

## Book Review

### **Cartographies of Time: A History of the Timeline**

Daniel Rosenberg, Anthony Grafton

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'May not duration be imitated and represented as effectively to the senses as distinctly as space, and may not intervals of time be as easily counted in degrees?' The seductive analogy of mapping historical time is evident in the title of this history of the timeline by Daniel Rosenberg of University of Oregon and Anthony Grafton of Princeton. The question was posed in the mid-eighteenth century by Jacques Barbeau-Dubourg, a Parisian doctor, botanist, philologist and aspiring arms-supplier to the American Revolution (defeated in that capacity by Beaumarchais). This was a time of significant innovation in visual culture, yet, as Rosenberg has said, historians do not study timelines; an object central to many people's learning of history has gone largely unnoticed.

*Cartographies of Time* is therefore not just a welcome book, it is a necessary one which deals with a neglected aspect of past historiography and an important cultural form. The most significant prior work in this area is that of the authors themselves, including Rosenberg on Joseph Priestley's graphic invention of modern time (2007) and Grafton's intensive two-volume study of Joseph Scaliger (1983, 1993), so it is fortunate that these two have now pooled their expertise.

How should time be mapped visually? The answers emerging from this richly illustrated history demonstrate vividly the correspondence between certain distinctive visual forms and particular cultural models of time. Though, as Alfred Gell pointed out in *Anthropology of Time* (1992), even to refer to such a model is to beg the question: a society may have a model of the relationship between events, or between now and the past, but not necessarily have a model of time per se. Feeney remarked in *Caesar's Calendar* (2007) the near-impossibility of our recovering in imagination the character of events before we had a standardised numerical grid for history, and emphasised the recency of its invention. Rosenberg and Grafton develop this theme to show how the line, visible or implied as a metaphor for time, is a product of only the last 250 years. They document a series of key influences on chronology and chronography: the explosion of conflicting sources faced by Renaissance scholars, the realisation that astronomical records might be used as a historical clock to correct dates corrupted or lost, the eschatological motive (many chronologies and chronographics mapped the past in order to predict the future), and the pain experienced by Christian chronologers as evidence accumulated – in the form of reliable records from other cultures and the growth of deep time through geological investigation – that the Bible could no longer be treated as history.

Perhaps there could have been more on Descartes' essential groundwork in visualising number as line, and the crucial proposition of Newton (so exciting to D'Alembert that he featured it in the *Discours Préliminaire* as well as his article *Chronologie* for the *Encyclopédie*) that time is a measurable container analogous to space. Pivotal in the narrative running from Eusebius to the present day, and literally central in *Cartographies of Time*, is the work of a fervent admirer of Newton: Joseph Priestley, preacher, scientist and radical, and like Barbeau-Dubourg a friend and correspondent of Benjamin Franklin. While many of the charts in the book are rich in graphical conceits such as trees, rivers, streams, chains and wheels of time, Priestley's *Chart of Biography* 1765 is wonderfully minimal and arguably egalitarian with its spread of two thousand undifferentiated named lifelines, an arithmetical presentation appropriate to Priestley's scientific and Dissenting philosophy and symptomatic of mechanical sympathies in those optimistic, 'improving' times. His depiction shows exactly that 'homogenous and empty time' anathematised by Walter Benjamin (1940), but it is remarkable how the empty spaces, the drifts and clusters of names, in themselves convey meaning without the need for additional graphical rhetoric. The account of Priestley's achievement might have said more about another of his innovations: the visual representation of uncertainty, a vital aspect of chronography ignored in most visualisation then and since.

The nineteenth century brings in chronographical games, mostly intended to be educational. Occasionally ingenious, these represent in some ways a nadir of the discipline, essentially childish and hardly a tool for investigation or serious thought. Nevertheless, it is nice to learn that a chronographic game was explicitly designed by Mark Twain so as to be winnable by any player knowing a lot of minor events, as much as by someone who knew the dates of the monarchs and battles so beloved of conservative champions of the Important Date.

Profoundly knowledgeable in historiography, the authors write sensitively about the visual, and effortlessly connect the two. For them the graphical is not a childish substitute for the sophistication of words but an essential counterpart. An admirable feature of the book's design by Jan Haux is the synergy of the text and illustrations. The figures are printed close to the relevant text, the captions are informative, and the authors draw out with verve the features they want the reader to notice.

The closing chapters are more cursory, touching on timelines as public monuments, timelines as art including Maciunas' chart of time and space-based art for Fluxus, John Cage's graphical scores, and Shapolsky et al's *Manhattan Real Estate Holdings*. Some exclusions are a little surprising: if Marey's chronophotography is in, should the comic strip and the film storyboard be out? The exhibition timelines of Charles and Ray Eames, the grandest of which mounted physical historic objects onto extended graphical representations of time, do not appear. Michael Twyman at Reading, author of significant work in this area prior to the authors' own, seems not to be acknowledged. But these are quibbles about a book whose long historical perspective is one of its finest features. In the middle of discussing modern grand timelines in museums and public spaces the authors tell us of Augustus' carved *fasti consulares* of the first century BCE; a frivolous modern timeline on a folding ruler is juxtaposed with Dürer, and Sarah Fanelli's *Tate Artist Timeline* with Piranesi. It would be nice to believe that chronography will no longer be unimportant once this exceptionally well researched book is widely seen.

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