
William DERINGER, *Calculated Values: Finance, Politics, and the Quantitative Age* (Cambridge, MA, Harvard University Press, 2018)

Numbers were (and are) “arguments, not answers” [xviii]. This simple reflection is the central thread that winds through *Calculated Values*, William Deringer’s engaging new book on the emergence of quantitative politics in Britain. Deringer argues that around the time of the Glorious Revolution in 1688 there was a change in the extent and flavor of political calculation. This shift reflected the emergence of a new civic epistemology that elevated the place of numbers in political discourse.

Deringer’s book is part of a wave of work on quantification to emerge from the discipline of history. Some of this research comes from scholars working in science and technology studies and the history of science. However, the shift is also broader, with historians of many periods and specialties seeking out new ways to write about numbers. Examples include Dan Bouk’s *How our Days Became Numbered*, Tamara Thornton’s *Nathaniel Bowditch and the Power of Numbers*, Christopher Phillips’s *The New Math*, Eli Cook’s *The Pricing of Progress*, and Jamie Pietruska’s *Looking Forward*.¹ All of these histories aim to slice open the black boxes that so often enclose quantitative reasoning. They consider calculation as a practice—as a technical and cultural tool used by individual people to teach, create, and critique arguments.

Deringer’s rich contribution, *Calculated Values*, unfolds chronologically, with chapters describing a series of late 17th and early 18th century political debates in Britain. Each of these debates features political calculations that were “empirically rich and technically inventive” but not yet statistical or scientific [5]. The first chapter begins in the aftermath of the Revolution of 1688, describing the

¹ Dan Bouk, 2015, *How Our Days Became Numbered: Risk and the Rise of the Statistical Individual* (Chicago, University Of Chicago Press); Tamara Plakins Thornton, 2016, *Nathaniel Bowditch and the Power of Numbers: How a Nineteenth-Century Man of Business, Science, and the Sea Changed American Life* (Chapel Hill, The University of North Carolina Press); Eli Cook, 2017, *The Pricing of*

Progress: Economic Indicators and the Capitalization of American Life (Cambridge, MA, Harvard University Press); Christopher J. Phillips, 2015, *The New Math: A Political History* (Chicago, The University of Chicago Press); Jamie L. Pietruska, 2017, *Looking Forward: Prediction and Uncertainty in Modern America* (Chicago, The University of Chicago Press).

growing importance of public accounting for government oversight. The second turns to the union of England and Scotland, which involved the calculation of the “equivalent,” a one-time payment to Scotland of £398,085.10s intended to offset the costs of union, especially future taxes. The next chapters profile a variety of other debates, including the use of numbers in debates over the balance of trade (chapter 3), the politics of the public debt (chapter 4), the 1720 South Sea bubble and crash (chapter 5), and the related hope that a “sinking fund” might harness the power of compound interest to manage debt (chapter 6). The seventh and final chapter ranges forward to the mid 18th century and profiles dueling commentators with different perspectives on the role of numbers: Scottish philosopher David Hume warns of quantification’s perils while Welsh minister and mathematician Richard Price defends calculation’s virtue.

Calculated Values profiles the numerical sparring in these episodes without cynicism about quantification. Take chapter 4, which profiles the intersecting paths of John Crookshanks and Archibald Hutcheson. Crookshanks and Hutcheson are two of the most “middling” of a group of wealthy and well-connected calculators. Each gained entry into politics by drawing on calculating skills they honed working overseas, Crookshanks as a bookkeeper and Hutcheson as a lawyer. Their paths crossed dramatically in 1718 when they published dueling pamphlets on the state of the public debt [177–184]. The feud began when Hutcheson critiqued the policies of the Whig government through a series of estimates of the state of the national debt. Along the way, he lamented his lack of access to solid data, maligning the government officials whose responsibility it should have been to provide the public with this vital information. Crookshanks replied by turning this point against Hutcheson, lamenting the shock and astonishment he felt when he saw Hutcheson’s speculative calculations—estimates made “without a perfect Knowledge of the Particular Articles” involved [179]. Crookshanks wove number and narrative together in his attacks, lamenting the decline of his previously favorable opinion of Hutcheson, and cycling deftly between small discrediting errors, substantive critiques, and personal insults. Hutcheson responded in kind. Both men crafted their arguments in ways that cast numbers as impersonal, even as they used them in personal attacks. Their fight exemplified an emerging genre of argument that simultaneously deferred to the authority of numbers and displayed their slipperiness.

Deringer’s openness to the promise of political calculation, however messy, gives him the ability to see something more than lies in the data. His book describes the always leading but not always misleading use of numbers. As a result, *Calculated Values* goes beyond the observation made by many histories of quantification, “that quantitative ways of knowing, like all ways of knowing, have politics” [304]. Deringer’s argument is more nuanced: “in the eighteenth century, politics were what generated numbers’ authority—not the other way around. Calculation attained an elevated position in Britons’ civic epistemology *because of*, not *in spite of*, its overt political affordances and applications” [394]. Numbers, which could be both tools for generating consensus and weapons for sparring, gained sway because people used them to navigate politics. The fact that calculations were political was part of what made them attractive and powerful.

In many ways, *Calculated Values* reads as a celebratory account. This is at once the book’s greatest strength and a potential weakness. By taking the reckoning of his calculators seriously, Deringer shows how numbers offered a productive terrain for argumentation and understanding. Though his cast of calculators was often “self-serving, unscrupulous, and prejudiced”, he nonetheless finds “inspiration” in their stories, suggesting that just as calculation can be a tool for accruing power it can also be a tool for undoing it. This makes *Calculated Values* an insightful counterpoint to most other recent work on the history of quantification. Other studies have tended to emphasize the ways numbers were used as instruments of control or as inspirers of trust: “previous studies link the authority of quantification to processes of objectification or to the pursuit of objectivity; this book links it to argumentative acts of objection” [13]. Deringer pushes us to look at numbers more openly, suggesting that they might be a tool for exploration as well as exploitation.

And yet—numerical optimism has limits. Deringer points to the “relative openness and diversity”, among a group of men who include “Charles Davenant (civil servant) William Pulteney and John Crookshanks (accountant), University mathematician (David Gregory), Unitarian minister (Richard Price), banker (William Paterson)” [23]. This is a varied list, to be sure, but not really a diverse one along dimensions of race or gender. Even class variation is limited to “middling” and up. Deringer knows this, and he acknowledges the formal and informal exclusion of women and working class men. He also points out, if not as forcefully as he might have, that though

laborers and enslaved people are almost never doing the quantifying, they were often the subjects of quantification.

Was the 18th century really an aspirational period for political calculation? I hope that Deringer is right in saying that this history can help us “to imagine ways that calculation might be more diverse, contentious, emotionally resonant, and politically frank” [321]. But I also fear that it will require a lot of imagination. Still, if the book is at turns overly optimistic this is in my view a worthy shortcoming. Numbers will continue to infuse the search for political solutions, and pushing for more diversity and creativity among those who calculate might just make those solutions more just.

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