to contain international communism were fundamental to such projects and shaped geographical perspectives accordingly.

A cursory look at World Bank Reports, however, illustrates how geographical knowledges adapt to changing political conditions. The Bank initially saw the 'free' world as carved up into a multitude of independent states (many freshly minted in the wave of decolonisation that occurred after 1945). Each state was regarded as an independent economic unit with its own particular resources and development possibilities. The Bank's approach to economic development initially reflected Rostow's theory in *The Stages of Economic Growth* (interestingly subtitled 'a non-communist manifesto').¹⁶ The 'take-off' of each state into self-sustained economic growth required a high level of fixed capital investment. Negotiating with individual state governments, the Bank sought to identify and fund those long term fixed capital investment projects that would lay the basis for take-off. The aim was to bring each country to a final stage of high mass consumption (thereby immune to communist influence) embedded within an open 'community' of nations engaging in capital accumulation

¹⁶ W. Rostow, *The Stages of Economic Growth: A Non-Communist Manifesto* (Cambridge: Cambridge University Press, 1962).

through the free market exchange of goods and services. En route to this final happy stage (in which poverty was also supposed to be eradicated), a good deal of deficit financing by state apparatuses and even a modicum of protection of infant industry was tolerated.

The shift from a state-led to a market-led development model after 1980 or so altered the means but not the basic geographical framework of thinking. The latter began to change in response to localised oppositions and external criticisms (from the NGOs in particular) but also because of the failure of many of the Bank's projects. The environment had to be reconceptualised as more than mere natural resources but as habitats and ecological systems that could be disrupted or even harmed by development projects. States are more porous economically and politically and internally more regionally disparate (in terms of both culture and political-economy) than previously allowed (they had to be seen as relational entities in relative space). The Bank has in recent years recognised that the institutions of civil society are every bit as important as state apparatuses (particularly those of a more authoritarian and corrupt kind) in promoting development. It now employs environmentalists and anthropologists. The result is a much greater sensitivity to environmental issues, local cultures and geographical conditions in World Bank reporting and (presumably) policy formation. A comparison of the World Bank Development Report for 1984 and 2000 indicates a substantial shift in its geographical knowledge structure. Geographical knowledges, we may conclude, can and do change significantly over time at specific sites. How and why this happens calls for further inquiry.¹⁷

3. Non-governmental organisations and the institutions of civil society

The extraordinary proliferation of NGOs in recent decades has made the production of geographical knowledges throughout civil society at large a much more complicated and contested affair. The objectives of such organisations vary. Organisations like Oxfam or CARE generate vast amounts of geographical knowledge, as do human rights groups (Amnesty International, for example), environmental groups (the World Wildlife Fund or Greenpeace) and the array of NGOs dealing with

¹⁷ R. Wade, 'Greening the Bank: The Struggle over the Environment, 1970–1995', in D. Kapur, J. Lewis and R. Webb (eds.), *The World Bank: Its First Half Century, vol. 2, Perspectives* (Washington, DC: Brookings Institution, 1997). World Bank, *Entering the 21st Century: World Development Report 1999/2000* (Washington, DC: World Bank, 2000). See also B. Rich, *Mortgaging the Earth* (Boston: Beacon Press, 1995).

specific issues (violence, the situation of women and children, education, poverty, health, refugees, etc.). Such organisations often pursue their objectives precisely through the production of an alternative kind of geographical understanding. By highlighting local cultures and indigenous traditions as well as ecological diversities and relations to habitats, Greenpeace produces a distinctive geographical vision. Many of its battles with the Corporations, the World Bank and other apparatuses are fought precisely through articulation of the geographical details that get erased or evaded in other literatures. Where the World Bank traditionally saw a gleaming dam on an untamed river as an unalloyed symbol of power and progress, Greenpeace depicted it as an ecological disruption (perhaps with severe consequences for biodiversity and species extinction) insensitively imposed upon indigenous cultures and local ways of life. Greenpeace is not alone in this tactic. Oxfam reports are typically sophisticated geographical documents that focus on the ecological, social, cultural and political-economic roots of impoverishment in particular places and show great sensitivity to the ways in which the institutions of civil society (as opposed to or complementary to the state apparatus) can be mobilised for human improvement. This is the alternative geographical vision that the World Bank has recently sought to co-opt. The NGOs clearly recognise that they can fight for their alternative vision through mobilisation of the geographical details.

Conversely, the state apparatus can achieve hegemony by successfully penetrating the institutions of civil society and imposing its singular geographical vision upon them. The destruction of communist and socialist influences within the US trade unions during the 1950s meant the acceptance of a Cold War geographical vision (a mix of fierce anti-communism and international developmentalism) on the part of the union leadership and an increasing acceptance of that vision within the grassroots. Support for the Vietnam War and for military coups and authoritarian governments around the world (which repressed labour movements in the name of anti-communism and kept wages conveniently low) was the hallmark of AFL-CIO politics for many years. The internationalism of the US labour movement was broadly aligned with that of the State Department (collusion on projects was not uncommon). It was only when competition from all those militarised territories led to massive deindustrialisation in many areas of the US that the official union movement (as opposed to dissidents and activists within it) began to search for an alternative. The obvious choice, unfortunately, was to turn back to protectionism and exclusionary attitudes to immigration. There are several signs (the strong

resistance to NAFTA and to Chinese membership in the WTO) that this is the dominant trend within the trade unions rather than an internationalism based on solidarity with nascent union movements in developing countries (even those that are very close by as in the Mexican border region of maquila industries). Even the internationalist anti-sweatshop campaign backed by organised labour is not free of the charge of secret protectionism for US workers. Hampered by a truncated and nationalist geographical vision, the official union movement is perpetually in danger of lapsing into exclusionary localism. That danger lurks also in Europe where the unions are caught between the urgent need to develop European-wide organising tactics and agreements and the impulsive urge for each national union movement to circle its wagons to preserve highly localised advantages. Which geographical vision will prevail then becomes a crucial political question. The unions have an important untapped potential to generate an entirely different set of geographical perspectives out of cross-border coordinations and information sharing. When the latter does occur, as Moody shows, the political effects can be dramatic. Improved geographical understandings appear to be a necessary condition for this kind of cross-border politics to evolve.¹⁸

Religious, community and ethnic organisations (e.g. diasporas of various sorts) and political parties, contribute to governance. All of them produce and use distinctive geographical knowledges to promote their own agendas. The Church of England with major reports on topics like 'Faith in the City' drew attention to the increasing geographical concentration and segregation of social distress in British inner cities in the 1980s and in so doing aroused Margaret Thatcher's ire. The Catholic Church not only pioneered territorialised forms of administration in the early Middle Ages, but it also early on evolved strong geopolitical strategies for proselytising and maintaining social control. Its missionary activities (and some of its more famous missionaries) produced a vast array of geographical information during the early years of colonisation (some of it, as in the case of Las Casas in Mexico, at odds with imperial conceptions and policies). Religious organisations often have the advantage of a geographically dispersed grass roots presence linkable into a global framework that can, as with the Jesuits (prior to the Vatican's suppression of their radicalism) and the World Council of Churches (that played a leading role in the struggle against Apartheid in South Africa), be the

¹⁸ K. Moody, *Workers in a Lean World* (London: Verso, 1998); B. Silver, *Forces of Labor: Workers' Movements and Globalization Since 1870* (Cambridge: Cambridge University Press, 2003).

source of alternative geographical understanding. Organised missionary activities coupled with charitable works frequently entail the dissemination of an entirely different kind of geographical knowledge structure through the grass-roots base of organised religion. Many churches in, say France or Britain, document and support projects in developing countries which parishioners are encouraged to support. Much of the opposition to US policies in Central America during the 1970s and 1980s was based in church groups (both catholic and protestant) that had intimate connections to religious communities severely impacted by the US-backed violence then occurring in the region. The ability to mobilise geographical details (based on intimate and empathic understandings of local ways of life) was crucial to undermining the official State Department story that Cuban subversion and the diffusion of international communism (throughout Central America even threatening Texas), rather than a local struggle for social justice, lay at the root of the problem.

But we here encounter another intriguing aspect to the problem of how geographical knowledges get deployed politically. In so far as NGOs, religious organisations and other groups within civil society seek to confront or negotiate with the state or supranational institutions, they must perforce resort to compatible (which often translates to mean 'hegemonic') geographical knowledges and discourses. But NGOs and religious organisations must also generate geographical knowledges that speak to the life-conditions of their primary constituents while consolidating their own political power. The ability to speak the hegemonic language while preserving an alternate geographical knowledge for internal use is a frequent feature of such organisations. But discursive boundaries are porous. In the same way that the state can force its own geographical vision down into the grass roots (as the US state did with the unions during the Cold War or the public in the run-up to the war on Iraq), so grass roots visions can on occasion (as with the environmental movement) bubble up to subvert and ultimately transform the dominant discourse (and hence the whole structure and meaning of governmentality) within the state or supra-state apparatus. Governmentality of whatever sort is vulnerable to such influences. Contestation over 'appropriate' geographical knowledge is fundamental to political practices both within and between institutional sites.

III. The deep structures of geographical knowledges

Any full analysis of the production and uses of geographical knowledges at all possible sites for their production would reveal a chaotic panoply of cross-cutting discourses, just as incoherent, particularistic and unsystematic in aggregate as that which Kant depicted in microcosm. Particular geographical knowledges are, moreover, often circumscribed by technical capacities and political-economic objectives. What the military needs to know to engage in pin-point bombing in Iraq is quite different from what the EPA needs to know (or to hide) to evaluate (or deny) the threat of toxic exposures from hazardous waste or what children need to know as they set out to gather firewood or search for medicinal plants in rural Africa. Small wonder that geographers have signally failed to impose any order or discipline upon such disparate knowledges. From the standpoint of the multiplicity of objectives and political tasks it seems quite appropriate that no attempt ever be made to unify this knowledge field.

Yet all these different knowledges have common features. They typically comprise four structural components: (1) a dialectical ontology with respect to socio-environmental change; (2) a way of conceptualising and measuring space-time; (3) a sense of place/region/territory; and (4) a system of cartographic identifications. Long regarded as key elements in geographical thinking, the status of these structural components remains underdeveloped. I reflect briefly on them here.

1. The dialectics of socio-environmental change

All societies develop means to evaluate, represent and live within their surrounding environments (both naturally occurring and humanly constructed, with the distinctions between those two aspects decidedly porous if not increasingly meaningless). Local knowledges of this environment (including the resource knowledges of indigenous populations as well as scientific understandings), the construction of symbolic meanings and the development of capacities to represent and 'read' the landscape and its signs effectively—these sorts of knowledges have always been fundamental to human survival. Such knowledges vary greatly, depending upon technologies, social forms, beliefs and cultural practices all of which instantiate a certain view of the relationship of human activities to life and nature in general.

The question of how the relationship to environment and nature is to be understood is implicit in all forms of geographical knowledge across all institutional sites. Under market capitalism, for example, the world is typically treated as a spatially diversified bundle of 'natural' resources waiting to be discovered, exploited and transformed into commodities for sale. Commercial geographies exemplified the view. But even scientists such as Alexander von Humboldt, working in a nineteenth-century context where resources had become valued assets, constructed descriptions of the earth's surface as a repository of use values, as a dynamic field within which natural processes could be harnessed for human action.¹⁹ The accurate description of physical and biotic environments, of climate, soil and water regimes, of resource complexes and possibilities, largely for utilitarian purposes, has remained central to many geographical knowledges and practices ever since.

Observation of geographical variations in ways of life, forms of economy and social reproduction has also been integral to environmental understandings ever since merchant capitalism came to regard such knowledges as essential to its practices. This tradition degenerated into the mere compilation of 'human resources' open to profitable exploitation through unequal or forced exchange, the imposition of wage labour systems, the redistribution of labour supplies through forced migration (e.g. indentured labour), and the manipulation of indigenous economies and political power structures to extract economic surpluses. Geographical knowledges have been deeply affected by imperial and colonial practices. The objectification and exploitation of nature under capitalism went hand in hand with the objectification and exploitation of peoples.

The dialectics of socio-environmental change can, however, be understood from a variety of perspectives. The long history of environmental determinism, a doctrine that periodically returns (as, for example, in the recent work of economists like Jeffrey Sachs and other popular authors such as David Landes and Jared Diamond), articulates a way of thought which runs counter to the triumphalist humanism that underlies so-called 'possibilist' doctrines of economic development and change.²⁰ The more

¹⁹ A. von Humboldt, *Cosmos: Sketch of the Physical Description of the Universe* (London: Longman, Brown, Green, and Longman, 1847). For a more general exposition on the natural history tradition in geography see D. Livingstone, *The Geographical Tradition* (Oxford: Blackwell, 1992).

²⁰ See J. Blaut, *Eight Eurocentric Historians* (New York: Guilford, 2000), for a strong critical engagement with the revival of environmental determinism. Sachs is featured in B. Pleskovic, and J. Stiglitz (eds.), *World Bank Conference on Development Economics* (Washington, DC: World Bank, 1999). Sessions were devoted to the theme of 'Is Geography Destiny?' See also

favoured posture within Geography has been to study anthropogenic influences in 'changing the face of the earth'. Instead of seeing humanity as a mere 'object' of evolutionary forces, the trend has been to see ourselves as 'subjects' actively transforming the environments in which we live with all manner of intended and unintended consequences (for ourselves as well as for biotic and physical environments). A more dialectical stance sees the subject–object distinction as arbitrary. In changing the world we change ourselves. We cannot change ourselves and our society without changing our environmental condition, sometimes in dramatic and radical ways. Social and political projects are always, therefore, ecological and environmental projects and vice versa.²¹

Exactly how the environmental issue and the relation to nature is to be approached is a subject of intense debate. But the fact that all forms of geographical knowledge take a position on this question suggests that the terms of that debate can have huge implications for how geographical knowledges get set up and deployed in different institutional settings.

2. The measure of space–time

Many geographers claim that 'space' is the central, privileged and even defining concept of their discipline. I find this claim rather far-fetched. The physical sciences and engineering have a long history of dealing with the concept of space (and space–time) and it has likewise been the object of extended reflection in philosophy, literature, anthropology and many of the social sciences. The concept of space may be central to the discipline of Geography, but it is best viewed against the background of multiple discourses about space–time emanating from multiple sites. Since space and matter (or process) are fundamental ontological categories in our understanding of the world, Geography internalises the

J. Diamond, *Guns, Germs, and Steel: The Fates of Human Societies* (New York: Norton, 1997). For a carefully documented and detailed study that is incompatible with Diamond's Pulitzer Prize best seller, see J. Carney, *Black Rice* (Cambridge, Mass.: Harvard University Press, 2002). For more general approaches, see C. Glacken, *Traces on The Rhodian Shore* (Berkeley: University of California Press, 1967); W. L. Thomas (ed.), *Man's Role in Changing the Face of the Earth* (Chicago, Chicago University Press, 1956); B. Turner, W. Clark, R. Kates, J. Richards, J. Mathews and W. Meyer (eds.), *The Earth as Transformed by Human Action* (Cambridge: Cambridge University Press, 1990).

²¹ D. Harvey, *Justice, Nature and the Geography of Difference* (1996). A tangible example of this way of thinking within geography would be D. Meinig, *The Great Columbia Plain: A Historical Geography, 1805–1910* (Seattle: University of Washington Press, 1995); and a parallel in history would be W. Cronon, *Changes in the Land: Indians, Colonists and the Ecology of New England* (New York: Hill and Wang, 1983).

same problematic as many other disciplines. Questions of the absolute, relative and relational conceptions of space (and time) are posed as is the issue of whether or not time can meaningfully be separated from space.²² In my own view ‘space–time’ or ‘spatio-temporality’ is the relevant category. This quite properly implies that ‘all geography is historical geography’. The importance of this dynamic conception of spatial ordering and spatial form will shortly become apparent. Without it, geographical knowledges tend to become dead and immovable structures of thought, when their most exciting manifestation invariably comes from observing matters in motion.

Armed with the right kitbag of tools, it is possible to set up common descriptive frames and modelling procedures to look at all manner of flows over space, whether it be of commodities, goods, ideas, energy, ecological inputs.²³ But the tendency in this is to construe processes (no matter whether physical, ecological, social or political-economic) as occurring within a fixed spatio-temporal frame (absolute space–time). It is just as important to see the spatio-temporal frame as malleable and variable (relative and relational), as an actively produced field of ordering that is perpetually shifting and open. Space is then understood as dynamic and in motion, an active moment (rather than a passive frame) in the constitution of physical, ecological, social and political-economic life.

Space and time are, however, as much mental as material constructs. This is so not only in the sense that the measurement systems and the mathematical constructs (geometries and calculus) that are used to represent spatiality are products of human thought. The spatial and temporal imaginary, the construction of alternative possible worlds (to use Leibniz’s famous formulation) and the senses of space and time that course through consciousness and which present themselves in works of art, poetry, novels, films and multimedia forms—all of these provide a vast array of metaphorical meanings with which it is possible to explore hidden connections and analogies. So-called ‘mental’ or ‘imaginary’ space and time are rich terrains through which to work in order to understand personal and political subjectivities. They also become crucial grist for the mill of utopian thought and the attempt to define alternatives.²⁴

²² D. Harvey, *Justice, Nature and the Geography of Difference* (1996); S. Kern, *The Culture of Time and Space, 1880–1918* (London: Weidenfeld and Nicolson, 1983); D. Harvey, *The Condition of Postmodernity* (Part III) (Oxford: Blackwell, 1989).

²³ For an example of how analogical thinking across subject matters can work productively see R. Chorley and P. Haggett, *Network Analysis in Geography* (London: Edward Arnold, 1969).

²⁴ Kern, *Culture of Time and Space*; Smith, *Uneven Development* (1984); H. Lefebvre, *The Production of Space*, trans. Donald Nicolson Smith (Oxford: Blackwell, 1990); N. Brenner,

Attempts to deal with these dynamic aspects of spatio-temporality—generally under the rubric of the ‘social construction’ or ‘production’ of space–time are now legion. The whole history of capital accumulation which, as Marx long ago observed, has embedded within it an historical tendency towards the annihilation of space through time, points to an evolutionary process in which relevant metrics and measures of both space and time have changed significantly. Speed-up of turnover time and reductions in the friction of distance have meant that spatio-temporality must now be understood in a radically different way from what was operative in, say, Classical Greece or Medieval Europe. Any search for an alternative to neo-liberal globalisation must be prepared, if necessary, to search for a different kind of spatio-temporality.

Several key questions derive from a study of spatio-temporality. The question of scale is crucial.²⁵ What makes sense at one scale does not necessarily make sense at another. The spatial and temporal horizon within which decisions are taken matters. Financial markets, for example, frequently operate on instantaneous decisions over a global space which have the effect of making funds available here or withdrawing them from there at a moment’s notice. Plainly this is difficult to match with the requirements of reproduction of some ecological system (fish-stocks in the North Sea for example) or even of economic well-being of whole populations (speculation against a currency can produce impoverishment). All decision making is, in short, contingent upon how space–time is construed and measured. Critical engagement with conceptions of spatio-temporality is common to all forms of geographical knowledge.

3. Place/region/territory

The ‘region’ is possibly the most entrenched of all geographical concepts. Within the discipline it has proven the least flexible, mainly because of its central role in those essentialist definitions of the subject which rest exclusively on the study of chorology or regional differentiation.²⁶ Terms like

‘Global, Fragmented, Hierarchical: Henri Lefebvre’s Geographies of Globalization’, *Public Culture*, 10 (1997), 135–67; D. Harvey, *Spaces of Hope* (Edinburgh: Edinburgh University Press, 2000).

²⁵ E. Swyngedouw, ‘Neither global nor local: “glocalization” and the politics of scale’, in K. Cox (ed.), *Spaces of Globalization: Reasserting the Power of the Local* (New York: Routledge, 1997).

²⁶ G. Kimble, 1951: ‘The Inadequacy of the Regional Concept’, in L. Stamp and S. Wooldridge (eds.), *London Essays in Geography* (London: Longmans Green, 1951); J. Paterson, ‘Writing Regional Geography: Problems and Progress in the Anglo-American Realm’, *Progress in Geography*, 6 (1974), 1–26; E. Casey, *The Fate of Place: A Philosophical History* (Berkeley:

'locality', 'territory' and above all 'place' have often been substituted for 'region' both within and without the discipline. The extensive literatures on 'the local and the global', on 'deterritorialisation and reterritorialisation', and on the changing significance of 'place' under conditions of hypermobility across space, testify to the vibrancy of the topic and the diversity of conceptual apparatuses with which it is approached.

The central idea is that there is some contiguous space that has the character of an 'entity' of some sort defined by some special qualities. Sometimes the boundaries are clearly demarcated (as with administrative territories) but in other instances they are left ambiguous or even unconsidered (many ideas of 'place' fail to deal at all with the activity of bounding). Sometimes the region is defined in terms of homogeneous qualities (e.g. of land use, soils, geological forms) and sometimes in terms of coherent relations between diverse elements (e.g. urban functional regions). Sometimes the region is defined in purely materialist terms (physical qualities of terrain, climatological regime, built environments, tangible boundaries) but in others it depends on ideas, loyalties, a sense of belonging, structures of feeling, ways of life, memories and history, imagined community, and the like. In either instance it is important to recognise that regions are 'made' or 'constructed' as much in imagination as in material form and that though entity-like, regions crystallise out as distinctive from some mix of material, social and mental processes. The approaches to place/regionality/territory are wondrously diverse no matter where they are found.²⁷

The scale problem also enters in, with a hierarchy of labels often deployed that begin with neighbourhood, locality and place and proceed to the broader scale of region, territory, nation state, and globe. Region then becomes territorialisation at a certain geographical scale. Scaling is not a problem unique to the social side of matters. The bounding of

California University Press, 1997); J. Agnew, *Place and Politics: The Geographical Mediation of State and Society* (London: Macmillan, 1987); D. Massey, 'In What Sense a Regional Problem?', *Regional Studies*, 13 (1979), 233–43; M. Pudup, 'Arguments Within Regional Geography', *Progress in Human Geography*, 12 (1988), 369–90.

²⁷ For the argument that place has become irrelevant see J. Meyrowitz (1986), *No Sense of Place* (Oxford: Oxford University Press, 1986), and for the argument that it has become more deeply relevant than ever see T. Hiss, *The Experience of Place* (New York: Knopf, 1990), as well as Y-F. Tuan, *Space and Place: The Perspective of Experience* (Minneapolis: University of Minnesota Press, 1981); for other arguments see E. Relph, *Place and Placelessness* (London: Pion, 1976); E. Carter, J. Donald, and J. Squires (eds.), *Space and Place: Theories of Identity and Location* (London: Lawrence and Wishart, 1993); and Harvey, *Justice, Nature and the Geography of Difference* (1996), chap. 11.

ecosystems, their embeddedness in higher order systems (hierarchies of systems) and how processes prominent at one scale give way before others at another scale, makes the whole question of 'appropriate' territorial definition as crucial within ecological research as elsewhere.

Whatever the procedure or methodology, once continuous space gets carved up into distinctive regions of whatever sort, the pictures we form and the operations we conduct multiply enormously. Yet we also know that entities constructed can conceal as much as they reveal. Furthermore, as human populations frequently organise themselves territorially so regionality becomes as central to consciousness and identity formation and to political subjectivity as does the cartographic imagination and the sense of spacetime. Beyond the obvious cases of nation state formation and movements for regional autonomy (much more prominent in recent years despite or perhaps because of the forces of globalisation), the general processes of political articulation resting on everything from community boosterism to 'not in my back yard' politics transforms the world into complex regional differentiations, interregional relations and rivalries.²⁸

Geopolitical struggles between territories and regions have therefore been of considerable importance in geographical understandings. But it is not only the interactions between geographical entities that need to be treated in a dynamic way. The processes of region formation are perpetually in flux as social and natural processes reconfigure the earth's surface and its spatially distributed qualities. New urban regions form rapidly as urban growth accelerates, climate change generates shifts in biotic conditions, water regimes, and the like. Populations shift their perceptions and allegiances, reinvent traditions and declare new regional formations or radically transform the qualitative attributes of the old. Like space-time, the dynamics of the process are by far the most interesting.

Regionality, the dynamics of place and space, the relationship between the local and the global, are all in flux, making the uneven geographical development of the physical, biotic, social, cultural and political-economic conditions of the globe a key pillar to all forms of geographical knowledge.²⁹ Such questions cannot be evaded in any general social theory and the question of how best to handle such issues in a proper and appropriate manner has to be one central epistemological pillar in any adequate social science. It is similarly central to the formation of popular 'common sense' knowledges.

²⁸ J. Agnew, *Geopolitics: Revisioning World Politics* (New York: Routledge, 1998); G. O'Tuathail, S. Dalby and P. Routledge (eds.), *The Geopolitics Reader* (New York: Routledge, 1998).

²⁹ K. Cox (ed.), *Spaces of Globalization* (1997).

4. Cartographic identifications/cartographic consciousness

Maps have traditionally taken the form of two-dimensional spatial representations. They rest, therefore, upon a certain conception of space and an ability to order and locate positions, things and events in that space through precise measurements. The mathematics of map projections (representing a globe upon a flat plane surface) itself has an interesting history. New forms of geometry were first worked out in this context (Gauss devised spherical geometry while conducting a cartographic survey of Hanover). Map-making and cartography have been central to the history of globalisation and geographical knowledge production. Maps have also always been and continue to be created and used in an extraordinarily wide range of institutional and disciplinary settings and for a variety of purposes. Under capitalism, for example, concern for accuracy of navigation and the definition of territorial rights (both private and collective) meant that mapping and cadastral survey became basic tools for conjoining the geographer's art with the exercise of statecraft and political and economic power. The use of military power and mapping went hand in hand. In the imperialist era, the cartographic basis was laid for the imposition of capitalist forms of territorial rights in areas of the world (Africa, the Americas, Australasia and much of Asia) that had previously lacked them. Cartographic definitions of sovereignty (state formation) aided state formation. Cartography laid the legal basis for class-based privileges of land ownership and the right to the appropriation of the fruits of both nature and labour within well-defined spaces. It also opened up the possibility for the 'rational' organisation of space for capital accumulation, the partition of space for purposes of efficient administration or for the pursuit of improvements in the health and welfare of populations (the Enlightenment dream incorporated into rational planning for human welfare).

Cartography is about locating, identifying, representing and bounding phenomena and thereby situating events, processes and things within a coherent spatial frame. It imposes spatial order on phenomena. In its contemporary manifestation it depends heavily upon a Cartesian logic in which *res extensa* are presumed to be quite separate from the realms of mind and thought and capable of full depiction within some set of coordinates (a grid or graticule). The innovation of thematic, synoptic and iconic maps extended the range of what could be represented cartographically in important respects (synoptic charts in meteorology and climatology becoming basic tools for analysis, for example). Cartographic

operations can be found right throughout the academy at the same time as they are fundamental to the work of many institutions (the state, the military, the law, etc.). Information is now often stored digitally and in GIS there exists a powerful tool for automated storage, analysis and instantaneous presentation of data and information in an ordered spatial form.

There is, of course, an extended literature on the limitations of cartographic operations and plenty of evaluative materials concerning the uses and abuses of maps, GIS, and the like. Their deployment for propaganda purposes is well-known and their function as tools of governance, power and domination has been well-portrayed in several settings (particularly that of imperial administration). The history of cartography is now also being written from a broad-based comparative perspective, revealing much about cultural and temporal differences in understandings of human positionality in the world.³⁰ The evaluation and historiography of cartographic forms is well under way by geographers, historians, anthropologists and many others.

Cartography is, plainly, a major structural pillar of all forms of geographical knowledge. But there is much more to be said about this issue. Locating, positioning, individuating, identifying and bounding are operations that play a key role in individuation and the formation of personal and political subjectivities. Who we consider ourselves to be (both individually and collectively) is broadly defined by our position in society and the world. This positioning occurs with or without any formal map of the generally understood sort. There are mental or cognitive maps (perhaps even whole cartographic systems) embedded in our consciousness that defy easy representation on some Cartesian grid or graticule. The mental maps of children, of men and women, of the mentally ill, of adherents to different cultures and religions, of social classes or of whole populations, evidently vary greatly. The intersection of formal mapping procedures with this sense of who we are and how we may locate ourselves is far from innocent. The traces of a new cartographic consciousness are writ large in poetry (e.g. Shakespeare and the so-called 'metaphysical poets' deploy cartographic imagery to great effect) as well as in literature (even before

³⁰ J. Harley, P. Laxton, and J. Andrews (eds.), *The New Nature of Maps: Essays in the History of Cartography* (Baltimore, MD: Johns Hopkins University Press, 2001), and the various volumes published by the history of cartography project edited initially by J. B. Harley and David Woodward, published by the University of Chicago Press. See also D. Wood, *The Power of Maps* (New York: Guilford Press, 1992).

Daniel Defoe and others made cartographic exploration central to their narrative structures). The effect of reading such literature is to see ourselves in a different positionality, within a different map of the world. The literature on this 'cartographic consciousness' on 'mental' and 'cognitive' maps is now growing by leaps and bounds, suggesting an emergent field of enquiry that links thematics in traditional Geography with much of cultural and literary theory (as well as with anthropology and psychology). How urban life is experienced and practised, for example, has much to do with how we form and re-form mental maps of the city.³¹

Plainly the difficulties of communication across these different cartographic modalities is considerable as we imagine placing an expert in techniques of GIS cheek by jowl with a literary critic interested in the cartographic consciousness deployed in *Beowulf* or *Rabelais*. Cartography as one central structural support of all forms of geographical knowledge is made up of many intertwining threads. Investigating their intersections provides not only exciting challenges. It also provides some important clues as to how political, personal and psychological subjectivities are sensitive to cartographic endeavours and how changing the map of the world can change not only our modes of thought about that world but also our social behaviours and our sense of well-being (much as the depiction of the earth as a globe from outer space is often credited with affecting the ways in which we think of global problems or even of globalisation itself). Cartography, in some or all of these manifestations, provides one central pillar of all forms of geographical knowledge. But it also has a fundamental role to play in all of social theory. It poses the question: what kind of map (or maps) of the world can be embedded in social theory and what happens if the maps are in some ways erroneous or inappropriate? Steinberg's famous 'New Yorkers' Map of the World' may tell us a great deal about how residents of that city think but it is quite inappropriate for a pilot trying to fly from Newark to Denver.

³¹ T. Conley, *Self-Made Map: Cartographic Writing in Early Modern France* (Minneapolis: University of Minnesota Press, 1996); T. Conley, 'Algeria Off-Map', *Parallax*, 4 (no. 2) (1998), 99–112; R. Helgerson, 'The Land Speaks: Cartography, Chorography and Subversion in Renaissance, England', *Representations*, 16 (1986), 51–85; P. Gould and R. White, *Mental Maps* (Harmondsworth, Middlesex: Penguin, 1974); K. Lynch, *The Image of the City* (Cambridge, Mass.: MIT Press, 1960).

IV. Geographical knowledges/political powers

Much geographical work rests (sometimes lopsidedly) on one or two of these structural pillars with scant concern for the others. This is sometimes quite properly so since particular projects may require intensely specialised technical and other research skills. But most geographical work (at no matter what site) weaves these structural threads into a more general account. This does not produce an essentialist or synthetic understanding. But it does identify the interactive dimensionality within the core of all geographical knowledges that serves to produce their extraordinary diversity. It also opens up a terrain for critical and comparative inquiry. We can look upon any set of geographical discourses and associated practices and ask what it does or does not tell us, whose interests does it represent and how important might silences, absences and erasures be? More specifically, what conception of socio-ecological transformation does it incorporate and what conception and measures of space–time are being deployed in whose interests and why? How are entities and spatial containers like regions, neighbourhoods, places and territories constructed (and by whom) and how are they to be understood, politically as well as affectively (as sources of personal identity and objects of political loyalty)? What map of the world do we hold in our heads and what happens when we change it? These questions become doubly important when we place geographical knowledges in relationship to power and institutional and social settings. As I earlier argued, noble universal ideals all too easily run aground on the geographical details.

We should not, however, presume that geographical knowledge production is always neatly functional for particular purposes. Planners, developers, military strategists, development agencies and just plain ordinary people have seen their projects fail because their geographical knowledge was faulty. We are, furthermore, not dealing with isolated institutionalised boxes of geographical knowledge production but with a complex interweaving of multiple discourses powerfully shaped at key nodal points by dominant institutions. Geographical knowledges intermingle and react with one another. Confusions and conflicts are common, particularly during phases of political transition. And it is not always clear whose kind of knowledge influences whom. Are popular and common sense geographical knowledges (stubborn and fixed as they often are) reflected in or shaped by the media? Do combinations of state and corporate power dominate academic thought or do academic formulations

percolate into the thinking of state administrations and corporate practices? Do the images produced by the tourist industry or the *National Geographic* permeate public perceptions?³² There are multiple reciprocities, interactions, tensions and contradictions within geographical knowledge production and utilisation. When dominant forms of geographical knowledge get challenged by, say, the environmental movement, or by the NGOs critiquing the complicity of US corporations in the production of global poverty and degrading labour practices, then openings occur to problematise the role particular geographical knowledges play in relation to the exercise of political power.

It is odd, however, that such scant critical or reflective attention has been accorded within the discipline of Geography as to how, where and why geographical knowledges are generated and what the consequences of their use might be. There are exceptions such as the examination of the relation between geography and Empire.³³ But it is years now since Foucault taught us that knowledge/power/institutions lock together in particular modes of governmentality. Foucault's other key observation on the importance of discipline, surveillance and punishment within the functioning of all institutions from the prison and the factory to the World Bank, the university and even individual disciplines has also passed unexamined in its geographical context.

Reflection on the role of geographical knowledges (no matter where produced) should entail (i) examination of the role of geographical knowledges (preferably in alliance with anthropology and history) as critical preconditions for the discovery and application of all other forms of knowledge (ethical and/or empirical), (ii) critical dissection of the production and use of geographical knowledges in relationship to institutional arrangements and the exercise of political-economic power, (iii) exploration of the unities within or possibilities of translation between the seemingly cacophonous and highly differentiated geographical discourses that already exist, and (iv) establishment of rough guidelines as to what constitute proper forms of geographical knowledge and criteria for appropriate application to particular projects. Under this last rubric must also be included learning how to contest political power by shifting the

³² C. Lutz and J. Collins, *Reading National Geographic* (Chicago: Chicago University Press, 1993); B. Harvey, *American Geographics: U.S. National Narratives and the Representation of the Non-European World* (Stanford: Stanford University Press, 2001).

³³ D. Stoddart (ed.), *Geography, Ideology and Social Concern* (Oxford: Blackwell, 1981); A. Godlewska and N. Smith (eds.), *Geography and Empire* (Oxford: Blackwell, 1997); and Smith, *American Empire* (2003).

terrain of geographical knowledge production and challenging knowledges produced by a dominant political power.

What might be called ‘geographical deconstruction’ is a powerful tool of critical analysis. It must be freely deployed if the sorts of errors that began with Kant and which have dogged the application of worthy universal principles ever since are to be mitigated. It must be incorporated into all forms of social scientific inquiry not simply to render transparent the relation of geographical knowledges to political power but also to see how other knowledges (such as economics) work in relation to the pursuit of political goals when inflected with different geographical perspectives. For the aim of deconstruction is not destruction. Geographical knowledges can never be neutral (as opposed to narrowly functional for some technical objective and political task). To believe so is to subscribe to a beguiling fiction if not engage with a downright fraud. Many geographical knowledges have been tainted by virtue of their connection to the instrumental ends (like colonialism) for which they were designed and the institutional frameworks (like military power) to which they were beholden. But this is not to say they are useless, irrelevant or too contaminated to be touched (any more than we might dismiss the uses of specific technologies because they were invented for purposes of military domination and destruction). The problem for a critical geography (alongside critical history and anthropology) is to take these varied forms of knowledge, appreciate the circumstances of their origin and their distinctive genealogies, evaluate them for what they are, and, if possible, transform them.³⁴ Into what they might be transformed depends upon the political nature of the socio-ecological project to which we, as individuals endowed with consciousness and will, collectively subscribe.

³⁴ The radical anarchists at the end of the nineteenth century used their geographical knowledge in exactly this way. See E. Reclus, *L’homme et la Terre*, 2 vols., ed. B. Giblin (Paris: Maspero, 1982); M. Fleming, *The Geography of Freedom* (Montreal: Black Rose Books, 1988). I sought to take a similar path in Harvey, *Spaces of Hope* (2000), Appendix.

