

Trig points

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Matthew H. Edney

MAPPING AN EMPIRE

The geographical construction of British India, 1765-1843
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Lord Hastings, moved by the promise of Britain's tumescent Indian territory, laid a wish list before his Court of Directors in London in 1817. What could warm a governor-general's heart like a map of his domain? Accurate, extensive, the product of a co-ordinated survey effort. Lord Hastings's "map without parallel" would lay British India before him, Mangalore to Machilipatam, Travancore to Bundelcund.

Mapping an Empire: The geographical construction of British India, 1765-1843 by Matthew H. Edney, sets out to tell the story of that map, and to show that it was indeed a map without parallel, though not quite as the Earl of Moira intended. For Edney, the British cartographic depiction of India was not only without rivals, it was without a referent: it had no natural double in the world, no thing of which it was merely the image. The subtitle is significant; geographies are constructed, not found. Edney's account of British surveying and mapping on the subcontinent shows how mapping defined more than a British India; it defined the British as well. Between the lines of colonial maps lies an intricate story of science, administration and imperial identity. Where the naive might spy a mirror held to the topography of south Asia, Edney sees a cartographic text tightly inscribed with colonial desires.

Edney shows that the map is not the territory, any more than the portrait is the sitter. Maps are convention, not nature. Having had to row a jeep across the Chambal river in 1992 on account of a faulty map of Rajasthan, I had an immediate sympathy for this approach. Bridges on maps, as it turns out, may or may not appear on rivers, for the thing that spans and its corresponding sign are subject (as a truck driver in the neighbouring Bihar village of Sheopor subtly pointed out) to distinct and particular vicissitudes.

In insisting that the map be treated as a text - exuberant in meanings, rendering all interpretations deficient - Edney is not alone. The map has become hot scholarly property. Seen as colonial weapons, as surreptitiously furled nets for enmeshing alien territory, the dusty maps of empire have been subjected of late to a battery of new readings. What seemed a pukka town plan became, in the hands of post-colonial Foucauldians, a cartographic panopticon for the control of indigenous subjects; lines of longitude and latitude have been reread by critics as nothing less than the metaphorical prison of imperial hegemony.

For all the vigour of this trend - actively "decolonizing" the map inherited from the age of empire - it often assumes that the history of European expansion can be understood like laying new carpet. Europeans arrived and unrolled their maps over the non-European world and thereby formed a colony. It is in this context that the importance of *Mapping an Empire* must be understood, for Edney's study is no postmodern trifle, but a meaty historical dish. Laborious archival work anchors the study, as does Edney's technical expertise (he is a competent cartographer in his own right).

There is much to be praised in this book. It is an excellent history of how India came to be painted red in the nineteenth century. But more importantly, *Mapping an Empire* sets a new standard for books that examine a fundamental problem in the history of European imperialism: how did regions that Europeans called terra

incognita come to be inscribed on maps as bounded, reified colonial territories? Answering this question demands several different kinds of history, by no means easily synthesized: a history of the technology of surveying and cartography; a treatment of the institutions that made such work possible; and some account of the complex cross-cultural encounters and field experiences out of which colonial maps took shape.

Edney has tried to synthesize these approaches by explaining what he sees as a British colonial delusion. For decades, the British administration paid a small fortune for the prosecution of an elaborate survey of the subcontinent. By undertaking to establish the coordinates of a handful of points (using the techniques of trigonometric surveying), colonial officials used a style of surveying that never served their practical administrative needs. Good local topographical surveys were needed to raise revenues, move troops and grasp the lie of the land; knowing the co-ordinates of a hundred hilltops (to within a few feet) was an expensive and nearly useless enterprise. What, then, can account for the durability and nostalgic hagiography of the Great Trigonometric Survey of India, a costly and quixotic effort to cover India in a mesh of exactly measured triangles?

Edney examines the minutiae of institutional politics, the biographies of surveying heroes like George Everest (of mountain fame), and the technical details of trigonometric surveying, as he seeks an explanation for British dedication to a surveying enterprise that failed to meet the cartographic needs of colonial administration. The result is a study that undermines generalizations about monolithic, co-ordinated imperial authority. Edney shows, in detail, how technologies go into the world umbilically linked to the problems that bore them, swaddled in the social institutions that deploy them.

The short answer is that the British stuck to the Great Trigonometric Survey because it was high science. Trigonometric surveying, with its precision, cumbersome instruments, and complex calculations, invoked the apogee of metropolitan science. Its technological genealogy goes back to the great Enlightenment geodetic controversies, in which trigonometric surveys were used to measure the deformation of the earth's form, calculations that became the apotheosis of Newtonian mechanics. In essence, Edney argues, the British stuck to the ideal of trigonometric surveying not in spite of how hard it was, but because it was so hard. Anyone could sketch an ordinary topographic map using a compass and pedometer (in fact, the story of indigenous Indian surveyors, or Pundits, is relatively well known, at least in the romantic vein of Kipling's *Kim*). But a trigonometric survey demanded the high-minded, rational, mathematical, co-ordinated efforts of an enlightened imperial administration. By performing the Great Trigonometric Survey (GTS), the British performed an elaborate masque of what it was to be British.

One might wish to dismiss the idea of large numbers of men weighing death against promotion in the prosecution of a survey prized for being inordinately harder than necessary. But consider Jim Corbett and his friends splashing in the streams around Nainital, busily snapping the finest Scottish split-bamboo fly-rods in their efforts to take Himalayan Mabseer (upwards of 150 pounds) in the sporting manner of salmon on the Dee. Villagers, cleaning the gargantuan fish pulled with ease from their own traditional traps, must have looked on in wonder. The British version of European enlightenment involved some curious performances.

Edney has other plausible answers to his trigonometric conundrum: trigonometric surveys had become a familiar element of European statecraft, and hence afforded a way to bring British India more firmly in line with European political and spatial ideas; the London-based Court of Directors sought a way to consolidate the overlapping civil and military surveys going on half way around the world, and were persuaded (however mistakenly) that a trigonomet-



Colin Mackenzie, surveyor-general of India, 1816, by Thomas Hickey

ric survey could facilitate such centralization. The systematic approach implied by the trigonometric survey promised an orderly structure for the imperial geographical archive; and those bent on bettering their social status aspired to the gentility of gentlemanly science over the scruffy work of road-measuring. But none of these other contributing factors, for all their good sense, is quite so deliciously perverse as Edney's fundamental assertion that it was a British ideological commitment to a scientific identity and perish the cost - that drove the fortunes of the GTS.

Whether this is right or not is more difficult to say. For all the considerable ground that this study has covered, it has left room for a fuller account of the process of surveying in the field. Just how useless were the maps that came out of the GTS? To what degree was the privilege afforded to trigonometric surveys built out of anxiety about the nomadic and idiosyncratic

explorers who did other kinds of surveying? Where is the fuller account of how indigenous spatial ideas were subjected to and transformed by British cartographic culture? And were there identifiable influences that worked in reverse?

To show Edney wrong would be no small undertaking, however, given the breadth of research that informs this study. It is easy to claim (as he does) that quantification served as a sort of magic dust, which, sprinkled on maps, invested them with authority, and that this scientific rhetoric of cartography became part of a "legitimizing concept of empire". It is harder to show this in detail. But this Edney also does. He teases apart the nine separate surveying operations working in the Madras Presidency in the first decade of the nineteenth century; he reconstructs chains of command and traces shifts and conflicts in bureaucratic structures. In the course of his five robust historical chapters covering half a century of British cartographic institutions and practices in the subcontinent, Edney has turned up gems - for instance that the surveyor-general suggested that the names of smaller Indian villages should be replaced by mathematical co-ordinates - but he has also provided ample evidence that British cartographic efforts in India were more anarchic than orderly, that the colonial administration maintained an idealized image of a scientific map, despite evidence that no such map was forthcoming, and that the hallowed GTS did much to sustain British cartographic faith.

Edney thus dispels a durable myth about the unity and co-ordination of British geographical inquiry and the imperial archive it ostensibly produced. The myth was originally invented to buttress the British imperial claim to have captured a synthetic and reliable image of their possession. This illusion of a highly centralized colonial survey subsequently found a niche in the pantheon of post-colonial studies: to analyse the map as a homogenizing tool of colonial appropriation made it easy to assume that maps emerged from a co-ordinated and rational plan to appropriate.

The reality, as Edney shows, was that the cartographic representation of British India followed the Dilbert principle more than any theory of rational state action: the Court of Directors in London had immense difficulty sorting out who was mapping what on the other side of the globe; they would pay for instruments, but not the training and infrastructure that enabled them to be used; each presidency was a separate fiefdom in which civil and military junior officials jostled for control over different kinds of surveys. The Court's efforts to consolidate this cartographic chaos often merely led to a proliferation of administrative positions.

Edney criticizes the delusions of the imperial fantasy of a master archive, but some real archives of empire have served him well. He documents his sources carefully and includes a useful biographical supplement. Several charts map the history of mapping and, along with the illustrations, provide their own commentary on the power of cartographic imagery. The writing is for the most part lively, and accessible to an interested non-specialist.

Mapping an Empire shows that the British claim to have created in their maps a simple, accurate and natural depiction of the geography of India is untrue. The cartographic archive must be read in the same vein as a *mapa mundi*. There, the city of God and the cities of the world shared the same page. In a similar way, the map of Lord Hastings's imagination plotted the Indo-Gangetic plain on to the empyrean fields of the Raj. This juxtaposition, however hyperbolic, offers a moment of insight: no map stands outside of culture; no map is an island.

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