

MAPS ARE TERRITORIES / REVIEW ARTICLE

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MAPS ARE TERRITORIES: SCIENCE IS AN ATLAS: A PORTFOLIO OF EXHIBITS / David Turnbull; with a contribution by Helen Watson with the Yolngu community at Yirrkala. Geelong, Victoria: Deakin University, 1989. vi, 66 p.: ill., maps (some col.). ISBN 0 7300 0688 3: AUS\$25. Available from: Deakin University Press, Deakin University, Geelong, Victoria 3217, Australia.

Here's a book that raises a couple of questions, in fact, 78 of them. Given as well that this 66-page book also exhibits 76 often full-page illustrations (15 in color), this is a lot of questions. While the unusual density of interrogatives could account for the book's liberating quality, this is more likely to be a tribute to their refreshing nature. A few years ago the late Jeremy Anderson, as part of an elementary schools map skills curriculum, proposed a series of questions that he felt needed to be asked of any map (Anderson 1985; 1986). Related to a variety of map elements, they were to be recalled according to the acronym TODALSIGS. In this way Anderson encouraged us to ask, with respect to the Title, what the map was of, *where* its subject was located, and *when* it was being represented; with respect to Orientation, *where* north or the other directions were; with respect to Date, *when* the map was made. We were prompted to ask *who* the Author was; in the Legend, *what* the symbols stood for; and similar questions with respect to Scale, Grid and Sources.

These are useful, indeed essential, questions; but there is a world of difference between asking, for instance, who the author is ("Who made the map? Knowing who made the map helps people evaluate its reliability and tells them who to contact if they discover any errors on the map.") and how he *benefits*, as in *Maps Are Territories* David Turnbull does again and again. In this passage, for example, he is asking who benefits from the portrayal of the world on a Mercator projection:

If you compare the Mercator projection with the Peters projection, a map which endeavours to preserve relative size, what differences do you discover which might have cultural or political significance? You may wish to ask yourself what interests are served in a Mercator projection. Is it a coincidence the a map which preserves compass direction (a boon for ocean navigation) shows Britain and Europe (the major sea-going and colonizing powers of the past 400 years) as relatively large with respect to most of the colonized nations? What if we turn the Peters projection upside down and centre it on the Pacific? A profoundly altered view of the world is obtained.

In cartography, such a line of questioning traditionally has been reserved for the analysis of what used to be called 'propaganda maps' (the evident implication of which was that maps not so stigmatized were somehow not caught up in the motivation to help or hinder some cause or institution), but Turnbull uses it to interrogate (dare we say *deconstruct*?) no less an icon of 'objectivity' than a

topographic survey sheet. Here, for instance, is one of the 43 questions he poses of a map from the Ordnance Survey: "Are any functions of the society, state, interest group, military served by this, or any map?"

It would be easy to exaggerate the differences between the questions put by Anderson and those set by Turnbull, and to turn the former into a naive positivist tool of the state and the latter into a caricature of a left-wing catechist. In fact, among the probes made of the Ordnance sheet, Turnbull explicitly covers Anderson's queries about title, orientation, legend, scale and grid (for instance, "What does the grid enable you to do? If one of the functions of the map is to allow accurate measurements to be made, what sorts of things can be measured? What social accomplishments and practices are required to enable those measurements (bench marks, sea level, National Grid datum, standard yard etc.)?"); and he treats the balance of them implicitly (for instance, Anderson's concern for dates is absorbed in Turnbull's concern for indexicality). Some of the differences between the line of inquiry Anderson promoted and that being advanced by Turnbull are attributable to little more than differences in their audiences (Anderson was writing through elementary school teachers to their pupils, whereas Turnbull is addressing university students and teachers in art history and theory, the philosophy of science and environmental studies), but more, I think, can be attributed to a change in the weather. It is not so much that Turnbull has abandoned the sort of cartography advocated by Anderson as subsumed it: he is always pushing beyond it, wondering what it means, worrying about the way "it shapes and constrains the field of possible actions of persons within some specific social context" to quote from Turnbull quoting Rouse (Rouse 1987, 211).

What is finally at stake here is a change of tone, a shift in emphasis. To a limited extent this is no more than a matter of generational succession. Power in the cartographic establishment is passing from those who came of professional age during World War II and under Eisenhower to those who matured under Kennedy and the war in Viet Nam; and there is a sense in which this can be characterized as a transition from certainty to doubt, from answers to questions (Wood 1987a; Rundstrom 1989). But there is more to it, and certainly the increasingly pervasive influence of the French critical establishment – Barthes, Derrida but especially Foucault – cannot be denied, even if here it enters at second-hand, through the work of, among others, anthropologists and sociologists of science (Bruno Latour, John Law). Yet the influence of any of these thinkers on cartographers remains slight – among the cartographic works cited in *Maps Are Territories* only Brian Harley's recent 'Maps, Knowledge and Power' shows any at all (Harley 1988) – and more than anything what seems to have driven Turnbull's highly original synthesis is, in general, the marginality of Australia on the world scene and, in particular, the further marginality within Australia of its aboriginal peoples. That is, what seems most pertinently to differentiate Anderson and Turnbull is a dialectics of center and periphery where Anderson, whatever his proclivities – and they were actually inclined toward the periphery (Wood 1987b, 1988) – spoke from inside, from within the center, as Turnbull speaks from outside, from without.

Maps Are Territories, then, is an outsider's polemic. Once said, the trick of turning the Peter's projection 'upside down' – the very turn of phrase acknowledges the colonizer's point of view – is revealed for the reflex it is, that of the marginalized to turn the tables on the power center. And in fact the book is dominated by examples of maps produced at times or places marginal to the Euro-American core. We find here the putative maps from prehistoric Valcamonica and Çatal Hüyük, 'primitive' maps from the Chippewa, Ojibway and Iowa, stick charts from the Marshall Islands, wood and pencil maps of the Inuit, ancient maps from Nippur and Nuzi, and maps of the Quechua, Miztec and Aztec from the post-contact period. These maps are not, as is usually the case, segregated toward the front of the volume as baseline imagery against which to demonstrate the 'progress' of the core, but are distributed evenly throughout the book (which is arranged as a sequence of 'exhibits', each of which explores a different theme in the cartographic problematic: 'Maps and Theories', 'The Conventional Nature of Maps', 'Maps and Power', and so on). When cartographic products from the core do appear they are often marginal in its tradition, the Hereford *mappamundi*, the Ebstorf map, the fifteenth-century plan of Inclesmoor, a seventeenth-century strip map, playing card maps of the eighteenth century, a cartoon map of the nineteenth. Maps from the core central to its tradition account for only a quarter of those reproduced (Diego Ribera's 1529 map of the world, an Ordnance Survey sheet, a world map in the Peters projection, a contemporary rendering of Petermann's 1852 map of the cholera outbreak in England of 1831–33). What this amounts to is a redefinition of the canon (to adopt a word current in debates over core texts in literature curricula) and implicit in this is an interrogation of the grounds on which the canon is determined. As ever, the effect is as liberating for the colonizers (those in the center) as for the colonized (those at the edge).

At the heart of this revisionist project is a comparison of three Aboriginal-Australian maps (Exhibit 5) with a sheet from the Ordnance Survey (Exhibit 6). This proceeds via an *interpretation* of the Yolngu maps (or *dhulan*) – that is itself a product of conversations between Helen Watson and the mapmaker, Djamika Munungurr, and his wife and daughters (who are collectively the authors of Exhibit 5) – and an *interpellation* of the Ordnance Survey sheet. An interpellation is technically a formal bringing into question (as in a European legislature) of a ministerial policy or action, but this in fact is what Turnbull's 43 queries amounts to. This has the effect of 'deconstructing' the survey sheet – bringing to the surface its hidden assumptions (because taken for granted, because transparent) – at the same time that the interpretation of the *dhulan* brings to the surface its hidden assumptions (hidden in this case because hermetic, because unshared):

Aboriginal maps can only be properly read or understood by the initiated, since some of the information they contain is secret. This secrecy concerns the ways in which the map is linked to the whole body of knowledge that constitutes Aboriginal culture. For Aborigines, the acquisition of the knowledge is a slow ritualized process of becoming initiated in the power-knowledge network, essentially a process open only to those who

have passed through the earlier stages. By contrast, the Western knowledge system has the appearance of being open to all, in that nothing is secret. Hence all the objects on the map are located with respect to an absolute co-ordinate system supposedly outside the limits of our culture.

One could argue that in Western society knowledge gains its power through denying, or rendering transparent, the inherent indexicality of all statements or knowledge claims. In the Western tradition the way to imbue a claim with authority is to attempt to eradicate all signs of its local, contingent, social and individual production. Australian Aborigines on the other hand ensure that their knowledge claims carry authority by so emphasizing their indexicality that only the initiated can go beyond the surface appearance of local contingency.

In the light of these considerations we should perhaps recognize that all maps, and indeed all representations, can be related to experience and that instead of rating them in terms of accuracy or scientificity we should consider only their 'workability' – how successful are they in achieving the aims for which they were drawn – and what is their range of application.

Though this does segue into a comparison of maps from the Ptolemaic and T-O traditions, this is not the unbridled relativist posture it might at first appear. What it does emphasize, though, is the way we have imposed on the study of world cartography not only criteria of our own – that is, generated from within, from within our own culture – but among these selected for special emphasis the very ones we most labor to produce in our own work (any history written under this aegis will inevitably construe our cartography as the acme of perfection). Accuracy, for example, is not a measure that stands *outside our culture* by which other cultures may be evaluated, but is a concept from our *own* culture which may be irrelevant in another. In yet a third culture, accuracy may be an issue, but with respect to what? Certainly our topographic surveys do not, as the *dhulan* do, accurately represent the "footprints of the Ancestors". Of course if you don't believe in the Ancestors, then it's all a bunch of primitive nonsense anyway; but such cultural absolutism is not only repugnant (isn't this precisely what we condemned in Khomeini?) but impossible to justify?

But Turnbull's relativism is no more than a necessary consequence of his constructivism, that is, his belief that what we take to be real is inescapably a product of the act of knowing, an act no longer the disembodied pure thought it might once have been for Immanuel Kant, but a product itself of the cultural, social and economic structures within which it is embedded and which it in turn produces. Turnbull draws on a number of constructivist thinkers, from Thomas Kuhn and Jean Piaget – cited on page 1 – to E.H. Gombrich, cited on page 41 – to the following effect:

The correct portrait, like the useful map ... is not a faithful record of a visual experience, but the faithful reconstruction of a relational model ... Neither the subjectivity of vision nor the sway of conventions need lead us to deny that such a model can be constructed to any required degree of accuracy. What is decisive here is clearly the word 'required'. The form of a representation cannot be divorced from its purpose and the requirements

of the society in which the given visual language gains currency (Gombrich 1960, 90)

When understandings such as these are wed to those of a Kuhn and a Piaget we reach a position which is, in many scholarly domains, rapidly achieving the status of a dogma. Mayanists Linda Schele and Mary Ellen Miller, for instance, put it like this:

Each society also has its own natural way of seeing and producing images. The decisions about reality that comprise these ways of seeing are often unconsciously made, learned by children as they grow to understand their world and to create two-dimensional imagery that refers to their three-dimensional experience ... [W]e too carry culturally acquired ways of seeing ... (Schele and Miller 1986, 35)

Because *seeing* is so transparent to us, these conclusions are often hard to swallow, but it is time those of us concerned with the theory and history of cartography learn to accept them. When we have, we will find our thinking guided by precepts some of which have acquired sufficient clarity to be articulated. Among these are:

- 1 Acceptance of the fact that *perception is a socio-cultural phenomenon that subsumes its physiological and psychological foundations without being exhausted by them*. Adoption of such a precept would release the study of map perception from the thrall of the eye – and the eye's perceptual *abilities* – and return it to the whole body in its human ecological situation. That this would relegate to an historical footnote the psychophysical research of the past few decades goes without saying, but it would simultaneously relieve us of the burden of having to apply the notion of accuracy to cultures that 'see' things differently. This 'vision' of perception – for obviously it has to acknowledge that *perception* too can be seen in many different ways – draws not only on the work of those previously cited, but among others on philosopher E. Wade Savage's critique of psychophysics (Savage 1970), on psychologist R.L. Gregory's idea of perceptions as 'perceptual hypotheses' (Gregory 1970, 1974, 1977, 1981), and on art critic John Berger's social construction of perception (Berger 1972). Adopting this precept would bring cartographic thinking into the second half of the 20th century.
- 2 *All signs are conventional*. This follows directly from the contingent character of perception, but the principle was originally established on other grounds. It is fundamental to the semiotics of Charles Sanders Peirce, Ferdinand de Saussure, Roland Barthes, Umberto Eco and others (Peirce 1955; Saussure 1959; Barthes 1967; Eco 1976); to the structural linguistics of the Prague School (Trnka 1964); to the increasingly important work of Benjamin Lee Whorf (Whorf 1956); as well as to most of those drawn upon by Turnbull in his essay. Adoption of this precept would force us to retheorize the cartographic sign (abolishing or reformulating such distinctions as 'symbolic', 'iconic', 'pictorial', 'natural', 'arbitrary'), which would enable us to see what we have been blithely ... *looking through* (Wood and Fels 1986). This would force us to confront the culture in our own cartographic products (to acknowledge them as within culture rather than outside it).
- 3 *Cultures cannot be compared*. Because there are no standards that are not given *within*

culture, so-called cross-cultural comparisons inevitably apply the standards of one culture to the practice of another. But this is the way that cultures assess practices arising within them. The situation is precisely that faced by Albert Einstein when he realized that there existed outside any given inertial frame no absolute standard of space and time against which to compare it. The loss of absolutism that results is no more cause for despair in cartography than it was in physics. Worked through, the adoption of such a principle would allow us to understand the point of P.D.A. Harvey's contention that maps *as such* do not really exist in Europe, for example, prior the 15th century, although many things that lead in time to maps – charts, plans, diagrams – do (Harvey 1980; Wood 1980). But at the very least adoption of such a principle would free us from such absurdities as the evaluation of an older product of a smaller society according to standards of a much larger contemporary one (for example, our characterization of the Hereford *mappamundi* as inaccurate). In this regard Turnbull's practice is genuinely exemplary, for in his treatment of their 'map' he allows the Yolngu to speak for themselves, and no more than brings *their* interpretation of their product into juxtaposition with his interpellation of ours. Nor is there anything individuating in my use of quotation marks around the Yolngu 'map'. These no more than acknowledge that this category of thing from our culture may be not completely isomorphic with even its nearest analogue in that of the Yolngu (any more than our use of 'world map' today is identical to the Medieval use of 'mappamundi').

- 4 *Place names do not develop in cultural vacuums, and may not be used with impunity outside their appropriate cultural and historical contexts.* For example, 'European' cannot refer to both the contemporary culture flourishing in the lands north of the Mediterranean *and* to the circum-Mediterranean culture of, say, the 1st century AD. That the regions often referred in this fashion share Italy, for example, cannot be allowed to obscure the fact that they do not share the North African littoral and the Baltic Sea. If 'the West' is used to describe the Roman Empire in distinction to that of China, it cannot, without great care, be used at the same time to refer to the contemporary Euro-American culture realm in distinction to that of the Soviets. At the very least this would spare us the embarrassment of chauvinistic priority claims (since the 19th and 20th century nations in whose names they are made don't go back, *as such*, far enough to make the quest interesting); at best it might open our histories to the fluidity characteristic of actual culture exchange. After all, it is never *nations* that exchange anything – much less ideas – but people, and to restore them to center stage (in place of the nations) would be to serve a living history. It may be legitimate to speak of the Jews of Genoa in the 15th century; to refer to them as Italian is not.
- 5 Maps do not materialize in our midst. They are made by people. *Assume the motivations of others is at least as complex as yours and that their lives are just as deeply knit into the manifold circumstances of life.* I imagine those of you who actually make maps do so in the name of science. But this doesn't mean that I can overlook the fact that you also make them in the name of your career, to make a living, or to impress co-workers or colleagues. But having said this, I am not licensed to ignore the fact that you do so in the name of science. Our culture is present to us, as those of others are present to them, in complex and multifaceted ways: as we think science we inescapably think religion, art, craft; just as we think of our class, our past, the trajectory we imagine we are setting for ourselves through a social structure we struggle to comprehend. To lay the map on

any individual altar is to deny what is due – unavoidably – to all the others, to deny the actual complexities out of which it arises and which it attempts to negotiate. It is not that the map is a weapon in a class war, or that it is a scientific document, or that it is a material artifact stained by the signs of craft, or that it is a product made to earn the credit necessary to buy food, but that if it is one of these it is inescapably all the others.

We may be as blind as we choose – though this choice also arises like the map from the circumstances of the life it is part of – but there are times when it is hard to avoid seeing with greater clarity. In an article in yesterday's newspaper called 'Tracking the history of the Arab states' – a background piece for those a little out of touch with the setting of the current U.S.-Iraqi confrontation – there appeared this line: "The map drawn by Britain is now another object of defense" (Ruby 1990). This is to say that *soldiers are aiming at one another* across what is in reality no more than an artifact of cartographic activity, across a line that exists *only on a map*. But to draw a boundary is always to make a commitment. How widely can we share the blame? Without reducing cartography to a servile instrumentalism, is there any way of staving off the guilt?

Von Clausewitz' dictum that the map is not the territory is a cartographic truism. But as David Turnbull forces us to concede, it is no more than that. As exhausted and anxious American and Iraqi teenagers are demonstrating daily in the desert sands of Arabia there are times indeed when ... *maps are territories*.

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