

# Cultural Geography

## A Critical Dictionary of Key Concepts

Edited by  
David Atkinson  
Peter Jackson  
David Sibley  
Neil Washbourne

I.B. TAURIS

## — Mapping/Cartography —

Denis Cosgrove

Conventionally, the geographer was represented with compasses in hand, in the act of consulting a map or globe. Mapping is popularly considered a geographical task, and the map regarded as the principal tool of geography. The spatial relationships revealed on maps generate geographical hypotheses, while the results of geographical research are characteristically illustrated in cartographic form. Such time-honoured formulations have been radically altered in recent decades as the concepts of map and mapping have been expanded, as traditional claims for cartographic representation have been subjected to critical interrogation, and as the use and significance of mapping within geography and beyond have been transformed. These changes are in large measure a function of the 'cultural turn' within the discipline, and thus bear heavily on theory and practice in cultural geography.

Geographers have long treated mapping and cartography as scientific endeavours, dividing maps into geographic and thematic types. The former, the history of which in the West goes back to the ancient world, seeks to give a visual impression of features over a part of the earth's surface, reduced to a measured and manageable scale. Using a combination of 'natural' and conventional signs, including colour and shading, contours, graphic symbols and lettering, such mapping produces a strongly 'pictorial' image. Thematic mapping, which developed alongside empirical and – especially – statistical science over the past three centuries, also uses graphic means but with the intention of revealing the spatial pattern, distribution or relations of classes of phenomena, not necessarily visible in reality, such as population, agricultural production, migration, language or other cultural traits. In both cases, scale is a critical determinant of the meaning and use of the map. In map work, geographers have paid specific attention to scale, as well as to other technical matters such as projection, orientation and date of production. As a scientific instrument, therefore, a map is to be judged by its accuracy and objectivity when measured against the real world that it claims to represent. Scientific cartography remains an adjunct technique to geographical research and teaching. Thus, university and college geography departments generally employ specifically

trained cartographers. The techniques and methods used by these specialists have been revolutionised by satellite and remote-sensed technologies and by the capacities of the computer to manipulate and represent geo-referenced data with unprecedented speed, accuracy and graphic sophistication.

Thematic maps have played a central role in cultural geography's examination and representation of the distributions of cultural artefacts and patterns of cultural activity. From its mid-nineteenth-century European origins, especially in Germany, where mapping the distribution of such cultural traits as language and settlement form was fundamental to the project of national unification, cultural geography used maps to illustrate ecological connections between a physical environment and the human community that occupied it. With the decline of environmental determinism, landscape geographers, interested in defining and delimiting culture areas, continued to use the map as a principal tool for revealing the visible expressions of human agency in transforming physical regions and creating distinctive patterns of human occupation. A survey text such as William Norton's *Cultural Geography* (2000) contains maps on virtually every page, indicating spatial expressions for every type of cultural form and process. They include the distribution of world religions and of vernacular house types within the United States, the changing pattern of Mormon religious adherence, the spatial diffusion of neolithic plant domesticates and the patterns of racial segregation in apartheid Cape Town. Because culture, like every physical and social activity, is both spatially structured and geographically expressed, the map remains a powerful mode of visualising and representing the spatial aspects of how cultures form, interact and change. Mapping thus remains a vital tool of analysis and a significant mode of representation in the study of interconnections between culture and space.

But mapping and cartography play a much richer and more complex role within contemporary cultural geography. One of the foundational texts of the 'new' cultural geography of the 1980s and 1990s was titled *Maps of Meaning* (Jackson 1989), yet it contains very few maps and no discussion of mapping as a geographical technique. The author is using the terms 'map' and 'mapping' metaphorically, as his connection of maps to 'meaning' indicates. He calls on the representational significance of the map to draw attention to the significance of representation itself, to the idea that the world is only ever known through signs and symbols, and to the impossibility of guaranteeing, or indeed claiming, transparent or objective connections between these signs and symbols (the map) and what they claim to represent. From this perspective, the mapping process involves both a 'complex architecture of signs' – graphic elements with internal forms and logics capable of theoretical disconnection from any geographical reference – and a 'visual architecture' through which the worlds they construct are selected, translated, organised and shaped (Jacob 1996, 195). The mapping metaphor is therefore extended to include all graphic representations of knowledge. Thus, it is common today to refer to 'mapping' the human genome or a management system.

Peter Jackson's metaphorical use of mapping coincided closely with a radical reassessment within cartography itself of map makers' conventional claims to obtain

ever greater accuracy and objectivity in their representations. In a series of essays, the historian of cartography Brian Harley (2001) drew upon the critical theories of writers such as Michel Foucault to argue that there was a structural connection between cartography and power. Cartographers had long been aware of the opportunities provided by the visual authority of mapped images to shape what is taken as truth. American map makers classified and castigated a whole category of 'propaganda maps', such as the geopolitical images developed by Italian and German map makers in the mid-twentieth century to support nationalistic ambitions and strategic goals. These maps used selected graphic techniques such as exaggerated scale, selected centring, framing and cropping of regions, sharp colour contrast and the aggressive symbolisation of military campaign plans to dramatise ideological claims. 'Scientific' cartographers sought to establish strict boundaries between such intentionally mendacious images and their own cartography. Their belief in the objectivity of their work led to similar criticism of the pictorial cartographic images developed by Richard Edes Harrison to illustrate for a popular readership the progress of the Pacific and European conflicts in World War II, because their basis was the photograph rather than the mathematical projection (Schulten 2001). But Harley and others argued that all maps are cultural artefacts and, as tools of those with wealth and authority, are inescapably bound as ideological instruments into the nexus of power-knowledge.

With his fellow historian of cartography David Woodward, Harley initiated a multi-volume project, *The History of Cartography*. Still in progress, this work has radically extended the scope of mapping history, first by extending the definition of the map to encompass 'graphic representations that facilitate a spatial understanding of things, concepts, conditions, processes, or events in the human world', and second by initiating serious study of the mapping histories of diverse cultures, both literate and non-literate, in time and space. *The History* thus treats mapping as a cultural activity that is present in some form in all societies as the expression of their concern to record, represent and communicate spatial knowledge. The Western mapping tradition, with its focus on rational, geometrically based spatial scaling, classification and allocation is thus revealed as merely one, culturally specific, mode of geographical representation rather than a timeless and universal technique of graphic communication.

A consequence of this recognition is to complicate Harley's initial claims concerning maps and power. The intimate connections between Western mapping, knowledge and power derive from their unique theoretical relations and historically specific circumstances. Theoretically, the rationalist and mathematical foundations of Western mapping entail a distancing between the observer and the space observed. That distancing is both intellectual in its objectivity and actual in presenting in the two-dimensional, scaled space of the geographic or topographic map, an image of actual space as seen from a measurable linear distance above it. Historically, from the mid-fifteenth century, the Western mapping tradition resurrected techniques of cartographic representation originally developed in Imperial Rome, and recorded by Claudius Ptolemy. It did so in the context both of developing new modes of

property and land exploitation at home and of conquering and exploiting vast territories overseas. In both contexts, the map acted as a crucial agent of social imposition and spatial regulation, so that the cultural landscapes of colonised regions such as the American Midwest or Spanish South America actually reflect in their grids of farm boundaries, rural roads and administrative partition the cartographic structures that authorised their current forms of occupation. In this example, or in the colonial mapping of British India co-ordinated by the great meridian from Delhi to Bangalore, cartographic knowledge certainly has been intimately bound to the exploitative exercise of colonial power. We should be cautious, however, in attributing too simple a connection between the mastering European gaze, its inscription on the map, and the exercise of dominion over subject spaces and peoples. Graham Burnett's (2001) detailed reconstruction of Britain's imperial mapping of interior Guiana in the nineteenth century reveals a complex and fractured story of myths inherited from Renaissance exploration, picturesque attraction to spectacular topography, crucial contributions of native knowledge and appeals to the rhetoric as much as the practice of scientific survey, all of which together yielded a fluid, arbitrary and unstable geographic representation rather than an authoritative and authorising map. And, while connections between cartography and territorial authority are apparent beyond the West, for example in Chinese imperial mapping, other mapping traditions are not so easily subordinated to such a simple formula. The three-dimensional constructions of stick and yarn that Pacific Islanders use to represent knowledge of winds, currents and sea surface patterns, the Hindu cosmological mandalas illustrating Mount Meru rising from the Ocean of Milk, the narrated songlines of Australian native peoples, and Korean or Japanese charcoal sketches of geomantic lines all represent complex and culturally specific forms of spatial cognition and connection between people and place. Maps are sophisticated artefacts, to be read as much for what they reveal of the cultures that produce them as of the geographical information they represent.

If mapping conventions are culturally specific in the anthropological sense, they also vary socially within individual cultures. The idea of mental or cognitive mapping, that we carry spatial images in our heads that serve to guide spatial behaviour such as way finding or place recognition, was pioneered by the urbanist Kevin Lynch (1960), drawing upon psychological theories of images. Behavioural geographers have generated maps of how individuals and groups, defined by age, education, gender and so on, perceive familiar or new spaces. While such work may be criticised for failing to take sufficient account of the learned elements of mapping as a mode of graphic communication, it has produced a broader interest in the cognitive aspects of map making and meaning. Maps may be treated as cultural negotiations between cognitive subjects and material spaces. Further, 'maps' or spatial representations produced by ordinary subjects, and therefore not subject to the conventions of scientific cartography, allow insights not only into human perceptions and affective relations with space and place but also into the imaginative and aesthetic aspects of human spatiality. Even scientific mapping, despite attempts to regulate style and reduce the 'artistic' content of its images (such as the 'plain style' adopted by

eighteenth-century map makers in order to distinguish their science from the symbolism and allegory of baroque cartography), cannot fully eliminate these imaginative and aesthetic aspects. In part because of this recognition, in the past decade mapping has witnessed a resurgence of critical interest within cultural studies and imaginative exploration among artists.

Feminist and postcolonial criticism of the 'master-narratives' of Western humanism has emphasised the 'situatedness' of knowledge, and thus focused attention on aspects of space and location. Cognitive and affective dimensions of space and place have been the principal subjects of attention rather than objective, material geographies. This has led not only to historical, literary and anthropological studies of maps as cultural texts, and thus of their selections, omissions, additions and inescapable contextual influences, but also to critical reflection on mapping *spatialities* rather than simply spaces. Western cartography's emphasis on the 'view from nowhere', its selection of material objects or empirical, statistical data to be mapped by regular spatial co-ordinates and its insistence on mathematical scaling renders it a 'masculinist' practice in the eyes of some feminist critics. Challenging this, the artist Kathy Prendergast has developed an 'Atlas of Emotions', revealing the presence of such terms as 'Lost' in the toponymy of colonised North America, thus disrupting the confident assertion of authority represented by the conventional topographic map (Nash 1998). In a similar vein, the artist Pat Naldi has reproduced a school geography exercise – colouring the British Empire red on a world map – as a video installation of the revolving globe to under-line and challenge the colonialist assumptions of her Gibraltarian education (Cosgrove and Martins 2000).

The contemporary world is witnessing a general 're-territorialisation' of social phenomena as the horizontal, bounded and regulated spaces of modernity (materialised, for example, in Fordist production spaces or in the nation state) give way to spaces characterised by interactive nodes, fluid connections, networked linkages, cultural hybridity and altered marginality (apparent, for example, in post-industrial production spaces, virtual reality and the internet). Transgression of fixed, linear boundaries and hermetic categories, and the non-hierarchical spatial 'flows' that characterise so many aspects of the contemporary world, render obsolete conventional geographic and topographic mapping practices, dominated by the logic of fixed spatial co-ordinates. Simultaneously they stimulate new forms of cartographic representation, to express not only the liberating qualities of new spatial structures but also the altered divisions and hierarchies they generate. It is now possible to effect the continuous transformation of a geographic surface through a quasi-infinite number of mathematical projections on the computer screen by means of a single program.

Culturally, at every scale, connections between phenomena formerly considered distinct and relatively fixed, rooted in space or holding to stable patterns of distribution and identity, become contingent and unstable. These characteristics are emphasised by the interactive nature of much of the cartographic information (both visual images and geo-referenced data) on the web (Kraak and Brown 2001). The implications are potentially both liberating and constraining. Geographical

Information Systems, which manipulate and correlate vast amounts of spatially referenced data, can guide terrain-sensitive 'smart' weapons as effectively as they can help pinpoint 'hotspots' of ecological vulnerability for the purposes of species protection. Mapping's conventional claim to represent spatial stability, at times to act as a tool in achieving it, has radically altered. In a world of labile spaces and structures, it is unsurprising that the idea of mapping should require rethinking.

This rethinking has been pioneered as much in the creative arts as in academic geography or professional cartography. Since the situationist subversion of urban mapping in the 1960s and the emergence of conceptual and land art movements in the same years, maps and mapping have been the subject of diverse artistic expressions, given the imprimatur of an art movement by a 1994 exhibition at the New York Museum of Modern Art (Storr 1994). Artists have distorted conventional scientific maps in various ways to explore the limits of their meaning and form, and have extended the concept of mapping into three-dimensional installations, land art works and performance pieces. Two New York examples will indicate the range of this work. The artists Lilla LoCurto and Bill Outcault (2000) used sophisticated body scanners to create full-surface, digitised images of their bodies, applying computer-generated programs to the scans in order to create body maps that dramatised pictorially the distortions of cartographic projection while forcing the observer to view the human body in wholly new ways. Using more conventional techniques of tourist guide mapping, the artist Laura Kurgan produced a powerful fold-out map of 'Ground Zero' for free distribution to visitors seeking to make sense of the huge site of devastation and recovery in lower Manhattan following the attack on the World Trade Center in September 2001. The project placed in sharp focus the sensitive moral and political terrain that all mapping must negotiate but that is too easily obscured by the apparent naturalness of the map in cartographically hyper-literate societies such as our own.

Commercial art has also made imaginative and effective use of maps and mapping. The value of using a map to indicate where a product may be purchased or to stress the accessibility of a location, has long been recognised. But advertising today makes much more sophisticated use of map images to suggest connections between place and product. The Italian clothing company Benetton pioneered the use of cartographic images during the 1980s and 1990s to connect its products to political and moral questions raised by the very globalisation its activities promoted. Cultural geographers have been concerned to interrogate and expose the implications of such uses in mobilising geographical imaginations.

In some respects all spatial activities might be regarded as 'mappings', and all maps as metaphorical to some degree. Mapping is always a performative act, a spatial activity incorporated into the creation and communication of individual and group identity, leaving a trace or mark in the world.

## KEY REFERENCES

- Cosgrove, D. 1999. *Mappings*. London, Reaktion.
- Cosgrove, D. 2001. *Apollo's Eye: A Cartographic Genealogy of the Earth in the Western Imagination*. Baltimore, Johns Hopkins University Press.
- Kraak, M.J. and Brown, A. 2001. *Web Cartography: Developments and Prospects*. London and New York, Taylor and Francis.
- Wood, D. 1993. *The Power of Maps*. London, Guildford.

## OTHER REFERENCES

- Burnett, G.D. 2001. *Masters of All They Surveyed: Exploration, Geography, and a British El Dorado*. Chicago, University of Chicago Press.
- Cosgrove, D. and Martins, L. 2000. Millennial Geographics, *Annals: Association of American Geographers*, 90: 97–113.
- Harley, J.B. 2001. *The New Nature of Maps: Essays in the History of Cartography*. Baltimore, Johns Hopkins University Press.
- Harley, J.B. and Woodward, D. 1987– *The History of Cartography*. Chicago, University of Chicago Press.
- Jackson, P. 1989. *Maps of Meaning*. London, Unwin Hyman.
- Jacob, C. 1996. Towards a cultural history of cartography, *Imago Mundi*, 48: 191–198.
- LoCurto, L. and Outcault, W. 2000. *Selfportrait*. Map: LoCurto/Outcault. Seattle and London, University of Washington Press.
- Lynch, K. 1960. *The Image of the City*. Cambridge, MA, MIT Press.
- Nash, C. 1998. Mapping emotion, *Environment and Planning D: Society and Space*, 16: 1–9.
- Norton, W. 2000. *Cultural Geography: Themes, Concepts, Analyses*. Oxford, Oxford University Press.
- Schulten, S. 2001. *The Geographical Imagination in America 1880–1950*. Chicago, University of Chicago Press.
- Storr, M. 1994. *Mapping*. New York, Museum of Modern Art.
- Thrower, N.J. 1999. *Maps and civilization*. Chicago, University of Chicago Press.