

CHAPTER 11

Cartographic identities: geographical knowledges under globalization

First presented to the conference on Social Sciences at the Millennium sponsored by Hong Kong Baptist University in June 2000; the revised version, published here, was presented to the twenty-ninth International Geographical Congress in Seoul in August 2000.

Preliminary observations

The all-encompassing political-economic process we have come in recent years to call 'globalization' has depended heavily upon the accumulation of certain kinds of geographical knowledge (indeed it did so from its very inception which dates back well before 1492 in the case of western capitalism). The further development of this political-economic system will undoubtedly influence Geography as a distinctive discipline as well as geography as a distinctive way of knowing that permeates social thought and political practices. Reciprocally, geographical understandings may affect future paths of political-economic development (through, for example, the recognition of environmental constraints, the identification of new resources and commercial opportunities or the pursuit of juster forms of uneven geographical development). A critical geography might go so far as to challenge contemporary forms of political-economic power, marked by hyper-development, spiralling social inequalities, and multiple signs of serious environmental degradation.

My interest is to look at this dialectical relationship between political-economic and socio-ecological change on the one hand and geographical knowledges on the other. I begin with three basic observations.

First, though the history of this dialectical relationship is a fascinating area of enquiry (as, for example, in the whole relationship between geographical knowledges, state formation, colonization, military operations, geopolitics and the perpetual seeking-out of commercial and economic advantages), I shall largely ignore any explicit discussion of this historical record here. Nevertheless, I recognize that this past legacy weighs heavily upon contemporary geographical knowledges and that any broad-based attempt to transform the latter must, at some point, confront the particularities of past achievements.

Secondly, I use the plural 'knowledges' because I think it dangerous to presume there is some settled way of understanding or a unified field of knowledge called 'geography' even within the academy. A 'discipline that ranges from palaeo-ecology and desert morphologies to 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, its methods, and its 'point of view' has to be challenged, though it is a long time since anyone dared write so confident a book as Hartshorne's *Nature of Geography*.

This strategic position becomes even more important in relation to my third point: there is a significant difference between geographical knowledges held (often instrumentally) in different institutional settings (for example state apparatuses, the World Bank, the Pentagon and the CIA, the Vatican, the media, the public at large, NGO's, the tourism industry, multinational corporations, financial institutions, and so on) 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 information of a certain sort in a variety of institutional settings is important. Geographical knowledges of the latter sort are widely dispersed throughout society. They deserve to be understood in their own right (for example how the tourism industry or cable television has created and promoted a certain geographical sense in society). Different institutions, furthermore, create a demand for different kinds of geographical knowledge (the tourism industry is not interested in highlighting the geography of social distress). If academic geography does not or cannot meet these various demands, then someone else surely will.

From these preliminary remarks I draw some immediate conclusions:

1. We need general studies in comparative historical and geographical settings to better understand how the dialectical relationship between forms of geographical knowledge and socioeconomic and ecological development occurs.
2. We need careful studies of how geography as a mode of understanding is formulated, used and applied in different institutional settings (for example the military, Greenpeace, the state apparatus, multinational corporations, and so on).
3. We need to better understand the links between geographical discourses which emanate from particular institutions and the way geographical knowledges are created and taught both within and without the specific discipline of Geography.
4. We need to think through the principles that might govern the

‘proper’ application of ‘sound’ geographical knowledges in specific settings. Here the discipline of geography has a potential role of considerable importance, as both arbiter and judge of appropriate uses of properly-formulated geographical knowledges.

Cosmopolitanism and its geography

In a recent paper in *Public Culture*, I looked at how claims about global governance, management and regulatory activity are now being mobilized through ideals of ‘cosmopolitanism’. Writers like David Held have argued eloquently that such a cosmopolitan perspective is essential to the evolution of democratic institutions of global governance to regulate neoliberalism. But what kind of geographical knowledge is presupposed in such an argument?

Nussbaum, one of the main proponents of the cosmopolitan ideal in the US, complains how ‘the United States is unable to look at itself through the lens of the other, and, as consequence, [is] equally ignorant of itself’ precisely because the population is so ‘appallingly ignorant of the rest of the world’. In order to conduct any adequate global dialogue, she continues,

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 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.

In making this assertion, Nussbaum follows no less a figure than Kant whose founding arguments on a cosmopolitan ethic are frequently appealed to in the general literature. Kant recognized both geographical and anthropological understandings as ‘necessary preconditions’ for the discovery and application of all other forms of knowledge, including that of a cosmopolitan ethic. Nussbaum (along with almost everyone else who writes on cosmopolitanism) leaves the nature of the necessary geographical knowledge unspecified. But Kant taught his course on Geography no less than forty-nine times (it was the second most important course he taught). A study of Kant’s Geography reveals a serious problem. For not only is Kant’s account unsystematic and incoherent (in marked contrast to the rigor 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 and superstitious, Burmese women wear indecent clothing and like to get pregnant by Europeans . . . it goes on and on in this vein.

Geographical knowledge of this sort appears deeply inconsistent with Kant's universal ethics and cosmopolitan principles. It immediately poses the problem: what happens when universal ethical ideals get inserted as principles of global governance in a world in which some people are considered inferior and others are thought indolent, smelly, or just plain untrustworthy? Either the smelly Hottentots, the lazy Samoyeds, the thieving Javanese, and the indecent Burmese women have 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.

What appears so dramatically with Kant has, unfortunately, widespread ramifications for contemporary politics. If, as is the case, geographical knowledge in the public domain in, for example, the US is either lacking or of a similar prejudicial quality to that which Kant portrayed, then it 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 'demonized' 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 favorite phrase) illustrates all too well how geographical knowledge of a certain sort is mobilized for political purposes while sustaining a belief in the US as the bearer of a global ethic.

So what kind of geographical knowledge is adequate to a cosmopolitan ethic? 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 they were likely to support US government military interventions or economic sanctions. Conversely, it then follows that 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 such ignorance). Biased or 'empty' geographical knowledges, deliberately constructed and maintained, provide a license to pursue narrow interests in the name of universal goodness and reason.

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 therefore a necessary precondition for any kind of reasoned global governance. But what kind of geographical knowledge might be implied here? Geographers tend to be suspicious of cosmopolitan ideals (in part for good reason). But geography uninspired by any cosmopolitan vision either becomes a matter of mere description or a passive tool of existing powers (military, administrative, economic). Liberating the dialectic between cosmopolitanism and geography seems a critical precondition for the achievement of any juster and saner socio-ecological order for the twenty-first century. How can geographical knowledges be reconstituted to meet the needs of democratic global governance inspired by a cosmopolitan ethic of, for example, justice, fairness and reason?

These are big questions, but essential to contemplate not only from the narrow standpoint of Geography as a discipline, but more importantly from the standpoint of the role of geographical knowledges (no matter where produced) in affecting the future trajectory of the global socio-ecological order and its associated patterns of political-economic power. So what kinds of geographical knowledge are presently available to us as we contemplate that question?

Sites for the production of geographical knowledges

Professional geographers, like economists, sociologists and political scientists, do from time to time generate their own data sets and produce novel information to fuel their enquiries. But much of their work rests on the analysis of data, information and perspectives developed elsewhere. There is, curiously, very little formal recognition within Geography of how the geographical knowledges assembled in different institutional settings vary according to distinctive institutional requirements, cultures and norms. If Geography as a discipline aspires to be judge and arbiter of the proper application of sound geographical knowledges, then a first step down that path is to provide principles to evaluate the production of geographical knowledges in different institutional settings. Many geographers attach themselves to external institutions. But this is often viewed as a private or personal matter. Rarely do we sit back and reflect upon the consequences of such attachments for the discipline as a whole. Consider, for example, some of the primary sites for the production of geographical knowledges and how the qualities of such knowledges vary from site to site.

The state apparatus

With its interests in governmentality, administration, taxation, planning, and social control, the state apparatus has steadily been built up from the eighteenth century onwards as a primary site for the collection and analysis of geographical information. The process of state formation was, and still is, dependent upon the creation of certain kinds of geographical understandings (everything from mapping of boundaries to the cultivation of some sense of national identity within those boundaries). For the last two centuries, the state has been perhaps *the* primary site for the production of geographical knowledges necessary for the creation, maintenance and enhancement of its powers. Governmentality rests, however, on a certain set of precepts concerning individuality and objectivity (individuating, counting and locating – hence the importance of mapping – are primary operations in everything from censuses to social security administration). ‘Facts’ are generated by a variety of means and analyzed accordingly. Furthermore, different departments within the state apparatus develop specialized expertise on, say, agriculture, forestry, transportation, fishing, industry, and the like. Insofar as the state is itself organized hierarchically, it will typically produce 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, analyzed 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. Through its influence over education, the state can actively produce national and local identities as means to secure its power. When geographers situate themselves within these frameworks of geographical knowledge production they become, sometimes without recognizing it, tacit agents of state power. At the same time, the interests of particular states lead to particular kinds of geographical knowledges (producing identifiable ‘national schools’ of geography) related, interestingly, to geographical and geopolitical conditions. The ‘hidden geography’ of geographical knowledges has rarely been addressed except eliptically and occasionally.

Military power

While obviously part of the state apparatus, military power deserves to be categorized separately because it is in this arena that the connection

between privileged geographical knowledges and the pursuit of power becomes most obvious. Geographical knowledge is here often held in secret. Access to it is a matter of national security. Getting the maps or geographical information system right is crucial to attaining military superiority while reading them wrong (as in the bombing of the Chinese Embassy in Belgrade in 1999) can produce serious consequences. The connection between geographical knowledges and the military has always been extremely strong (it goes back at least to the Romans, if not before). The conventions and the norms which attach to military requirements affect the nature of the geographical knowledge produced. Engineering perspectives, like the evaluation of terrain conditions affecting vehicular movement, tend to take precedence over evaluating cultural conditions in the population, for example. Only when it is a matter of designing counterinsurgency or civilian control programs do we typically find appeal being made to anthropological and human geographical understandings.

Supranational institutions

These have increasingly become major sources of new geographical knowledges, particularly since 1950. The World Bank, the UN Development Program, the ILO, the WHO, the WTO, UNESCO, FAO, and the like form a huge and rapidly growing domain for the production of a variety of geographical knowledges (often of a specialized sort on topics such as world health, agriculture, labor, and the environment). Traditions of governmentality pioneered within the state apparatus tend to live on in these institutions, giving a certain objectivity and individuality to data forms and frameworks of analysis. The main effect is to produce qualitatively similar information to that compiled within the state apparatus but at a more supranational and global scale. Other supranational institutions, like the European Union and the OECD, take less of a global perspective but nevertheless also operate as key sites for the production of particular geographical knowledges at that geographical scale. A cursory look at, for example, World Bank reports, shows that geographical knowledge structures within the bank have changed significantly over time as different policy directions have taken root (environmental information is now much more prominent while an interest in decentralization and the institutions of civil society as vehicles for promoting economic development have introduced a much greater sensitivity to local cultures and geographical conditions in World Bank reporting). This point can be generalized: geographical knowledges produced within institutional settings can and do change significantly over time.

Non-governmental organizations

In recent decades, NGOs have proliferated, making the production of geographical knowledges throughout civil society at large a much more complicated affair, in part because the objectives of such organizations vary greatly. Organizations like OXFAM or CARE incorporate vast amounts of geographical knowledge, as do human rights groups like Amnesty International, environmental groups like the World Wildlife Fund or Greenpeace, and the vast array of organizations dealing with specific issues (violence, the situation of women and children, education, poverty, health, refugees, and so on). While it may seem inappropriate in some respects, I think we should also include within this arena that vast array of religious organizations (from the Catholic Church to Islamic, Hindu and Protestant groups), community and ethnic organizations (for example diasporas of various sorts) and political parties. These all constitute elements within civil society that contribute to governance and all of which produce geographical knowledges in particular ways (the Catholic Church, for example, not only pioneered territorialized forms of administration in the early Middle Ages, but it has also evolved strong geopolitical strategies for proselytising and social control ever since). Insofar as such organizations seek to engage with the state or with supranational organizations, they must perforce produce geographical knowledges that are broadly compatible with those held in these more dominant institutions simply for purposes of argument and negotiation.

Corporate and commercial interests

These have their own ways of assembling and analyzing geographical knowledge for their own particular purposes. The vast business of consultancy (sometimes in-house but mainly not) today operates with particular force as corporate and commercial interests seek out expert opinion on marketing possibilities, locational preferences, resource availability (both natural and human), environmental constraints, security of investment, business climate, amenities for personnel, and the like. By the same token, such institutions produce a wide array of geographical knowledge subjected to a certain style of geographical analysis (all the way from real-estate analysis and market-survey information through the grading of governmental bonds to remote sensing of crop yields as a speculative aid in crop futures markets).

The media, entertainment and tourism industries

These industries are a prolific source of geographical knowledges. In this instance, however, we are largely concerned with the projection of images

and representations upon a public at large and the predominant effects of those images and representations upon the populations subjected to them. The impact is primarily aesthetic and emotive rather than 'objective'. The selectivity entailed in the choice of images is often problematic. Commercial requirements introduce a bias towards the immediate, the spectacular, the aesthetically acceptable and associative thinking (sexuality, nature and the authenticity of the product, for example). But the variation in images and representations within the media, entertainment and tourism industries is enormous and it forms a highly problematic but influential field within which geographical knowledges get shaped and reshaped in all manner of ways. It is not hard to see the ways in which geographical misinformation gets purveyed in this arena, nor is it hard to see that here, above all, there is a vital role for geographical principles that encourage a broad-based and popular capacity for evaluation and judgement on the nature of the geographical knowledges being constructed and presented.

Education and research institutions

These generate a lot of disciplinary-specific geographical information. Economists, sociologists, anthropologists and political scientists all produce and modify information that has geographical content and often reshape that knowledge to their own disciplinary purposes. Those working on general circulation models of the atmosphere, turbulence in estuaries, biodiversity, environmental history, diffusion of diseases, epidemiology, healthcare delivery, the interpretation of novels, the history of ethnicity or cultural forms, all need to compile geographical knowledges of a specific sort to which geographers can appeal or contribute. Geographical knowledges are found throughout the whole educational and research system. It is quite proper that such knowledges become widely diffused rather than circumscribed within one unified disciplinary frame. This can be perceived within the discipline of Geography either as a threat or as a marvelous opportunity to engage in constructive dialogue about the proper use of sound geographical knowledges in many distinctive spheres of endeavor.

Institutionalized geographical knowledges of the sorts I have mentioned above are particularly important to Geography as an academic discipline. But there are far wider and more general kinds of geographical knowledge embedded in language, local ways of life, the local symbiosis achieved between nature, economy and culture, local mythologies and diverse cultural practices and forms, common-sense prescriptions and dynamic sociolinguistic traditions. Specialized geographical knowledges (everything from the urban knowledge of the taxi driver to the particular

knowledge of amateur ornithologists or local antiquarians) abound. Local knowledges, for example, often amount to relatively complete geographical descriptions albeit structured from a certain parochialist perspective. Local and regional identities, conversely, are themselves built (as is the nation state) around the formation and articulation of certain kinds of geographical (often strongly colored by environmentalist sentiments) understandings. Geographers (along with anthropologists) have traditionally paid close attention to these localised 'structures of feeling' and ways of life and in so doing have helped frequently to highlight the conflict between institutionalized knowledges directed towards governmentality and localized knowledges that guide affective loyalties and socio-environmental identities. If I pay scant attention here to these traditional forms of geographical knowledge, this in no way implies lack of respect for them or their importance. They have traditionally provided, and continue to provide, the backbone of argument for an authentically independent discipline of (human) geography. But to insist upon these perspectives and knowledges as the exclusionary basis upon which to exercise geographical judgement is to isolate the discipline from its much broader potentialities.

So what general conclusions can we draw? To begin with, I find it odd that various discussions of the nature of geography pay such scant critical or reflective attention to the ways in which different geographical knowledges generated across such a wide array of institutional bases course through our own disciplinary structure. It is years now since Foucault taught us that knowledge/power/institutions lock together in particular modes of governmentality, yet few have cared to turn that spotlight upon the discipline of Geography itself. They have been unmindful of Foucault's other key observation on the importance of discipline, surveillance and punishment to the functioning of all institutions (from the prison and the factory to the World Bank, the university and even individual disciplines – the double meaning of this last word should alert us to the problem). There are exceptions to this comment. The connection between geographical knowledge and empire has been a strong topic of commentary in recent years, but the relations to state-building, the military apparatus, covert operations, multinational strategies, and even easily targeted institutions like the World Bank or the World Wildlife Fund pass by largely ignored as a topic for critical analysis and commentary, even as interest groups or individuals within the discipline of Geography avidly court connections and sometimes work closely with those institutions.

Furthermore, it is intriguing to examine how conflicts can get articulated as conflicts between geographical understandings. When, for example, Greenpeace attacks the projects of multinational corporations or the

World Bank, it often does so by providing radically different geographical descriptions (emphasizing biotic communities, cultural histories and heritages, distinctive ways of life) compared to the technical specifications laid out in, say, World Bank or company prospectuses. Similarly, when Oxfam disputed State Department policy towards Central America in the 1980s, it did so in part by describing a quite different geographical socio-environmental situation relative to the geopolitical crudities offered by the State Department. Persuading the public politically often proceeds via geographical education.

But particular studies on these topics, useful though they may be, will not do the trick. For what we have to recognize is that Geography as a discipline is situated at the confluence of a vast array of geographical discourses, constructed at quite different institutional sites with often seemingly incomparable (and some would argue incommunicable) rules of operation. Much of the confusion as to what Geography in general might be about rests upon the different allegiances that individual practitioners or groups may have to external institutions, their cultures and their dominant modes of thought (the state apparatus, NGOs, the 'scientific community' or whatever). The inability to find a common language through which to communicate across the innumerable subgroups that typically comprise a geography department (with the 'two cultures' of science and the humanities forming a particularly significant divide) in part has its origins in these multiple allegiances. Hence, I suspect, the reluctance even to contemplate the idea that geography may have a 'nature', an 'essence', or a basic mission as a discipline, and the reduction of most historiography of the discipline in recent years to an account of divergent trends and different schools of thought (with David Livingstone's weak idea of ongoing 'conversations' being the most adventurous unifying theme advanced to date).

We should, I believe, view the confluence of these divergent discourses within the discipline of Geography as an opportunity and an advantage rather than as a source of mystification and confusion. Where else might it be so easy to confront head-on the existence of, say, the 'two cultures' of science and the humanities and in what other setting would it be so easy to pursue not only meaningful conversations but also explore how to translate between and even integrate seemingly incompatible or radically divergent knowledges? I do not argue that such work will be easy (that would be wishful thinking). But it is an interesting zone of endeavor which in its own right is worth struggling for, not in pursuit of some holy grail of a unified field of Geography (with a well defined 'essence') but as a means to explore how unities (general principles and arguments) might be constructed without doing violence to the differences that divide.

Furthermore, the extraordinarily diffuse presence of geographical knowledges across the different disciplines and their dispersal throughout many major institutions provides a ready-made network for the diffusion of 'strong' geographical ideas, constructed within the discipline. Instead of Geography weakly refracting institutionalized discourses (more or less as a servant of dominant or superior institutions, including other disciplines within the academy to which we all too easily feel inferior) it is surely possible to imagine Geography as a discipline sending strong innovative impulses throughout the academy and across multiple institutional sites based upon the collective work which geographers produce.

This leaves us with a clearer mission. Geography will not survive as a discipline, nor do I think it should survive, unless it develops *strong* geographical ideas expressive of some of the *unities* that we come to identify among the highly-differentiated discourses that converge within our disciplinary frame. Strong ideas will be listened to and command respect elsewhere. And those strong ideas must be born out of experience gained through the specific positionality of our discipline as a convergent point of multiple geographical knowledges. How, then, can we reflect upon the geographical knowledges we hold in order to identify such strong ideas? Furthermore, in the cosmic scheme of things, will such strong ideas be useful and productive in guiding socio-ecological changes in ways that contribute to human emancipation from want, need, suffering and the various forms of alienation and repression that currently surround us? These are the big questions to which we need to find some answers.

The structures of geographical knowledges

Consider, now, the common structural components of geographical knowledges. This may not automatically reveal strong ideas, but it can help identify the unities (if such there are) that underlie highly diverse geographical knowledges and suggest foci around which strong ideas might cluster. Four structural elements stand out.

Cartographic identifications

Map-making and cartography have been central to the history of Geography. 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. In the bourgeois era, 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 political and economic power. The exercise 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 America, Australasia, and much of Asia) that had previously lacked them. Cartographic definitions of sovereignty (state formation), aided state formation and the exercise of state powers. 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 labor within well-defined spaces. It also opened up the possibility for the 'rational' organization 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 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, and so on). 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. The evaluation and historiography of cartographic forms is well underway by geographers, historians, anthropologists and a wide range of scholars from other disciplines.

Cartography is, plainly, a major structural pillar of all forms of geographical knowledge. Given its fundamental role in Geography as well as in other institutional settings, it provides one thematic point of convergence

from which 'strong' ideas about the role of geographical knowledges might derive.

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 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 (for example Shakespeare and the so-called 'metaphysical poets' deploy cartographic imagery to great effect) as well as in literature (even before 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 geography with much of cultural and literary theory (as well as with anthropology and psychology). How urban life is experienced and practiced, for example, has much to do with how we form and reform mental maps of the city.

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 behaviors 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 globalization itself). Cartography, in some or all of these manifestations, provides one

central pillar of all forms of geographical knowledge and deserves thorough consideration as such.

The measure of space-time

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, coincidentally providing the first well-grounded estimate of the circumference of the earth).

Ways of representing, understanding and shaping space appear as an element common to all forms of geographical knowledge. Here, too, we encounter a commonality, a unity, within which there exists a whole world of difference. How do the different geographical knowledges that converge upon us conceptualize, understand and represent space?

Many geographers now claim that 'space' is the central, privileged and even defining concept of their discipline. I find this claim rather far-fetched and potentially misleading. Most of the physical sciences (physics and cosmology in particular) 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. So while the concept of space may be central to the discipline of Geography, it is in part received, like cartography, as vectors of multiple discourses about space, many of which emanate from elsewhere even as they converge within the discipline. To put it this way is not to imply that there is nothing new to be discovered or thought about space (or space-time) within Geography or that there is no indigenous tradition to which we can appeal. Indeed, the recent convergence of multiple discourses about space and space-time within Geography makes this a key point from which 'strong' ideas have emerged. On this point, the discipline plainly does far more than merely refract and reflect what it has derivatively taken from elsewhere.

To the degree that time, space and matter (or process) are fundamental ontological categories in our understanding of the world, Geography internalizes within itself the same problematic as 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. In my own view, 'space-time' or 'spatio-temporality' is the relevant category. This quite properly implies that 'all geography is

historical geography' no matter where it is to be found. 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 and understanding when their most exciting manifestation invariably comes from observing them (or even setting them) in motion.

Spatial structures can, of course, be broken down in terms of nodes, networks, surfaces and flows and the powers of geometric representations can be appealed to as effective means of modelling those structures. The long-standing collaboration between Chorley and Haggett across the boundaries of the social and physical sciences is illustrative of the power of analogical thinking with respect to spatial forms. And there continue to be a host of common problems (both technical and representational) that are of interest. For example, the question of integrating an understanding of processes operating at quite different scales (both temporal and spatial) is a frequent dilemma in research in many areas. The issue of how to understand scale is as important in the modelling of climate change and ecological analysis as it is in understanding the political economy of uneven geographical development. The commonality in this problem is striking and it is surprising to find so little collaborative work on how to handle it.

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. The diffusion of cultural forms, diseases, biota, ideas, consumption habits, fashions; the networks of communications, energy transfers, water flows, social relations, academic contacts; the nodes of centralized power, of city systems, innovation and decision-making; the surfaces of temperature, evapotranspiration potential, of population and income potential; all of these elements of spatial structure become integral to our understanding of how phenomena are distributed and how processes work through and across space over time.

But the tendency in this is to construe processes (no matter whether physical, ecological, social or political-economic) as occurring within a fixed spatial frame (absolute space). It is just as important to see the spatial frame itself as malleable and variable (relative and relational), as an actively produced field of spatial ordering that changes sometimes quickly and sometime glacially over time. Space must be 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, like cartography, is as much a mental as a material construct.

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 connectivities 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 and their consequences when materialized as human action in space and time.

Attempts to deal with these dynamic aspects of spatiality – generally under the rubric of the 'social construction' or 'production' of space – 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, Ming Dynasty China or mediaeval Europe. Any search for an alternative to neoliberal globalization must search for a different kind of spatio-temporality.

Here, too, we encounter an arena that demands general reflection both within and without the discipline of Geography. It is an arena of distinctive geographical work within which 'strong' ideas are being generated even if somewhat weakly diffused throughout many other disciplines and across a variety of institutional sites of knowledge production.

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. Terms like 'locality', 'territory' and above all 'place' have often been substituted for 'region' in geographical discourses both within and without the discipline. The extensive literatures on 'the local and the global', on 'deterritorialization and reterritorialization', 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 where a place begins and ends). Sometimes the region is defined in terms of homogeneous qualities (for example of land use, soils, geological forms) and sometimes in terms of coherent relations between diverse elements (for example 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 recognize that regions are 'made' or 'constructed' as much in imagination as in material form and that though entity-like, regions crystallize out as a distinctive form from some mix of material, social and mental processes. The approaches to place/regional/territory are wondrously diverse no matter where they are found.

The scale problem also enters in, with a hierarchy of labels often deployed that begin with neighborhood, locality and place and proceed to the broader scale of region, territory, nation state, and globe. Region then becomes territorialization at a certain geographical scale. Scaling is not a problem unique to the social side of matters. The bounding of 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 of, and the operations we are enabled to conduct upon, geographical information multiply enormously. Comparative studies of geographical differentiation and uneven geographical development become much more feasible.

Furthermore, as human populations frequently organize 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 space-time. 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 globalization), 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.

Geopolitical struggles between territories and regions have therefore been of considerable importance in geographical understandings. The division of the world into distinctive spheres of influence by the main capitalist powers at the end of the nineteenth century, for example, raised serious geopolitical issues. The struggle for control over access to raw materials, labor supplies and markets was a struggle for command over territory. Geographers like Friedrich Ratzel and Sir Halford Mackinder confronted the question of the political ordering of space and its consequences head on, but did so from the standpoint of survival, control and domination. They sought to define useful geographical strategies in the context of political, economic and military struggles between the major capitalist powers, or against peoples resisting the incursions of empire or neocolonial domination. This line of work reached its nadir with Karl Haushofer, the German geopolitician, who actively supported and helped shape Nazi expansionist struggles. But geopolitical thinking continues to be fundamental within the contemporary era particularly in the pentagons of military power and amongst those concerned with foreign policy. By force of historical circumstance, all national liberation movements must also define themselves geopolitically if they are to succeed, turning the geography of liberation into geopolitical struggles.

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 and the cartographic imagination, 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.

Environmental qualities and the relation to nature

All societies develop means to evaluate, appreciate, represent and live with-in their surrounding environments (both naturally occurring and humanly constructed, with the distinctions between those two aspects decidedly porous if not increasingly meaningless). Local knowledges concerning the

uses of various processes and things, the appreciation of the qualities of local fauna and flora (indigenous resource knowledges), of changing meteorological and climatic conditions, of soil types, of natural hazards, 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 been fundamental to human survival since time immemorial. The nature of 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 life to life and nature in general.

The question of how peoples do and should understand the relationship to environment and nature forms the fourth pillar to all forms of geographical knowledge. But, as with the other structural supports, the issue is not unique to Geography but has a wide-ranging presence across all manner of other institutional sites. Thinking about it within Geography has been strongly influenced by these external institutional needs.

In the bourgeois era, for example, the creation of the world market meant 'the exploration of the earth in all directions' in order to discover 'new useful qualities of things' and the promotion of 'universal exchange of the products of all alien climates and lands' (Marx 1973: 409). The world was consequently understood as a spatially diversified bundle of 'natural' resources waiting to be discovered, exploited and transformed into systems of production of various sorts. Commercial geography reflected this trend. Working in the tradition of natural philosophy but with commercial endeavors omnipresent as a backdrop to their work, geographers such as Alexander von Humboldt set out to construct a systematic description of the earth's surface as a repository of use values, as the dynamic field within which the natural processes that could be harnessed for human action had their being. 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 geographical endeavors ever since. This kind of geography was always profoundly materialist but often crassly and a-historically so.

Close observation of geographical variations in ways of life, forms of economy and social reproduction has also been integral to the geographer's practice ever since merchant capitalism came to regard such knowledge as essential to its practices. This tradition degenerated (particularly in the commercial geography of the late nineteenth century) into the mere compilation of 'human resources' open to profitable exploitation through unequal or forced exchange, the imposition of wage labor systems, the

redistribution of labor supplies through forced migration (for example indentured labor), and the sophisticated manipulation of indigenous economies and political power structures to extract surpluses. Geographical knowledges were deeply affected by imperial and colonial practices coupled with the exploration of commercial opportunities and markets. The objectification and exploitation of nature under capitalism went hand in hand with the objectification and exploitation of peoples. Many forms of geographical knowledge were complicitous with that politics.

The dialectics of socio-environmental change can, however, take many twists and turns and be understood from a variety of perspectives. The long history of environmental determinism, a doctrine that periodically returns in a variety of guises (as, for example, in the recent work of economists like Jeffrey Sachs and a wide range of other popular authors such as David Landes and Jared Diamond), provides one angle of thought which runs counter to the triumphalist humanism that underlies so-called 'possibilist' doctrines of economic development and change. The resurrection of environmentalist discourses, even within the confines of a major institution like the World Bank (where the issue of 'Is geography destiny?' has been seriously debated in recent years) poses interesting challenges since this is a style of thinking that has long ago been suppressed or abandoned within Geography as a discipline. It would not take much to resurrect the argument and invoke Geography's historical experience with it as evidence in the debate.

The more favored posture within Geography concerns anthropogenic influences in 'changing the face of the earth' (to use a favored title), recognizing the extensive role played by human settlement and action upon everything from the morphology of landscape, habitat transformation to climate change. 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).

We should be prepared to think about this issue in a much more dialectical mode, treating the subject-object distinction as arbitrary, and understanding that in changing the world we change ourselves and that we cannot change ourselves and our society without changing our environmental condition, sometimes in dramatic and radical ways. Social and political projects are always ecological and environmental projects. The fluidity of that idea is constrained, however, by the ways in which relatively permanent features crystallize out to act as barriers to further change. Capitalism, for example, creates a relatively fixed physical and social environment to match its needs at a certain moment in history only

to have to face the stressful task of overthrowing those environmental conditions (for example patterns of resource extraction, transport networks and city forms) at a subsequent point in order to create space for further capital accumulation. Conversely, environmental transformations (whether arrived at through human action or occurring by virtue of the dynamic forces always at work within the environment in general) limit socioeconomic transformations (for example nuclear power stations, once constructed, require a certain kind of science and organization in order to be managed over the time-horizon of their existence just as environmental hazards require massive organizational forms if their destructive consequences are to be avoided).

The environmental issue (like that of space and region) gets much more interesting when it is recognized as a dynamic process and when it is treated as a dialectical rather than purely analytic problem. Geographers have already contributed much on an issue that pervades thinking and practices in a wide array of other institutional settings.

Geography among the disciplines

The four structural elements to be found within all forms of geographical knowledge collectively form structural supports for a unified methodological field of activity to be called 'Geography'. A number of points can be made about the positionality of this field among the disciplines.

Work within this field is not confined to the discipline of Geography. A scholar in literary theory studying, say, the works of Wordsworth, might examine his poetry against a cartographic background of the city-country divide, might pay minute attention to the conceptualizations of space and time that symbolize a distinctive way of life, thought and personal subjectivity, might pay close attention to environmental qualities and the portrayal of the relation to nature, and, finally, might examine the way in which the poetry helped to produce the idea of 'the Lakes' as a distinctive region eliding into the creation of a tourist industry (based on Wordsworth's 'Tour Guide' writings) which in turn helped produce a distinctive regionality on the ground.

It is possible to imagine palaeo-ecologists, geomorphologists, sedimentologists, economic geographers, cultural historians and rural sociologists all taking somewhat similar steps in their research design. 'Thinking like a geographer' then entails an understanding in each one of these operations of how the four structural pillars of geographical knowledges can be worked and woven together in specific instances and settings to produce profounder insights into socio-ecological conditions and processes of change. There are some deep commonalities and unities in how seemingly-disparate

geographical knowledges are structured and it is surely worthwhile examining more carefully how such structures work.

But what such an examination requires is an approach to 'thinking like a geographer' that is deeply at odds with some of the traditional concerns voiced within the discipline. The problem for Geography as a discipline has been its search for an 'essence' and for an exclusively defined 'nature' which sets it clearly apart from all other disciplines within the social and natural sciences. Taking essentialist definitions of other subject-matters like biology and economics as given, the best that Geography can do is to claim some 'hybrid' status, to hold itself up as some model of higher-order synthesis (a hope that seems futile) or to set itself apart by indulging in 'exceptionalist' claims. The latter can be based on the peculiarities of thinking that derive from deep contemplation of regions and space relations, paying particular attention to the seeming recalcitrance of geographical information in the face of general theory (*ergo* the idea that general laws and universal statements are impossible in geography).

But there is an entirely different mode of thought that avoids essentialist definitions and meanings and which seems far more appropriate to our existing circumstances. Analogical reasoning seeks connections and interrelations, pushes forward metaphors and underlying unities within seemingly disparate phenomena, seeks analogies to illuminate phenomena in one area by examination of another. Above all, it seeks translations between different modes of thought (often emanating from quite different institutions). It is profoundly open and avoids all the turf-wars and exclusions that typify a world dominated by essentialist and purist categories. The moment in the history of geography that was peculiarly fertile in this regard was that led by the collaboration of Chorley and Haggett to produce collective works like 'Models in Geography'. At the heart of that enterprise lay analogical reason opposed to the essentialist definitions earlier sought in, say, Hartshorne's *The Nature of Geography*. What is so impressive about the current situation is the widespread occurrence of analogical reason. Spatial themes, for example, permeate literary and social theory. Of course, there are all sorts of dangers which attach to the wilder use of analogies, metaphors and translations. The organic analogy for the nation state in the work of Ratzel connected to Nazi expansionism understood as a quasi-Darwinian struggle for 'living space' for the nation. Some of the spatial and cartographic metaphors deployed in literary theory today are wildly inappropriate. Part of our scholarly job is to place such transfers of thought and feeling on reasonably solid ground.

But now seems the moment when geographers are superbly placed to be a central guiding-force within the networks of knowledge being created by widespread appeal to analogical reason throughout all spheres of

academic activity. But for geographers to take advantage of this positionality, it is necessary to abandon essentialist attitudes (the negative effects of which are all too plain to see in other spheres of knowledge like multiculturalism, nationalisms, or gender studies). There is, I insist, no 'nature' of geography to be found. The search for such an essence is profoundly misplaced if not counterproductive (particularly when individuals or groups believe they have found it). But 'thinking like a geographer' is everywhere. Learning to think 'soundly' and 'properly' as a geographer is a profoundly important attribute in today's world. This is where the unified methodological field of geography is to be found at work. As the example of Kant's cosmopolitanism and its murky tradition all too easily shows, not knowing 'how to think properly like a geographer', how to weave together the four structural pillars of geographical knowledges into a system of geographic wisdom, has long-lasting negative effects upon the collective prospects for emancipatory socio-ecological change.

Political projects

Even the most objectivist and neutral-sounding scientist will acknowledge that the broad context of scientific activity and learning has a great deal to do with human emancipation from want and need, that the improvement of human understanding is a necessary condition for the betterment of society (whether it be in material or non-material ways). The claim of objectivity and neutrality is always a circumscribed claim (pertaining to certain limited and carefully defined aspects of the overall learning enterprise).

The supposed neutrality of geographical knowledges has at best proven to be a beguiling fiction and at worst a downright fraud. Geographical knowledges have always internalized strong ideological content. In their scientific (and predominantly positivist) forms, natural and social phenomena are represented objectively as things, subject to manipulation, management and exploitation by dominant forces of capital and the state. In their more artistic, humanist and aesthetic incarnations, geographical knowledges project and articulate individual and collective hopes and fears while purporting to depict material conditions and social relations with the historical veracity they deserve. Although it aspires to universal understanding of the diversity of life on earth, Geography has often cultivated parochialist and ethnocentric perspectives on that diversity. It has often been, and still is, captive to special interests and, hence, a formidable, though often covert, weapon in political and social struggle. It has been an active vehicle for the transmission of doctrines of racial, cultural, sexual, or national superiority. Cold war rhetoric, fears of 'orientalism'

or of some demonic 'other' that threatens the existing order have been pervasive and persuasive in relation to political action. Geographical information can be presented in such a way as to prey upon fears and feed hostility (the abuse of cartography is of particular note in this regard). The 'facts' of geography presented as 'facts of nature' have been used to justify imperialism, neocolonialism, expansionism and geopolitical strategies for dominance.

Many forms of geographical knowledge have been tainted by virtue of their connection to the instrumental ends for which they were designed and the institutional frameworks 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, as much within Geography as without, is to take these varied forms of knowledge, appreciate the circumstances of their origin, evaluate them for what they are, and, if possible, transform them or translate them (with the aid of analogical reason) into different codes where they might perform quite different functions.

Geographical knowledges can be mobilized to humanistic ends. Concerns for the unwise use of natural and human resources, environmental degradations, and inefficient or unjust spatial distributions (of population, industry, transport facilities, ecological complexes, and so on) have led many to consider the question of the 'rational' configurations of geographical distributions and forms. This aspect of geographical practice, which emerged with the early geological, soil and land-use surveys, has increased markedly in the past fifty years as the state has been forced to intervene more actively in human affairs. Even the neoliberal state has continued such practices, though often with different ends in view. Positive knowledge of actual distributions (the collection, coding and presentation of information) and normative theories of location and optimization have proved useful in environmental management and urban and regional planning. These techniques entailed acceptance of a distinctively capitalist definition of rationality, connected to the accumulation of capital and social control. But such a mode of thought also opened up the possibility for planning the efficient utilization of environments and space according to alternative and multiple definitions of rationality.

Geographical knowledges have the largely unrealised *potentiality* to express hopes and aspirations as well as fears, to seek universal understandings based on mutual respect and concern, and to articulate firmer bases for human cooperation in a world marked by strong geographical differences. The construction of geographical knowledges in the spirit of liberty and respect for others, as, for example, in the remarkable work of

Reclus, opens up the possibility for the creation of alternative forms of geographical practice, tied to principles of mutual respect and advantage rather than to the politics of exploitation. Geographical knowledges can become vehicles to express utopian visions and practical plans for the creation of alternative geographies. They can infuse cosmopolitan projects, founded on ideas of justice, tolerance and reason, with geographical understandings that do not automatically negate such worthy universal claims. They can be a vehicle to articulate the legitimate and frequently conflictual aspirations of diverse populations and so become embedded in alternative politics, whether it be through the NGOs or political parties and social movements. They can provide effective means to mobilize knowledge of the world for those emancipatory ends to which all learning and all science has traditionally aspired.

Geographical knowledges occupy a central position in all forms of political action and struggle. They are all the more powerful for being considered so obvious and so banal as to be unworthy of explicit consideration, let alone careful scrutiny. The counter-error to the geographical ignorance of which Nussbaum for one complains, is to insist that we should know everything about everywhere, that we each and every one of us become a walking gazetteer. The impossibility of that leads quickly to the conclusion that there is no solution to the problem other than that which already exists. But a critical geography seeks an alternative path. It seeks out the principles and mechanisms of geographical knowledge production and strives to understand how geographical knowledges are constituted and put to use in political action. It uses this understanding to question how and when different forms of geographical knowledge get deployed in what kinds of political action. It recognizes, in short, the dynamic connections between political powers and geographical knowledges of different sorts. By understanding how the devil so often lies in the geographical details, it offers a means better to counter dominant powers (much as, for example, Greenpeace challenges the World Bank by offering an entirely different geographical interpretation of what, say, the insertion of a large dam in a particular environment really means). But beyond that, a critical geography also recognizes that emancipatory politics depends crucially upon the ability to articulate geographical alternatives in both theory and practice. Geography as we now know it was the bastard child of Enlightenment thought. It either remained hidden or, as with Kant, became the dark side of what the Enlightenment was supposed to be about. It is time to bring it actively into the light of day, legitimize it and recapture its emancipatory possibilities. That is, surely, the strongest of the 'strong ideas' that a critical geography can articulate at this difficult moment in our history.