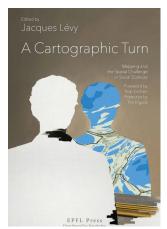
## A Cartographic Turn: Mapping and the Spatial Challenge in Social Sciences EPFL Routledge (2016) 336pp.

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We are used to thinking of critical cartography as a largely Anglo-American affair initiated by Brian Harley in the UK with his seminal essay on 'Deconstructing the Map', and by Denis Wood and Krygier in the USA. Of course, these pioneers were heavily influenced by French post-structuralism, and in particular by the work of Michel Foucault, Gilles Deleuze and Jacques Derrida. These ideas put in question the epistemological foundations of Cartesian cartography, at a time when digital technology was creating ever more accessible platforms from which to simulate its form of scientific objectivity as a principle of fixed correspondence between map and territory. But what was the impact of the deconstructive move, and the concomitant spatial turn in the human sciences, on the world of French cartography itself? This book attempts to provide the answer, and to introduce to an Anglophone readership a body of work that has been developing more directly under the influence, and to a large extent quite independently of, developments in Britain and America.

The book consists of fourteen chapters, written at various times, for various purposes, brought together and translated for the first time. The contents are organised into four sections: 'Map as resource'; 'Map as Language'; 'Where are we on the map?', and 'Who is the author of the Map?'. The allocation of texts to one or other of these headings at times seems somewhat arbitrary and, as the editor himself says, gives the impression that this is a collection of independent contributions united only by their subject matter. Certainly the overall quality and interest of contributions is uneven, but the book isn't just a ragbag of disparate musings on the nature of the map/territory relation nor is it unified by a single line of argument about how this relation should be understood in the light of contemporary philosophical debate and the multiplication of cartographic idioms. Rather, it consists of a series of programmatic statements elucidating a range of disciplinary perspectives on a shared problematic.

The authors, whether they be historians, geographers, philosophers, anthropologists, artists, environmentalists or professional cartographers, have a common starting point: the map, both digital and analogue, topographic and thematic, has a dual or contradictory mode of existence – it is both *indexical*, necessarily referring to some piece of the world, real or imagined, in terms of the spatial distribution of its properties, and *self-referential*, constituting its own system of signs which bear a purely arbitrary relation to what they represent. In the language of complexity theory, the map is at once a work of *allopoesis*. It has to draw on something other than itself and suggest something more than itself. At the same time it is a work of *autopoesis*. It reproduces the formatting conventions which make it both legible and operational.

This paradoxical aspect of mapping explains why artists have been so drawn to experiment with cartographic idioms, both to explore their aesthetic possibilities and to challenge the conventions of mimesis and verisimilitude which underwrite taken for granted understandings of the map/territory relation. Two chapters deal with this aspect of the cartographic turn. Patrick Maniglier argues convincingly that a mental map does not refer to a territory as an image to an object, but as a metaphor and even a model of the navigational

thought process itself. Drawing on the research of Franco Farinelli and Christine Buci-Glucksman [1], as well as on the work of digital artists, he focuses on what he calls cine-maps, digital maps which are navigated through a continual change of perspective (e.g. zooming in and out) and which in turn trace a trajectory of movement across territory rather than plotting a position within it. In the following chapter Marie-Ange Brayer explores the cartographic dimension of modern art, from the early work of Chirico, Picabia, Max Ernst and Magritte to Rauschenberg and Mona Hatoum. She makes the interesting suggestion, which could have done with more development, that the cartographic matrix established by the Renaissance, in which mapping and painting were regarded as equivalent practices of draughtsmanship and graphic representation (Leonardo was good at both) was fractured by the 18th century Enlightenment, with the establishment of Euclidean geometry and perspective as normative models of spatial perception. The map became a mobile centre of scientific calculation, and any pictorial content pushed to the margins as purely emblematic. We are still suffering from this division

Other contributors take up this theme, arguing that the art and science of map making are once more coming together under the impact of digital imaging and new visual technology. Several authors claim to have discovered the key to resolving the map/territory relation into some kind of new, non-Euclidean third space, where all social tensions and contradictions are magically dissolved. At times this invocation of an aesthetic utopia reminded me of the worst excesses of post modernism. For example, Andre Ourednik, in his chapter on the technology of augmented reality (AR), argues that AR represents a 'technical circumvention and subversion of all established knowledge power relationships.' The example he gives is work by two Dutch artists, Sander Veenhof and Mark Skivareli, who installed a permanent but entirely virtual exhibition in the Museum of Modern Art in New York, where, unbeknown to actual visitors to the gallery, an alternative group of artists and spectators met online to challenge the prevailing hierarchy of taste in the official art world without for a moment disturbing its actual functioning.

The aim of this approach to critical cartography, which finds expression in several other contributions to the book, is to give a new ontological status to the map's capacity to create its own virtual territory. Yet the notion that hundreds of people standing in a field, wearing headsets in which they are viewing an alternative landscape, each enclosed in their own AR bubble, are somehow experiencing a new kind of cartographic commons, in which map and territory merge into a single practical sensuous activity, strikes me as not only absurd but also as dangerous. It is to attribute a liberatory function to the penetrative power of the Spectacle in its most extreme and atomising form. What Guy Debord analyses as a seductive force of alienation in consumer capitalism becomes in this hall of mirrors a principle of dis-alienation, a world turned upside down only the better to keep it spinning even faster on its own axis.

One of the traps of critical cartography, which several contributors fall into, is to set up a straw man in the form of the traditional paper map or atlas in order to demolish its scientific pretentions by demonstrating the way it serves an ideological agenda, flattens the dense texture of networked society, reifies space/time and so on. They then proceed to big up counter-mapping based on locally situated knowledge, participatory action research or aesthetic experimentation as if these initiatives offered a viable alternative to GIS and GPS in capturing the processes of globalisation. Yet however good these methods are at grasping the detail of glocalities, they cannot trace the trajectories of traffic generated by global capital. That is literally beyond their scope.

Fortunately, most of the contributions which consider the impact of digital mapping technologies avoid such facile utopianism. There are some interesting suggestions, by Emmanuela Casti in her chapter on mapping otherness, and Patrick Poncet, exploring issues of map design and coding, about how these travelling stories require new strategies of cartographic scoping and scaling that digital mapping technology makes possible, if used imaginatively.

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The chapter by Denis Retaille on the mapping of nomadic space is exemplary in this respect. He shows how the spatiality of nomadic peoples requires a 'flat ontology with multi-scalar entry points (as in actor- network models), because it involves a time geography that is non-synchronous. His study of oases as occupying a mobile space-time is fascinating. His suggestions for how to map a circumambulatory territory as a rhizome is, for once, less a rhetorical flourish than a pertinent way of mapping discontinuous and non-linear movement. The shift from a topographic to a chorographic code, mapping mobile rather than bounded space, suggestively links these highly localised indigenous cartographies to the space of global information and commodity flows that is currently destroying them. But Retaille is too much of an ethnographer to be seduced by the postmodernist illusion that the deterritorialisation which is uprooting customary ways of life is of the same order or import as the globetrotting nomadism of the cosmopolitan business and intellectual elite, let alone the forced mass migrations of refugees.

It was left to another anthropologist and the one non-French (and in fact quintessentially home grown) contributor to spell out the full implications of this cartographic turn. Tim Ingold in his elegant tail gunner piece deftly turns the tables on his French hosts by inverting the classic Deleuzian distinction between map and trace on which so much the books argument rests. Drawing on the examples of native Australian dreamings and Richard Long's landscape art, he suggests that Deleuze has got it the wrong way round. It is worth quoting his argument in full:

Tracing, for Deleuze and Guattari, entails the transposition or axial projection of an already given array upon a surface, or perhaps a layered series of surfaces, at different orders of resolution. That is what we would call a mapping. Contrariwise what they call a mapping is what we would call a tracing - namely drawing a line, treading a track, or following a path; or more generally, inscribing a line, tracing a movement into a medium that is viscous enough to retain the passage in its wake, at least for a time.

Having turned Deleuzian cartography off its head and back on to its feet, Ingold proceeds to take a line of thought for a walk across the map/territory divide. He reconfigures their relation in terms of the distinction between territorialised strategies of hierarchical layering and what he calls *meshwork*, the traverse of surfaces which constitutes the phenomenological grounding, or grundrisse, of a cartography comprising woven out patterns of embodied navigation.

The sheer multiplication of different kinds of map, from the traditional topographic and chloropleth<sup>[2]</sup> formats, to the algorithmic cartogram with its surreal visualisations of big data, calls for a revision of cartography's own map of its community of practices. Although several contributors outline a descriptive typology in terms of what maps do and how they are used, what is lacking is a developed theory of cartographic genres, defined by particular types of map/territory relation and anchored to a comparative phenomenology. Instead we were given a lot of, often competing, axiomatic definitions of what a map essentially is, or could and should be.

The book contains a number of case studies – for instance on the pre-history of cartography in classical antiquity, the mapping of Swiss referenda and the French presidential election in 2012 which, whatever their intrinsic interest, do little to add to the reader's confidence that the whole is more than the sum of its parts. In fact, the book is rather like an atlas in which the individual maps convey useful information without in any way generating any cumulative understanding of their subject.

Finally, the book's appeal is somewhat diminished by poor editorial work. The introduction is perfunctory and misses the opportunity to contextualise the contributions in relation to the wider intellectual and cartographic culture to which they belong. The book lacks an index, has no biographies of the authors, which

given that they are virtually unknown to an Anglophone readership might have been useful. There are also numerous typos. Strangely, given that so much is made of the map's power of translation – or transduction as a bridge between the world we move through, and the world we fix as a platform for our plans and intentions, the translator(s) remain unacknowledged. On the plus side, the many maps used to illustrate the text are well reproduced, if not quite to coffee table standard.

Despite these caveats, the book offers much food for thought and should be a welcome, if not essential, addition to the social cartographer's bookshelf. It offers a way in to a body of work that parallels the development of critical cartography in the UK and USA but with some interesting differences in emphasis and approach.

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<sup>1.</sup> See Franco Farinelli (trans K Bienvenue) La Raison cartographique (Paris: DL, 2009) and Christine Buci-Glucksman L'Oeil cartographique de l'art (Paris: Galilee, 1996).

<sup>2.</sup> A choropleth map is a thematic map in which areas are shaded or patterned in proportion to the measurement of the statistical variable being displayed on the map, such as population density or per-capita income.