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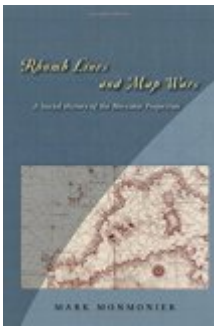
Mark Monmonier. *Rhumb Lines and Map Wars: A Social History of the Mercator Projection.* Chicago: University of Chicago Press, 2004. xiv + 242 pp. $25.00, cloth, ISBN 978-0-226-53431-2.



Reviewed by Jeremy Black

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Monmonier, Distinguished Professor of Geography at Syracuse University, offers yet another first-rate contribution to the literature on cartography. His focus is one of the most famous projections, that of Gerard Mercator. As Monmonier points out, the popularity of this projection reflected its value for sailors, not least the map's value for plotting an easily followed course that could be marked off with a straight-edge and readily converted to a bearing. Mercator sought to reconcile the navigator's need for a straightforward course with the trade-offs inherent in flattening a globe. Mercator's projection affords negligible distortion on large-scale detailed maps of small areas, but relative size is markedly misrepresented on Mercator charts because of the increased poleward separation of parallels required to straighten out loxodromes.

Monmonier shows how the projection was subsequently employed. It became the cartographic expression of what he terms a hot idea in the late 1590s, when Jodocus Hondius and Edward Wright offered their own versions of Mercator's world. Hondius relied heavily on Wright, who developed a mathematical description as well as tables showing how to position the parallels. Monmonier then takes the story forward showing how different demands, for example for artillery aiming, influenced the use of projections. For instance, before World War I, French artillery officers relied on independent local grids based on Bonne's projection (a nonconformal polyconic variant) and centered on strongholds from which fixed guns might conveniently bombard targets in the region. However, after the angular distortions and awkward discontinuities of the Bonne grids became apparent early in the war, French officials devised a single military grid based on a Lambert conformal conic projection. Directionally accurate long-range artillery and "map firing" also established a need for military surveyors, who relied on conformal projections in helping gun crews get a fix on true north by tying the gun's position into a precisely measured triangulation network. There is also a first-rate coverage of the Peters projection as part of a more general discussion of the depiction of scale. Monmonier, indeed, argues that population cartograms are fairer than

the Peters projection. An excellent book that deserves widespread attention.

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