

The History of Cartography and the History of Science

*By D. Graham Burnett**

Jeremy Black. *Maps and Politics.* 188 pp., illus., index. Chicago: University of Chicago Press, 1998. \$35 (cloth).

Jerry Brotton. *Trading Territories: Mapping the Early Modern World.* 208 pp., illus., bibl., index. Ithaca, N.Y.: Cornell University Press, 1998. \$35 (cloth).

Philip D. Burden. *The Mapping of North America: A List of Printed Maps, 1511–1670.* Foreword by **Tony Campbell.** xxxiv + 568 pp., illus., tables, apps., bibl., index. Richmansworth, Hertfordshire: Raleigh Publishers, 1996. \$195, £120 (cloth).

The *orbis totius* has long served as an icon for the sphere of the knowable; the map, in turn, became early, and has in important ways remained, a dominant archetype of human knowledge. A field for the collation of diverse measurements, a framework for ordering nature, a means of nesting multiple scales of representation, an intersection of mathematics, astronomy, chronometry, precision instrumentation, and a host of craft practices, maps in the European tradition constitute a distinctive system for apprehending the lineaments of the natural world: like science itself, they are stable but flexible, structured but expandable. The study of cartography—as practice, theory, metaphor—has been the subject of a fair bit of recent work in the history of science (one thinks here of Lesley Cormack, Jane Camerini, and James Moore, among others). There is reason to look forward to more such studies in the future.

The historian of science who sought to get a sense of recent scholarship in the history of cartography by picking up these three books would come away with a rather mixed impression, in large part because they are very different kinds of books: Philip Burden has produced a massive, meticulous cartobibliography of North America; Jeremy Black offers a loose accumulation of observations on maps and politics; Jerry Brotton's *Trading Territories* comes closest to being a traditional monograph. Diverse in form and objectives, these texts are also uneven in their merits. None is the work of a historian particularly interested in (or expert concerning) the history of science, but all touch on material relevant to the field.

The most impressive of the lot, both as a physical object and as a labor of scholarly devotion, is Burden's *The Mapping of North America*, which aims to document every European printed map before 1670 that depicts any portion of North America. He omits

* Center for Scholars and Writers, The New York Public Library, Room 225, Fifth Avenue and 42nd Street, New York, New York 10018.

only those world maps already covered in Rodney Shirley's *The Mapping of the World*, the book that forms the model for Burden's own.¹ As in Shirley's standard reference work, each of the more than four hundred entries in *The Mapping of North America* is accompanied by: a large, clear, black-and-white reproduction of the map in question; at least a paragraph of historical context, comments on features of interest, and (when available) biographical details on the cartographer; a list of all known variations and changes to the plate, with dates and distinguishing characteristics; references to published literature on the map; and, finally, a location list (exhaustive only for particularly rare examples). A forthcoming second folio volume promises to extend *The Mapping of North America* to the end of the seventeenth century.

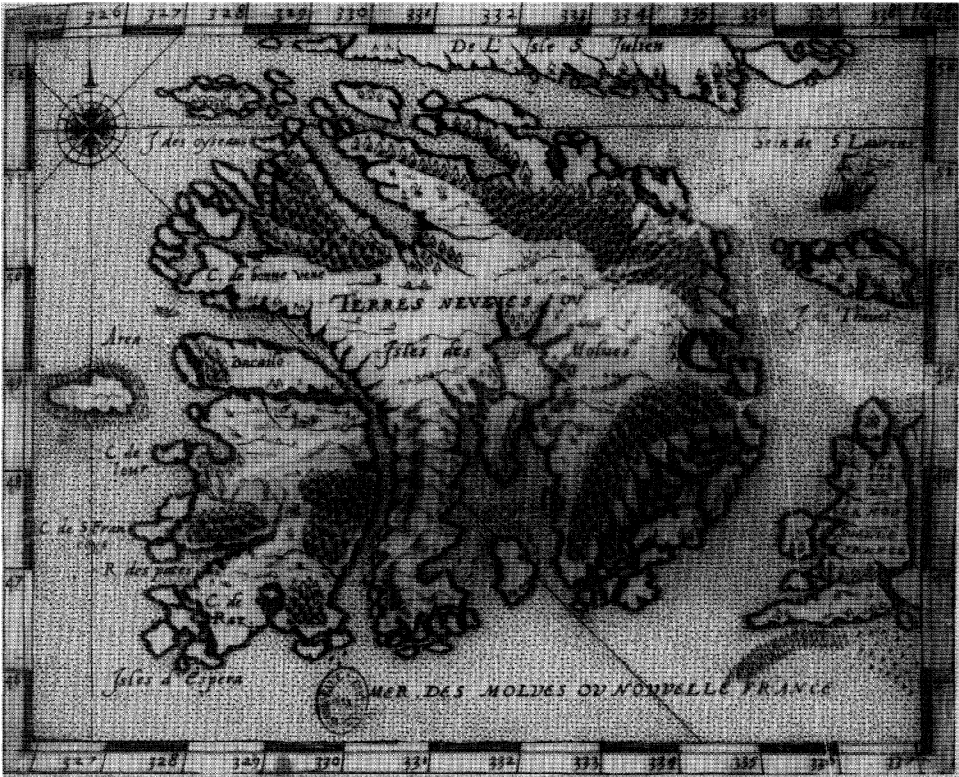
As a reference tool, Burden's book will likely have few readers who sit down, open to the first page, and read their way through his *summa* of North American cartography. Having done so, I can vouch for the value of the exercise. Historians' recent fascination with "representation" and "space" has stimulated a spate of studies that use maps as visual sources, and it is not unusual in this context to find an allusion to the antiquated, if not antiquarian, character of traditional histories of cartography. Burden's book fits firmly in this somewhat maligned genre. But those partial to more modish historiography of maps would do well to immerse themselves in a cartobibliography like this one, which serves as a salutary reminder of two things: first, of the great care necessary in using maps as historical evidence, given the complexity that often attended their printing, reprinting, and modification; and second, of the humbling detail with which these print histories have been chronicled. Snicker at the pedantry of old-fashioned historians of cartography, but use maps at your risk: the last laugh may be theirs.

Precisely what one can say about a Jodocus Hondius map of the Americas may depend on whether the fish to the left of the cartouche is facing to the right or to the left. Such Borgesian details signal dates, revisions, and in some cases a change in the publisher and place of publication. Burden details more than two thousand such variations, at one point going so far as to notice that a nineteenth-century facsimile edition of a sixteenth-century map by Paolo Forlani matches neither of the extant versions of the original, which themselves represent different states of Forlani's plate! This kind of close knowledge, extended for more than five hundred pages, becomes an object lesson in expertise. The text yields striking oddities as well: a map of Newfoundland by André Thevet (ca. 1586) that the engraver neglected to reverse in preparing the plate, producing a mirror image of the island; the astounding multiple-sheet Giovanni Francesco Camocio map (ca. 1569) in which—confused about how the different plates lined up—the engraver tried (semi-successfully) to attach California to Florida and China to Mexico. The result has a distinctly surreal effect.

Interesting as these cartographic sports are, the broad continuities and genealogies that link the maps leave a deeper impression than do the handful of misfits. In fact, one puts down *The Mapping of North America* impressed by how very few printed maps in the period were drawn from firsthand sources, how many were copies of already existing works. In a set of charts at the end of the book, Burden traces family trees for the majority of the maps he has treated, an exercise that (for all the arguments one might have) helpfully emphasizes that the making of printed maps had as much to do with the competitive and piratical world of early modern print culture as it did with early modern exploration. In fact, probably more.

One can quibble: without taking account of watershed manuscript maps, filiations of cartographic influence can be misleading. A larger book, however, would be a daunting proposition. One of the "finds" of which Burden is most proud involves his recognition

¹ Rodney Shirley, *The Mapping of the World: Early Printed World Maps, 1472–1700* (London: Holland, 1984).



The 1586 map of Newfoundland by André Thevet showing a mirror image of the island. Illustrated in Burden, *The Mapping of North America*, p. 77.

that a map by Jean Boisseau (1643) depicts all five of the Great Lakes some years before the work of Nicolas Sanson (1650) that has traditionally been accorded precedence. The Boisseau, admittedly, has the bodies of water arranged in quite an odd way, but they are all there, at least in name, and that makes his map a “first.” The fascination with firsts (they are listed in Appendix 3) proves to be one of the slightly distracting elements of this book, leading to disputations of limited broader significance. What might be the first depiction of Hudson Bay might also be a vestigial southern sinus of Giovanni di Verrazano’s phantom American sea. True. But how could one distinguish? What difference would it make if one did?

In Burden’s profession it makes a rather large difference: he is a dealer in the cartographic arts, where a first is a valuable commodity. This training in connoisseurship has yielded his formidably intimate acquaintance with thousands of maps. Has it limited his investigation? This would be an exaggeration. As Tony Campbell (the map librarian at the British Library) notes in his foreword, there is nothing like the red blood of commerce to prick one’s faculties. Few scholars stake their liquidity on their footnotes; Burden does.

If *The Mapping of North America* has the solidity of old-fashioned history of cartography, Jerry Brotton’s *Trading Territories* suffers at times from the unbearable lightness of being in the new wave. In a slim and ambitious volume Brotton sets out to document the changing shape of the early modern world, focusing particularly on the “East”: how it came to be in the European imagination, and how it in turn made the “West.” Maps are

chief sources in this account, which, by focusing on European perceptions of the “old” worlds of Africa and Asia, seeks to correct what Brotton takes to be the exaggerated emphasis on the cultural impact of the “new” world of the Americas. Here he is surely on to something: the Columbus anniversary has likely done its part in distracting us from an extensive history of European “encounters” before 1492.

In four main chapters Brotton seeks the following: to restore to historical prominence Portugal’s fifteenth-century maritime empire, emphasizing its commercial and transactional character; to reevaluate geographical learning in the Ottoman Empire in an effort to show the extent of scholarly (and commercial) exchange between it and Christian Europe; to detail the legal and cartographic disputes over the “back side” of the line drawn by the Treaty of Tordesillas (disputes that hinged on conflicting Spanish and Portuguese claims to the spice islands of the Moluccas); and, finally, to situate the two most prominent geographers of the sixteenth century—Gerhard Mercator and Abraham Ortelius—with respect to this dispute, arguing, in effect, that their innovations—the Mercator projection and the atlas—cannot be understood without reference to this context. Brotton closes with a suggestive account of how cartography came to be reformulated as a “science” at the end of the sixteenth century.

There is much here to applaud. Brotton has not written a finicky micro history but has gone after important figures and large interpretations, while keeping open the geographical and temporal range of his study. At the same time, this expansive scope obliges him to work extensively from secondary sources (though the book is not as well annotated as one might hope) and forces him to make questionable generalizations concerning both his own evidence and current scholarship in the fields he addresses.

Among the greatest strengths of this text is a welcome shift from an all too pervasive emphasis on the “map-as-instrument-of-possession” to a more refined understanding of maps as part of complex networks of exchange that are specific to particular times and places. In a sense, this aspect of Brotton’s approach can be linked to his choice of subject matter: for those who work on the American encounter, rapacious plundering predominates over networks of exchange; the reading of maps in this context has led to an emphasis on their power to apprehend territory and dispossess peoples. This is a slightly flat view of the map, as it were. In fact, our understanding of maps is enhanced when we recognize them as multivalent documents: parts of systems of gift exchange, tools of imperial administration, expressions of wonder, techniques for sanitizing the strenuous realities of travel or combat, means to intimate and facilitate commerce. A map, then, is not just a way to depict (and extend) an empire; it works both within and between empires as well.

Brotton says much of this in an elegant introductory chapter that departs from the reading of a remarkable cartographic tapestry by Bernard van Orley, executed in the 1520s to celebrate the marriage of Catherine of Austria to João III of Portugal. Other parts of the book are less successful. Editors can be held accountable for a number of repetitive passages (e.g., p. 34) and infelicitous phrasings (what does it mean to say that something “seamlessly transgressed established limits”? [p. 124]), but in at least one place (p. 141) the argument is obscured by imprecise prose. Brotton’s treatment of a rather remarkable elision of the words “ASIA” and “EUROPA” in the title of a map in Francesco Berlinghieri’s *Geographia* (1482) is marred by a misidentification of the plate depicted. Unfortunately, much of the illumination in Chapters 2 and 3 is provided by the bright torches of burning straw men: Brotton contests an idealized vision of the “Renaissance man” that has had little currency for some time; he exaggerates in asserting that standard histories of the Renaissance “invariably” and “persistently” juxtapose European love of learning with Ottoman bloody-minded despotism.

The irony is that Brotton’s material is interesting enough not to need this puffing: his account of the Moluccas dispute stands as a very engaging episode in the histories of cartography, exploration, and statecraft; the assertion that the Mercator projection installed

and polarized an east–west axis while shifting the geographical focus of European culture onto the Atlantic is suggestive. His concluding proposition—that the rise of a print culture, and the subsequent commodification of maps in new forms (like the atlas), made it possible for a cartographer to position himself outside the narrowly partisan framework exemplified by the Moluccas dispute—may outstrip his evidence, but it is a stimulatingly novel account of the rise of cartographic objectivity.

The reviewer of a Jeremy Black book must begin by orienting the reader to this author's scholarly productivity. The brief biography in his *Maps and History* (1997) identifies him as the author of twenty-one books. *Maps and Politics*, the subject of the present review, appeared earlier that year. Since then, however, Black has authored four additional full-length texts: *Why Wars Happen* (1998), *War and the World* (1998), *America or Europe? British Foreign Policy, 1739–63* (1998), and *Britain as a Military Power, 1688–1815* (1999).² All of these exceed two hundred pages, and two of them pass three hundred.

I cannot speak to the virtues of these most recent accessions to Black's opus, nor am I more than superficially familiar with his works on the American Revolution, Robert Walpole, or William Pitt the Elder, or with his several general texts on British and European history. I can say that *Maps and Politics* is not a strong book. Considerably less substantial than *Maps and History* (which offers a broad treatment of historical atlases), this briefer general examination of cartography and "politics" verges at times on incoherence. In seven nearly stochastic chapters Black takes up everything from the nonappearance of the infamous weasel community on a map included in a 1994 edition of *The Wind in the Willows* to a brief (and unexpected) mention of deltaic salination. Chapter titles suggest themes—"Socioeconomic Issues and Cartography," "Frontiers," "Cartography as Power"—but in a number of instances the conceptual distance between adjacent paragraphs exceeds that between distant chapters.

In general, Black wishes to contest what he calls the "ideological school" in the history of cartography, a group of scholars (J. B. Harley, Mathew Edney, Denis Wood) whose "post modernist interpretation of maps drew on left-wing dislike and distrust of authority" (p. 22). Black's own position is that this approach has led scholars to see a conspiracy in every cartographic omission or inclusion. He would remind us that not every cartographic "silence" reflects the machinations of those in power: some are a product of problems with data collection, others of problems internal to the medium of the map. This could be a worthy corrective to what he rightly identifies as a currently predominant scholarly reflex to see the map as complicitous with hegemonic forces. Such a project is not much advanced, however, by Black's quirky and rather ham-fisted interventions. "Golf courses," he writes, "are better mapped than poverty, although they are also of course easier to map, and it is more necessary to do so for the purposes of planning and play" (p. 42). There may be a grain of truth in this, but it cannot be said to go to the heart of the matter that interests the "ideological school."

To the degree that one can point to a single besetting flaw in a text most distinguished by its piecemeal character, it would be this: Black has an inadequately precise concept of politics. This is a serious problem when one sets out to write a book on politics and anything else. Not that a coherent concept of politics is easily achieved, but one might plausibly countenance, for argument's sake, a broad range of working definitions: who gets what when; the general business of the community; the name for the authoritative practices that allocate scarce resources; structured violence; manifestations of power short of violence; the business of establishing and maintaining human taxonomies; and so forth.

² Jeremy Black, *Maps and History* (New Haven, Conn.: Yale Univ. Press, 1997); Black, *Why Wars Happen* (London: Reaktion, 1998); Black, *War and the World* (New Haven, Conn.: Yale Univ. Press, 1998); Black, *America or Europe? British Foreign Policy, 1739–63* (London: Univ. College London Press, 1998); and Black, *Britain as a Military Power, 1688–1815* (London: Univ. College London Press, 1999).

Nor are all of these mutually exclusive (though some, obviously, are). For Black the meaning of “politics” simply meanders. At times he means party politics; at other times politics seems to denominate “anything people argue about” or—perhaps better—“the contentious.” Broadly speaking, politics seems to be what Black calls any situation in which people have a choice about anything. At one point he writes, “Politics stands as a metaphor for social processes” (p. 28), so politics may be a metaphor as well. The clearest indication of Black’s confusion comes late in the book, when he discusses “territorial politicization” (p. 135). What can this mean? Certainly the concept of “territory” has meaning only within some working framework of power, punishment, and property. In short, territory cannot be “politicized” because it is a *product* of politics, however defined.

This is not to defend Black’s adversaries. Indeed, a number of them (particularly Wood) can themselves be accused of having overly broad—and, at times, insufficiently thought through—notions of what it means to assimilate politics to power and call cartography its avatar. It is here, perhaps, in these “Map Wars,” that historians of science—particularly attuned to the need for subtle and detailed work in the synapses that link knowledge, nature, and power—will be able to contribute most to future work on the history of cartography.