

Introduction: Transformations in Demographic Thought

This book traces two transformations in early modern English thinking about the governance of populations. The first, spanning the Tudor and early Stuart eras, was a shift in emphasis in defining the real object of demographic knowledge and intervention. While sixteenth-century engagements with what we would consider demographic entities and processes tended to identify particular, qualitatively defined groups (referred to here as “multitudes” to distinguish them from “population” as a quantity) as their units of analysis, by the middle decades of the seventeenth century something much closer to the national population, as a total and knowable number of people, had come to the fore.¹ Underlying this shift, I argue, was not primarily a new spirit of quantification but rather new attitudes to the state and to the natural world.² While a new reason of state embracing commercial and colonial expansion stretched the traditional metaphor of the body politic past the breaking point, a growing appreciation of the importance of the nation’s natural environment and geographical situation – and of policies that exploited these in the service of the nation’s interest – directed attention both

¹ Early modern authors used “multitude” to describe myriad collectivities, including groups we now call populations. Its analytical use here draws attention to the way such groups were defined in qualitative terms for purposes of governance. To speak of a “multitude” either generally or in some delimited way (the multitude of vagrants, for instance) was to identify a collectivity with certain qualities, whose size was not necessarily subject to precise measurement. By contrast, “populations,” in modern social scientific discourse, are inherently quantifiable; in common parlance they *are* numbers. The distinction differentiates tendencies but is not absolute; for multitudes as objects of calculation in the Middle Ages, see Peter Biller, *The Measure of Multitude: Population in Medieval Thought* (Oxford: Oxford University Press, 2000).

² On the “quantifying spirit,” see Daniel Headrick, *When Information Came of Age: Technologies of Knowledge in the Age of Reason and Revolution, 1700–1850* (Oxford: Oxford University Press, 2000), pp. vi, 65, 88; Tore Frängsmyr, J. L. Heilbron and Robin E. Rider (eds.), *The Quantifying Spirit in the Eighteenth Century* (Berkeley: University of California Press, 1990). For a similar argument about the prior impact of “quantitative perception,” see Alfred W. Crosby, *The Measure of Reality: Quantification and Western Society, 1250–1600* (Cambridge: Cambridge University Press, 1997).

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to the balance between numbers and resources and to the plasticity of the population as a whole.³ The problem that organized demographic thinking ceased to be that of maintaining a healthy body politic. It became instead a question of transforming – not merely increasing or mobilizing, but changing and improving – populations, in an ever-growing variety of ways.

The second transformation began in the mid-seventeenth century and was completed with Malthus's *Essay on the Principle of Population*, the sixth and fullest edition of which appeared in 1826.⁴ This was a shift in the locus of what we might call demographic agency: The power, and thus the responsibility, to determine the course of demographic growth and related processes, as well as to shape the qualities of populations. Riding a wave of neo-Baconian rhetoric about the transformative powers of human science, and participating in the creation of a fiscal-military and imperial state, seventeenth-century “projectors” proposed schemes for manipulating the size, distribution and composition of the national population in the interests of productivity, security and stability.⁵ In later decades, however, initiative moved increasingly to the public sphere, in the guise of philanthropic efforts, drives for moral reform and discourses of public health. The constraints of nature, including a human nature bound by the impulses of passion and the calculus of individual interest, girded skepticism about the effectiveness and legitimacy of royal, state

³ On the reorientation of reason-of-state discourse and the role of interest, see Vera Keller, *Knowledge and the Public Interest, 1575–1725* (Cambridge: Cambridge University Press, 2015). On the attenuation of the body politic as a governing metaphor in early modern economic thought, see Andrea Finkelstein, *Harmony and the Balance: An Intellectual History of Seventeenth-Century Economic Thought* (Ann Arbor: University of Michigan Press, 2000).

⁴ Thomas Robert Malthus, *An Essay on the Principle of Population, as It Affects the Future Improvement of Society. With Remarks on the Speculations of Mr. Godwin, M. Condorcet, and Others* (London: Printed for J. Johnson, 1798) [hereafter cited as Malthus, *Essay* (1798)]; *Thomas Robert Malthus An Essay on the Principle of Population, Or, A View of Its Past and Present Effects on Human Happiness, with an Inquiry into Our Prospects Respecting the Future Removal or Mitigation of the Evils which It Occasions* (London: John Murray, 1826).

⁵ Ted McCormick, *William Petty and the Ambitions of Political Arithmetic* (Oxford: Oxford University Press, 2009); Colin Brooks, “Projecting, Political Arithmetic, and the Act of 1695,” *English Historical Review* 97:382 (1982), 31–53. On the wider context of “improvement” in England, see Paul Slack, *The Invention of Improvement: Information and Material Progress in Seventeenth-Century England* (Oxford: Oxford University Press, 2015). Outside Britain, similar developments often originated within the state, and took shape as policies rather than projects. See, for example, Carol Blum, *Strength in Numbers: Population, Reproduction, and Power in Eighteenth-Century France* (Baltimore, MD: Johns Hopkins University Press, 2002); Leslie Tuttle, *Conceiving the Old Regime: Pronatalism and the Politics of Reproduction in Early Modern France* (Oxford: Oxford University Press, 2010).

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or imperial intervention.⁶ By the time Malthus penned his *Essay*, both the effective power and the moral responsibility of demographic decision-making resided first and foremost with the sovereign individual. Once a privileged *arcanum imperii*, demographic agency – not merely the power to reproduce, but the responsibility to make reproduction a conscious and morally freighted economic calculation – had become a mode of individual subjectivity.

Straddling and linking these two transformations, in the later decades of the seventeenth century, was “political arithmetic,” the creation of the polymathic Sir William Petty (1623–87).⁷ Petty was an intellectual innovator of a very particular kind. Neither a great thinker on the order of his patron Thomas Hobbes nor a scientist on the level of his colleague Robert Boyle, he offered not a philosophy but rather a way of thinking about political and social problems – including what we would consider economic questions, but also matters of colonial policy and the management of religious fissures within and between Britain and Ireland – that placed an empirical, quantitative grasp of population at the center. The intermediate level of Petty’s intellectual engagement, linking theory and practice but reducible to neither, foreshadowed the uneasy tie between the later social sciences, which he and others like him supplied with concepts,

⁶ For later projects, see Sarah Lloyd, *Charity and Poverty in England, c. 1680–1820: Wild and Visionary Schemes* (Manchester: Manchester University Press, 2009); Joanna Innes, *Inferior Politics: Social Problems and Social Policies in Eighteenth-Century Britain* (Oxford: Oxford University Press, 2009), pp. 109–75. Charlotte Sussman’s emphasis on “peopling” rather than “population” fuels a related analysis of migration for the period after 1660; see Sussman, *Peopling the World: Representing Human Mobility from Milton to Malthus* (Philadelphia: University of Pennsylvania Press, 2020), pp. 1–16. On criticism of projecting see also Charlotte Sussman, “The Colonial Afterlife of Political Arithmetic: Swift, Demography, and Mobile Populations,” *Cultural Critique* 56 (2004), 96–126, and Peter Buck, “People Who Counted: Political Arithmetic in the Eighteenth Century,” *Isis* 73:1 (1982), 28–45. See also Donald Winch, *Riches and Poverty: An Intellectual History of Political Economy in Britain, 1750–1834* (Cambridge: Cambridge University Press, 1996), pp. 80–1, 91; Peter Miller, *Defining the Common Good: Empire, Religion, and Philosophy in Eighteenth-Century Britain* (Cambridge: Cambridge University Press, 1994), pp. 349–412.

⁷ On political arithmetic, see Paul Slack, “Government and Information in Seventeenth-Century England,” *Past and Present* 184 (2004), 33–68; Julian Hoppit, “Political Arithmetic in Eighteenth-Century England,” *Economic History Review* 49:3 (1996), 516–40; John A. Taylor, *British Empiricism and Early Political Economy: Gregory King’s 1696 Estimates of National Wealth and Population* (Westport, CT: Praeger, 2005); William Peter Deringer, “Calculated Values: The Politics and Epistemology of Economic Numbers in Britain, 1688–1738,” unpublished PhD dissertation, Princeton University (2012), and William Deringer, *Calculated Values: Finance, Politics, and the Quantitative Age* (Cambridge, MA: Harvard University Press, 2018). On Petty, see McCormick, *William Petty*; Sabine Reungoat, *William Petty: Observateur des Îles Britanniques* (Paris: Institut National d’Études Démographiques [INED], 2004).

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and modern social engineering, which echoed his aspirations. In the seventeenth century, it characterized the figure of the “projector,” forerunner of the modern expert: A man with a new way of doing things, willing to use his knowledge to solve the world’s problems – for a price.⁸ As this implies, the knowledge Petty offered his royal and vice-regal patrons was not discovered but created. Population was a project.

Its formulation and articulation in the context of Restoration-era international economic and imperial competition, the Irish land settlement and the politics of religion have been studied. Less understood is the source of its novelty. Like all projectors, Petty worked to differentiate his offerings from the competition, and the slogan he chose was a portentous one: “number, weight, and measure.”⁹ Combining biblical authority with the rhetoric of Baconian philosophy, this triad justified Petty’s materials and methods (extrapolation of numbers from the partial evidence of parish registers of births, marriages and burials, London mortality bills and tax returns) while underlining the precision, practicality and impartiality of his conclusions.¹⁰ Much as Petty intended, political arithmetic became synonymous with quantification; to praise one, in the eighteenth century, was to praise the other. The converse was also true: When Adam Smith, in the *Wealth of Nations*, or David Hume, in his *Essays*, wished to cast doubt on the reliability of demographic figures, it was political arithmetic that they criticized.¹¹ Modern commentators have followed suit, seeing in political arithmetic the fountainhead, or at least the precursor, of a modern, statistical worldview.

Yet, what was most radical about Petty’s political arithmetic was not its rhetoric of quantification or its instrumental use of numbers, but its

⁸ On projecting and the projector, see Vera Keller and Ted McCormick, “Towards a History of Projects,” *Early Science and Medicine* 21:5 (2016), 423–44; Koji Yamamoto, “Reformation and the Distrust of the Projector in the Hartlib Circle,” *The Historical Journal* 55:2 (2012), 375–97.

⁹ See, for example, William Petty, *Political Arithmetick* (London: Printed for Robert Clavel and Henry Mortlock, 1690), sig. A3v, sig. A4v, p. 21. The triad originated in the apocryphal Wisdom of Solomon, 11:20: “thou hast ordered all things in measure and number and weight” (KJV); in his *Novum Organum*, Francis Bacon had advised “that all things in both natural bodies and natural powers be (so far as is possible) numbered, weighed, measured, and determined.” Francis Bacon, *The New Organon*, edited and translated by Lisa Jardine and Michael Silverthorne (Cambridge: Cambridge University Press, 2000), p. 229.

¹⁰ On the legitimating role of number, see Mary Poovey, *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society* (Chicago: University of Chicago Press, 1998), pp. 120–38; Deringer, “Calculated Values,” 1–46.

¹¹ See Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, 2 vols., ed. R. H. Campbell, A. S. Skinner and W. B. Todd (Oxford: Oxford University Press, 1979), vol. I, pp. 534–5; David Hume, “On the Populousness of Ancient Nations,” in David Hume (ed. Eugene F. Miller), *Essays Moral, Political, and Literary*, revised ed. (Indianapolis, IN: Liberty Fund, 1987), pp. 377–464, at p. 381.

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purpose, which Petty distinguished by an equally telling but less modern term: “transmutation.”¹² In the first instance, this meant “the transmutation of the Irish into English” by means of large-scale, forced “transplantations” of socially marginal English women. Mobilizing these women as gendered subjects much as naval impressment mobilized men (a comparison Petty made), political arithmetic applied to Ireland promised to exploit women’s customary household roles and natural reproductive capacities to effect the transformation of the Irish population into one with English language, manners, habits and allegiances. Applied to England, the same instrument might be used to manipulate the relative sizes of different religious constituencies or to adjust balances between different trades, transforming confessional and economic demography. Extended across the Atlantic, it might dictate the transformation of Indigenous girls into English housewives, while sparing England’s own “teeming” (marriageable) women for service at home. Political arithmetic should not be seen as a new mode of analysis; it was, rather, a new kind of governance. Its object was a knowable, measurable and above all manipulable population. Its essence was not quantification but a new kind of demographic agency, initially intended for the use of the state, but soon subject to appropriation and contestation from other quarters.

How might we investigate the history of this power, and of the conception of population that it required? To do so is not the same as investigating the history of demographic quantification, or of statistics, both of which have rich historiographies.¹³ The practice of gathering information about numbers of people and their property is ancient, while the modern census, in Britain, dates only from 1801; local or otherwise highly specific enumerations – urban censuses of the poor, lists of householders, militia musters and

¹² This is examined in McCormick, *William Petty*, pp. 168–258. On the role of alchemical metaphor in the formation of imperial ideology, see Ralph Bauer, *The Alchemy of Conquest: Science, Religion, and the Secrets of the New World* (Charlottesville, VA: University of Virginia Press, 2019). Bauer’s work, which came to my attention during revisions, argues persuasively for the influence of medieval alchemy and eschatology on European thinking about the New World, but leaves the subjection of Old World groups to “transmutative” projects out of account.

¹³ On the history of demographic quantification, see D. V. Glass, *Numbering the People: The Eighteenth-Century Population Controversy and the Development of Census and Vital Statistics in Britain* (Farnborough: D. C. Heath, 1973); Jacques Dupâquier and Michel Dupâquier, *Histoire de la démographie: la statistique de la population des origines à 1914* (Paris, Librairie Académique Perrin, 1985). On probability, see Lorraine Daston, *Classical Probability in the Enlightenment* (Princeton, NJ: Princeton University Press, 1985); Ian Hacking, *The Emergence of Probability: A Philosophical Study of Early Ideas about Probability, Induction, and Statistical Inference*, 2nd ed. (Cambridge: Cambridge University Press, 2006).

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registers of congregants – were common in the sixteenth century.¹⁴ These were hardly unrelated to governance, but they were rarely framed with a view to transmuting the people they counted in any fundamental sense. That is to say, such enumerations neither required any notion of population as an object of transformative intervention nor implied the existence of any agent capable of transforming it. Unless and until political arithmeticians appropriated them, indeed, such lists and registers scarcely even implied the existence of such a unit as a national population. Quantification came to be crucial to the conceptualization and exercise of demographic agency in the later seventeenth century, but nothing in the prior history of demographic figures made this outcome inevitable. To the contrary, the manipulability of human populations was conceived largely without reference to anything resembling empirical statistics. Its history lies elsewhere.

Approaching the question of power over population from the other end, we might look for answers in the development of the state apparatus. This has chronological and historiographical appeal: The formation of the “fiscal-military state” in Britain coincided with the “golden age of political arithmetic” that historians of economic thought have found between 1660 or 1688 and 1714; indeed, observers linked them at the time.¹⁵ Historians, however, have doubted the practical effect of political arithmetic on government, and although recent work suggests closer connections between them than once thought, other developments muddy the waters.¹⁶ The most important of these is the rethinking of the state itself, as narratives of secularization, bureaucratization and centralization have given way to studies emphasizing the diversity of initiatives and motivations, the importance

¹⁴ See Rebecca Jean Emigh, Dylan Riley and Patricia Ahmed, *Antecedents of Censuses from Medieval to Nation States: How Societies and States Count* (Basingstoke: Palgrave Macmillan, 2016). On the history of the national census in Britain, see Glass, *Numbering the People*; Kathrin Levitan, *A Cultural History of the British Census: Envisioning the Multitude in the Nineteenth Century* (New York: Palgrave Macmillan, 2011). For earlier enumerations in Britain and Ireland, see Colin R. Chapman, *Pre-1841 Censuses and Population Listings in the British Isles*, 5th ed. (Baltimore, MD: Genealogical Publishing, 2012); Jeremy Gibson and Mervyn Medlycott, *Local Census Listings, 1522–1930: Holdings in the British Isles*, 3rd ed. (Bury: Federation of Family History Societies, 1992).

¹⁵ On the “golden age,” see Hoppit, “Political Arithmetic,” 516–17. On political arithmetic, demographic information and the state, see Edward Higgs, *The Information State in England: The Central Collection of Information on Citizens since 1500* (Basingstoke: Palgrave Macmillan, 2004); John Brewer, *The Sinews of Power: War, Money and the English State, 1688–1788* (Cambridge, MA: Harvard University Press, 1988), pp. 221–49.

¹⁶ A compelling recent case for political arithmetic’s effectiveness is Deringer, “Calculated Values”; see also William Deringer, “Finding the Money: Public Accounting, Political Arithmetic, and Probability in the 1690s,” *Journal of British Studies* 52:3 (2013), 638–68. John Brewer, by contrast, has suggested that “political arithmetic promised much more than it could deliver”; Brewer, *Sinews of Power*, p. 224.

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of local, low-level officials as well as of popular politics and the diffusion of governmental functions among a variety of institutions, not least the church.¹⁷ Approaching population as a state concern, then, raises as many questions as it answers – for who constituted the state and what were its boundaries? Nor can such an approach account for an idea of population before there was a fiscal-military state to speak of, or for its later appropriation by nonstate actors. As odd as a history of demographic power would be without the state, it would not quite be *Hamlet* without the prince. Their coincidence was contingent and their relationship was unstable.

If histories of statistics and the state miss the mark, that of biopolitical governmentality – Michel Foucault’s name for a complex of discourses and practices geared to the government of life through a combination of institutional authority and self-regulation – comes closer.¹⁸ Not only is governmentality distinguished from earlier modes of power by its distinctive focus on population; not only is population itself grasped as a historically contingent concept, distinct from older notions of multitude; but this idea is also understood in such a way as to illuminate the rise of quantification and that of the state without collapsing into either. Each of these points informs the present study. Yet, problems hamper a biopolitical approach to early modern population thought. Locating the origins of modern governmentality in the later eighteenth century, Foucault treated political arithmetic as a “virtual” anticipation of something that only became “operational” a century later.¹⁹ Scholars of Britain and Ireland have addressed this by arguing for the chronological priority of English developments or by questioning the causal linkages Foucault presumed.²⁰ But this skirts deeper problems. First,

¹⁷ See especially Michael Braddick, *State Formation in Early Modern England, c. 1550–1700* (Cambridge: Cambridge University Press, 2000), and Steve Hindle, *The State and Social Change in Early Modern England, 1550–1640* (Basingstoke: Palgrave, 2002).

¹⁸ See, especially, Michel Foucault *Security, Territory, Population: Lectures at the Collège de France, 1977–1978*, edited by Michel Senellart and translated by Graham Burchell (Basingstoke: Palgrave Macmillan, 2007); Michel Foucault “Governmentality,” in Graham Burchell, Colin Gordon and Peter Miller (eds.), *The Foucault Effect: Studies in Governmentality* (Chicago: University of Chicago Press, 1991), pp. 87–104; Michel Foucault *The Will to Knowledge: The History of Sexuality Volume 1*, translated by Robert Hurley (London: Penguin, 1978), especially pp. 135–9.

¹⁹ Foucault, *Security, Territory, Population*, pp. 277–8.

²⁰ See Steve Pincus, “From Holy Cause to Economic Interest: The Study of Population and the Invention of the State,” in Alan Houston and Steve Pincus (eds.), *A Nation Transformed: England After the Restoration* (Cambridge: Cambridge University Press, 2001), pp. 272–98, at pp. 273–4; Andrea A. Rusnock, “Biopolitics: Political Arithmetic in the Enlightenment,” in William Clark, Jan Golinski and Simon Schaffer (eds.), *The Sciences in Enlightened Europe* (Chicago: University of Chicago Press, 1999), pp. 49–68, and Andrea A. Rusnock, *Vital Accounts: Quantifying Health and Population in Eighteenth-Century England and France* (Cambridge: Cambridge University Press, 2002), pp. 3–4; Nessa Cronin, “Writing the ‘New Geography’: Cartographic Discourse and Colonial Governmentality in William Petty’s *The Political Anatomy of Ireland* (1672),” *Historical Geography* 42 (2014), 58–71.

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by distinguishing modern governmentality sharply from both the preceding regime of princely sovereignty and from the pastoral power of the church, Foucault segregated two major loci of early modern demographic agency from the emergence of population.²¹ Second, by locating the distinctiveness of population, as an object of *biopolitics*, in its biological character, Foucault made its historical emergence as a concept dependent on the prior existence of “life” sciences and its analytical perspicacity dependent on linkages between governance and biological knowledge.²² Not only is empirical evidence of such connections sparse before the later eighteenth century – with the partial exception of “medical arithmetic,” which linked political arithmetic to questions of public health from the early 1720s – but focusing on them also means ignoring what other contexts for demographic thought might tell us about how populations and demographic agency came to be conceptualized.²³ To the extent that population is construed as a manifestation of biopolitical governmentality, it cannot describe what sixteenth- and seventeenth-century vernacular commentators, addressing populations in most metropolitan and colonial contexts, had in mind.

However, Foucault surfaces here in a second way. If ideas about the governance of populations and the locus of demographic agency have no obvious historiographical home, it is because they hover – as their early modern promoters and projectors did – at the margins or in the interstices of institutional and disciplinary life. They are neither methods of demographic analysis in the statistical sense nor doctrines in the sense given to “doctrines of population” as reasoned preferences for maximal or optimal numbers of people relative to resources; both mercantilist “pronatalism” and “Malthusianism” involve ideas about how populations work and where control over them is vested, but neither is defined by them.²⁴

²¹ On pastoral power, see Michel Foucault, “Omnes et Singulatim: Towards a Criticism of Political Reason,” The Tanner Lectures on Human Values, Stanford University, 10 and 16 October 1979, reprinted in Jeremy R. Carrette (ed.), *Religion and Culture: Michel Foucault* (New York: Routledge, 1999), pp. 134–52.

²² Foucault, *Security, Territory, Population*, pp. 11, 21–22; see also Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Random House, 1994), pp. 250–302. On the limits of biopolitics as an analytical category, see Patrick Carroll, *Science, Culture, and Modern State Formation* (Berkeley: University of California Press, 2006), pp. 113–42, and Aaron James Henry, “William Petty, the Down Survey, Territory and Population in the Seventeenth Century,” *Territory, Politics, Governance* 2:2 (2014), 1–20.

²³ On medical arithmetic, see Rusnock, *Vital Accounts*; Innes, *Inferior Politics*, pp. 131, 153–4.

²⁴ On methods of analysis, see, for example, Karl Pearson and E. S. Pearson, *The History of Statistics in the Seventeenth and Eighteenth Centuries: Against the Changing Background of Intellectual, Scientific, and Religious Thought* (High Wycombe: Charles Griffin, 1978). On “doctrines” or “theories” of population expressed as preferences for maximal or optimal numbers see Charles Emil Strangeland, *Pre-Malthusian Doctrines of Population: A Study in the History of Economic*

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(Nor, for the same reason, can ideas about demographic governance and agency usefully be characterized as attitudes to population, pro- or contra.) They neither rise to the level of theories nor descend to the details of policies – though they inform both. They are more like models or logics of demographic thought, tacit rules or conditions for seeing, thinking about and engaging with populations in a coherent way. They are epistemic structures. Unearthing them, sketching their shape and dimensions and tracing their implications for and connections to their historical contexts means digging beneath the history of disciplines, institutions or ideologies. It resembles what Foucault described as archaeology.²⁵

Yet, these ideas were not expressions of some all-embracing *episteme* or succession of *epistemes* that shaped the perception and cognition of an age or sequence of ages.²⁶ The ways of thinking about population traced here were subject to contestation even at the height of their influence, and unlike Foucauldian *epistemes* and Kuhnian paradigms, they changed slowly and subtly rather than suffering revolutionary ruptures.²⁷ Though they linked different areas of intellectual and practical activity, moreover, they were in important respects local. What this means is, admittedly, a matter of degree and of perspective. Trained as an intellectual historian to study individuals, texts and events, I am predisposed to understand the objects of my investigation in terms of specific political and intellectual contexts: The struggle over the Irish land settlement in the 1650s and 1660s; the impact of biblical criticism on sacred historiography in the 1670s, 1680s and 1690s.²⁸ A subject such as this, which both persists and

Theory (New York: Augustus M. Kelley, 1904); James Bonar, *Theories of Population from Raleigh to Arthur Young* (London: George Allen and Unwin, 1982); Joseph J. Spengler, *French Predecessors of Malthus: A Study in Eighteenth-Century Wage and Population Theory* (Durham, NC: Duke University Press, 1942); E. P. Hutchinson, *The Population Debate: The Development of Conflicting Theories up to 1900* (New York: Houghton Mifflin, 1967); Johannes Overbeek, *History of Population Theories* (Rotterdam: Rotterdam University Press, 1974).

²⁵ See especially Foucault, *Order of Things*, pp. xxi–xxii.

²⁶ As is implied in Foucault, *Order of Things*, pp. xxii–xxiii.

²⁷ On paradigms see Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 3rd ed. (Chicago: University of Chicago Press, 1996). On developments in historical epistemology before Kuhn and since, see Hans-Jörg Rheinberger, *On Historicizing Epistemology: An Essay* (Stanford, CA: Stanford University Press, 2010).

²⁸ Political contexts of comparatively tight geographical and temporal specificity – and texts of an elite intellectual caliber – have marked the “Cambridge School” of intellectual history since the early methodological work of Quentin Skinner; see Quentin Skinner, *Visions of Politics I: Regarding Method* (Cambridge: Cambridge University Press, 2002), especially pp. 57–89; see also Elizabeth A. Clark, *History, Theory, Text: Historians and the Linguistic Turn* (Cambridge, MA: Harvard University Press, 2004), pp. 130–55. A concern with the reception, appropriation and tradition has, however, expanded the temporal scope of some studies; the paradigmatic example is J. G. A. Pocock, *The Machiavellian Moment: Florentine Political Thought and the Atlantic Republican Tradition* (Princeton, NJ: Princeton University Press, 2003).

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changes over the course of centuries, and which intersects with a large number of other historical questions (economic and social policy, gender and sexuality, poverty and deviance, racism and slavery, colonialism and empire, communication and information, to name just the most obvious) affronts this habit. There is no single context for the development, articulation, appropriation or modification of ideas about how and by whom populations can be governed, any more than there is a single disciplinary tradition to which these phenomena belong.²⁹ A comprehensive study tying each iteration of these ideas over three centuries to a particular set of contingencies – a global account told as the sum of all local histories – would soon become incoherent.

My solution to the problem of making a big argument about durable ideas without losing all sense of context has been to pursue the subject episodically, and to narrow my principles of selection and angles of analysis for the episodes I examine. The most obvious contractions of focus are geographical and linguistic: With few exceptions, this book deals with English-language works and with works produced in England or by authors and presses in English colonial settlements in Ireland or North America. This decision is not just a matter of logistical necessity, however; there are positive reasons for treating Anglophone discussions of population as a category. The first is their richness and diversity – which is not to say originality, priority or uniqueness – throughout the period. Historians of early demographic thought concerned with doctrine or theory credit Jean Bodin and, especially, Giovanni Botero with setting discussions of population and its relationship to resources on a new course.³⁰ Historians of demographic or social policy have examined pro-natalist, poor relief, public health and data-gathering projects in France, Italy, Germany, the

²⁹ Historians of demographic ideas can draw as usefully on strands of constructivist history of science – notably its openness to multiple and heterogeneous contexts, and its attentiveness to the construction of putatively natural objects of knowledge – as on the histories of political or economic thought. On constructivism see Jan Golinski, *Making Natural Knowledge: Constructivism and the History of Science* (Chicago: University of Chicago Press, 2005); Steven Shapin, *A Social History of Truth* (Chicago: University of Chicago Press, 1994). The persistent linkage of demographic ideas to statistics and to bureaucratic institutions means that works taking this approach are mostly modern in focus: See Theodore M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, NJ: Princeton University Press, 1995); Geoffrey C. Bowker and Susan Leigh Star, *Sorting Things Out: Classification and Its Consequences* (Cambridge, MA: MIT Press, 1999); Libby Schweber, *Disciplining Statistics: Demography and Vital Statistics in France and England, 1830–1885* (Durham, NC: Duke University Press, 2006).

³⁰ Strangeland, *Pre-Malthusian Doctrines of Population*, pp. 99–107; Bonar, *Theories of Population from Raleigh to Arthur Young*, p. 16; Overbeek, *History of Population Theories*, pp. 31–2; Yves Charbit, *The Classical Foundations of Population Thought* (Dordrecht: Springer, 2011), pp. 43–62.