

Seeing “The Economy” as a Political Object

When Bill Clinton jested in his 1992 presidential campaign that “it’s the economy, stupid,” most who heard him presumably had no trouble understanding just what he was referring to. They would be stupid, after all, if they could not. But there is nothing self-evident about this elusive object, “*the economy*.” It is not only less than a century old but also impossible to perceive without the aid of abstract and partial measurements generated by vast, institutional, knowledge-producing networks. As this chapter will show, only under very specific conditions did it become possible to see and thus to speak about “the economy.” Over the course of the twentieth century, however, the novelty of both the phrase and the object was largely forgotten. This lack of historical sense has made possible the now common understanding of the economy as a naturally occurring, measurable, and representable object whose growth is necessary for the well being of a people and the legitimacy of a state. Yet instead of securing general prosperity, this representation of the economy has radically constrained contemporary politics—understood both conventionally, and in the broader sense this dissertation develops—by channeling its transformative energies and forces into new methods of production and consumption rather than new methods of belonging together.

Until the beginning of the twentieth century, the word “economy” was primarily used in its classical, Aristotelian sense, and until the beginning of the nineteenth century, with its classical spelling—*œconomy*.¹ Economy in this usage was the practice and skill of householding, somewhat analogous to the contemporary notions of business or management, and since Aristotle, economy fell under the domain of ethics. No entity called “the economy” was thought or said to exist as a distinct object in the world. Even the British political economists—including Smith in 1776, Ricardo in 1817, and J.S. Mill in 1848—did not use the expressions “an economy” or “the economy” to refer to their object of study but instead spoke of “the market.”² Only in the early 1930s, largely as a consequence of the institutionalization of national income accounting in Britain and the United States, did it become common to say “the economy” and refer to an objective entity whose growth or lack thereof could be measured and estimated on a regular basis (Mitchell 1998, 2002; Tribe 2015). From that point on, one no longer learned economy, but how to observe, measure, represent, and participate in *the economy*. Whereas the market was thought of as a system governed by rational laws, and about which merchants, financiers, or businesspeople have special knowledge, the economy was conceived of as an object that can be governed and altered, albeit only partially, by the state’s responses to regularly published, quantitative estimations of its performance.

Political *œconomy*, when the phrase first appeared in the seventeenth century, was therefore understood as the management of the royal household or of the metaphorical household

¹ Starting in the mid-eighteenth century, the word acquired a third (although second, chronologically) meaning and began to refer to a condition of scarcity or strict equilibrium, first within the field of natural philosophy and then within political economy (Schabas 2005). Writers in the nineteenth century refer, for example, to an economy of labor or to an economy of scale.

² Smith, for example, uses expressions like “managed with very good *œconomy*” and “with proper *œconomy*” (Nietzsche 2010, 45); he does, however, speak of “market prices,” “market rates,” bringing goods “to market,” and “the market” *sans phrase*. Ricardo refers to “economy in the use of labour” (1821, 1.36), but never to an economy; he, like Smith, speaks of taking commodities “to market” and of “the market price” and insists, for example, that “wages should be left to the fair and free competition of the market” (1821, 5.34). Mill, in a parallel fashion, writes that “there is on the whole a great economy of labour” and notes that “increased economy” is possible (1909, I.6.1, I.5.21).

of the nation as a whole; this usage was retained for nearly two centuries and can be found in both Rousseau and Adam Smith.³ Beginning in the early-nineteenth century, political economists described their discipline as one which studied the laws governing an autonomous market system (Dumont 1977; Myrdal 1990; Schabas 2005; Tribe 1978).⁴ Whereas political *æconomy* sought to augment the wealth and prosperity of the sovereign, political economy sought to use sovereign power to ensure the working of an abstract market that was said to exist whether or not a sovereign political authority was there to constitute and manage it. Only at the turn of the twentieth century was the discipline renamed economics (Tribe 2015, 83).

In explaining these transformations and the emergence of this independent economic domain, two accounts have been predominant, one from Weber and his followers, the other from Foucault and his. After briefly summarizing these competing accounts, I will then discuss my own critical contribution to these literatures. Although I adopt the discursive approach developed by Foucault, the critical purchase of my argument relies on the claims made by Weber and Habermas.

For Weber, as I explained in the Introduction, modernity in Europe was characterized by the differentiation of a unified society and worldview (*Weltanschauung*) into distinct value domains (1981b). Each domain or value sphere was associated with a different standard of value or type of rationality, and Weber associated the economic domain with instrumental rationality. In explaining the emergence of an independent economic value sphere, Weber primarily credited Calvinism and the Protestant work ethic (2001). Although the economic sphere was formally distinct for Weber, it was not completely autonomous insofar as it depended on the legal order and the latter's threats of coercion to function smoothly (Weber 1978, 329, 336). Weber saw the value spheres largely as equals—"warring gods" he called them—but nevertheless suggested on occasion that the economic sphere was slowly gaining control or dominance over the others. His famous image of the "iron cage" implied that the economic order would inevitably assume a position of hegemony, unable to be surmounted or overcome.

Two of Weber's prominent followers—Habermas and Polanyi—each develop this account, but unlike Weber they directly highlight rather than just hint at the ascendance of the economic domain. In traditional societies, Habermas notes in his early work, the economic system "remained dependent on the supply of legitimation from the socio-cultural system" (1975, 21). In modern societies, by contrast, the situation is reversed. Political institutions, no longer sanctioned by traditional (i.e. religious) sources of authority, now rely on the economic sphere in order to legitimate themselves: "the now autonomous economic exchange relieves the political order of the pressures of legitimation...the institution of the market can be founded on the justice inherent in the exchange of equivalents; and, for this reason, the bourgeois constitutional state finds its justification in the legitimate relations of production." (Habermas 1975, 22). Later, Habermas would refer to this process as the system colonization of the lifeworld (1985b). In Karl Polanyi's similarly Weberian description of modernity, "instead of

³ Rousseau understands political economy as "the government of the large family which is the state" (1997, 3). Smith defines political *æconomy* as "as a branch of the science of a statesman or legislator" (Smith 1904, IV.I.1). Ricardo defined political economy as the science to "determine the laws which regulate" the distribution of wealth between various classes (1821, P.3).

⁴ J.B Say, for example, emphasized a strict distinction between politics proper and political economy in 1803; he begins his *Treatise on Political Economy* by proclaiming that his contemporaries "have confused politics properly speaking, the science of government, with political economy, which shows how wealth is produced, distributed, and consumed" (1803, i, my translation). He insists, moreover, that "wealth is independent of the nature of government" (1803, ii, my translation).

economy being embedded in social relations, social relations are embedded in the economic system” (2001, 60). Polanyi also assigns an aura of inevitability to this process, even while he describes resistances to the market system, noting that “once elaborate machines and plant were used for production in a commercial society, the idea of a self-regulating market system was bound to take shape” (2001, 43). For Weber’s students, then, the economic domain inevitably assumes a hegemonic position in contemporary social formations.

Foucault discusses the independence of the economy during his studies of neoliberalism. His story focuses on the emergence of the concept of the population, which turned the analysis of wealth from the Aristotelian art of house-holding into “a new domain of knowledge, political economy” (2009, 77). Unfortunately, however, Foucault is not consistent in his usage of “economy” and “the economy.” For most of the lectures he uses “economy” understood in the Aristotelian sense. Once he even explicitly acknowledges the differences between eighteenth-century concepts and “what we now call ‘the economy’” (2009, 206). At least twice, however, he claims that the linguistic change happened in the eighteenth or nineteenth centuries.⁵ Foucault’s early followers followed the latter route and placed the birth of “the economy” in the eighteenth century (Tribe 1981; Firth 1998; Rose 1999; Poovey 1998; Schabas 2005). In this they agree with other scholars, namely Joyce Appleby (1978) and Louis Dumont (1977), who independently reach similar conclusions about historical understandings of the independence of the market in England but who do not comment on the novelty of “the economy” *per se*.

More recent scholarship by Foucault’s students, however, has resisted this tendency and stressed that the “the economy” did not emerge as a distinct phrase or concept until the 1930s (Mitchell 1998, 2002; Tribe 2015). Mitchell locates the emergence of “the economy” in the works of Keynes and in the field known as econometrics, both of which he describes as responses to the Great Depression (1998, 85–87, 2002, 5). He insists, moreover, that “the economy did not come about as a new name for the processes of exchange that economists had always studied” but was “an object that had not previously existed” before the twentieth century (2002, 5). Tribe concurs and claims that the idea of “a discrete domain of human activity dedicated to [economic] ends dates at most from the early nineteenth century, and in its current sense is much less than a century old” (2015, 23).

This chapter complicates the Weberian and Foucauldian stories about the constitution of “the economy” by distinguishing it from the constitution of “the market,” and before that, the “balance of trade.” Although Mitchell and Tribe are correct that “the economy” was itself a new object of knowledge in the twentieth century, efforts to measure the totality of national production were being proposed as early as the seventeenth century as part of a project to measure this “balance of trade.” Whereas the twentieth-century calculation of national income in order to represent “the economy” relied on statistical extrapolation and partial indices, these earlier efforts involved the physical measurement of production on a national scale. In between these two bookends, the eighteenth and nineteenth centuries witnessed not the birth of “the economy” but of “the market.” Although the market was (thought to be) largely differentiated

⁵ First, he claims that “the word ‘economy’ designated a form of government in the sixteenth century; in the eighteenth century, through a series of complex processes that are absolutely crucial for our history, it will designate a level of reality and a field of intervention for government” (2009, 95). And the next year he announces his intention to “talk about the application of the economic grid to a field which since the nineteenth century, and we can no doubt say already at the end of the eighteenth century, was defined in opposition to the economy” (2010, 240).

from the state, it was primarily understood in the nineteenth century as a system of rational laws, not as a discrete object which could be measured and represented quantitatively.

To sort out these two distinct transformations, I contrast three different ways the sum total of economic production has been seen, measured, and represented: as “the balance of trade” (seventeenth century), as “the market” (late-eighteenth century onward), and as “the economy” (twentieth century onward). As Susan Buck-Morss notes, “because the economy is not found as an empirical object among other worldly things, in order for it to be ‘seen’ by the human perceptual apparatus it has to undergo a process, crucial for science, of representational mapping” (1995, 440). Each of these three objects of discourse, I argue, is “observed” very differently, and these different methods of observation engender very different representational maps. Each representation, in turn, resonates with and prefigures certain policy responses over others.⁶ The balance of trade was observed and calculated with measurements taken on the ground by an extensive surveillance network of tax collectors whose accounts were then collected, centralized, and organized; the market was envisioned in the minds of political economists as the expression of rational laws; and the economy was seen in the pamphlets, pages, and data sets of economists as a set of numerical indicators generated by statistical techniques. This episodic history reveals that although “the economy” was a new concept in the twentieth century, it nonetheless occupied a discursive terrain that had been developed nearly three centuries prior.

My account of the emergence of the market and the economy depicts both of them as historical, politically-created and fragile objects, rather than as naturally occurring systems whose laws constrain any and all attempts to transform a social formation. One can find this latter account of the economic domain not just in Weber, but in Hayek and his colleagues as well.⁷ Furthermore, the contemporary principle that the state should be concerned above all else with ensuring economic growth relies on this naturalized image of the economy that I historicize. As Bill Clinton’s famous quip proves, contemporary governments still rely on a growing economy in order to legitimate themselves. When the economy is thought of as a spontaneously generated, independent domain governed by its own immanent logic, however, the possibilities of political transformation are foreclosed prematurely. Rather than guiding markets, states are now said to themselves be subject to market logic. One prominent example of such constraint can be observed in the hesitant responses most nation-states have offered to the problem of climate change. Any large-scale action that could reverse or halt climate change is presumptively suspect because it would disrupt “the growth of the economy.” This representation of the economy therefore performs a policing function, in the sense that Ranciere ascribes to the term, by partitioning the sensible and determining what can be seen and what can be said. As I will discuss in the final section, contemporary measurements and representations of the national economy policy a partition of the sensible in which some activities are seen, counted, and valued while others remain invisible and left out of the accounts.

My story therefore operates in two registers, one historical and one polemical. Speaking

⁶ James Scott has made a similar, albeit more general, argument about the political connections between knowledge, sight, and legibility in his monograph *Seeing like a State*: “Certain forms of knowledge and control require a narrowing of vision. The great advantage of such tunnel vision is that it brings into sharp focus certain limited aspects of an otherwise far more complex and unwieldy reality. This very simplification, in turn, makes the phenomenon at the center of the field of vision more legible and hence more susceptible to careful measurement and calculation” (1998, 11).

⁷ Angus Burgin, however, has documented the “complex tensions confronted by market advocates in the postwar era” (2012, 9) and emphasized the distance that emerged between Hayek and Friedman in particular (2012, 11).

historically, I show how the economy was created by politics and is maintained by politics. Concurring with Unger that “history is vision, because history is also fighting” (2004a, xix), I want to expose polemically the ways in which concern for the economy has constrained contemporary politics. To live and work in the economy is to live politically, not naturally or freely, as liberals and neoliberals alike maintain. In other words, *homo economicus* is a subspecies of *homo politicus*. This point echoes and takes up Kathi Weeks recent call to resist the “depoliticization of work” and thereby to treat working as a political activity (2011, 4). Discursive practices that both constitute and assume the existence of the economy—including but not limited to daily news accounts of the economy's growth, constant refrains about the economy as the cause of an individual or a nation's ills, and the daily act of performing work in order to help the economy run—are paradigmatic political acts that maintain a social formation obsessed with the performance of the national economy.

In what follows, I begin by describing the transformation in the English evaluation of commerce in the late-seventeenth century. The next section details Charles Davenant's late seventeenth century efforts to measure the totality of English production in order to calculate the balance of trade. In the third section, I discuss the efforts of the classical political economists to cordon off the market and describe the rational laws that govern it. Narrating the transition from the market to the economy, the next section focuses on the roles played by both colonial administrators and railroad corporations in the US and Britain. Finally, I describe the creation of the economy in the works of Keynes and his American contemporary Simon Kuznets. The conclusion considers the contemporary, twenty-first century means by which the fiction of the independent economy is maintained.

Merchants, Public Finance, and Commercial Virtue

The slow legitimization and eventual glorification of commerce during the seventeenth and eighteenth centuries established the framework in which later attempts to observe and measure production on a national scale were worked out. More specifically, before the market system was said to be governed by natural and predictable laws, the world of commerce was thought to be characterized by turbulence and chaos (Dickson 1967; Pocock 1990). Commercial activities with profit as the primary goal, moreover, had long been deemed immoral by Christian authorities (Appleby 1978; Weber 2001). Only slowly, over the course of two centuries, did commerce for profit begin to appear virtuous rather than sinful in the European world. Whereas Weber emphasized the religious impetus of this transformation by connecting it to the rise of Protestantism and its worldly asceticism, I focus on its political character. In particular, the English, later British state's need for mercantile knowledge—and eventually for the vast sums of money the merchants and financiers had accumulated—set the stage for a radical reversal of the English evaluation of commerce.

Before this re-evaluation was complete, however, apologists for commerce spent a long time trying to legitimate their favored practices. Popular opinion at the time was heavily against the new financial and commercial revolution. Joyce Appleby isolates three focuses of criticism in the seventeenth century: “the grain trade, the conversion of commonly held land to private property, and the lending of money for interest” (1978, 52). Peter Dickson singles out the common accusation that the growth of the national debt benefitted the powerful and moneyed interests rather than the common interest (Dickson 1967, 17; see also Hont 1990). The market for government securities that developed in London attracted particular attention (Dickson 1967, 22–

23). And E.P. Thompson has argued that overcoming these criticisms involved juxtaposing a new, commercial logic against an older, embedded, moral logic (Thompson 1971).

One of the most important early technologies used by English merchants to establish their virtue and credibility, double-entry bookkeeping, came from the Dutch by way of the Venetians (Poovey 1998). Because of the commercial successes of the Dutch Republic, the English were anxious to adopt the tools needed to catch up (Appleby 1978; Dickson 1967). Mary Poovey has argued that the spread of double-entry booking to England helped enable merchants to appear truthful, virtuous, and important to their contemporaries; “as a *system of writing*, double-entry bookkeeping produced effects that exceeded transcription and calculation. One of its *social* effects was to proclaim the honesty of merchants as a group” (Poovey 1998, 30).⁸ As her account reveals, the method of accounting provided a way for merchants to display their credibility and prove their trustworthiness in the form of written accounts; if the balance was the same on both sides of the ledger, the merchant could demonstrate that any profit was legitimately earned.

Being able to point to socially validated, visible techniques also helped merchants claim access to special forms of knowledge. Examining the early-seventeenth century debate between Misselden, Malynes, and Mun about the nature of money, Poovey explains that in the early-seventeenth century “the most prominent innovation” was the “argument that merchants possessed critical expertise about ‘trade’ and that only they knew how to read existing records so as to generalize knowledge about ‘commerce’” (1998, 67). These records—the product of a new emphasis on written, formalized accounting—helped to render “the general system of commerce visible...In the face of such accounts, the prince will then be able to see the nation’s wealth, and with the help of the merchant experts, he will be able to evaluate and enhance the nation’s greatness” (1998, 78). The emphasis on vision is literal, for being able to see numbers on the ledger was important. Double-entry bookkeeping, and other systems of formal accounting, helped establish a precedent whereby numerical representation was used to visualize, represent and analyze systems of production.

In addition to establishing their moral credentials, merchants and financiers needed to demonstrate their political virtue within a social formation historically organized around landed wealth. According to J.G.A. Pocock, at the turn of the eighteenth century English/British

political thought became engrossed with the conscious recognition of change in the economic and social foundations of politics and the political personality...these changes in perception came about through the development of a neo-Machiavellian, as well as neo-Harringtonian, style in the theory of political economy, in response to England’s emergence as Britain, a major commercial, military, and imperial power. (1975, 423)

In Pocock’s account, the theory of political economy was neo-Machiavellian because it sought to reconfigure the meaning of virtue, tying the latter to political outcomes rather than to classical ideals or morals. In the case of Britain, the political economists attempted to dissociate virtue from land and nobility and ground it instead in credit and wealth. Such was the core of the conflict between the country and court ideologies. As Pocock notes, “the rapidly developing style of political economy...took shape around the varying relationships which publicists were prepared to allow between land, trade, and credit as sources not merely of public wealth, but of political stability and virtue” (Pocock 1975, 426). But as the British state continued to borrow vast sums of money, its credit, rather than the wealth of the old aristocracy, was increasingly essential to the success of its projects, especially its wars (Brewer 1990). The money which the landed nobility would not provide was found elsewhere. Pocock shows that eighteenth-century

⁸ Emphasis original. Unless noted otherwise, all italics in quotations are original.

“political economics marks the moment when the trader—and, still more pressingly, the financier—was challenged to prove that he could display civic virtue in the sense that the landed man could” (1975, 445). An appeal to supposedly stable and predictable laws of commerce, conceived as a semi-autonomous system, made it possible for political economists to connect virtue with the opportunities provided by commercial wealth. And by lending their newly acquired wealth to the state (at low rates of interest), the merchants and financiers, i.e. the bourgeoisie, could demonstrate their commitment to the nation and disprove the charges of the landed aristocracy that they sought merely to profit from the state’s wars.

Of particular importance in bringing about this reevaluation of commerce was the East India Company. Chartered in 1600, the Company was granted a monopoly on Indian trade, but for two and half centuries faced numerous obstacles in maintaining this monopoly. The Company’s continued existence and profitability therefore “depended upon demonstrating the autonomy of the world of commerce and its own pivotal role within it” (Ogborn 2007, 130). In order to trade at great distances effectively, Miles Ogborn has shown, the Company developed new accounting practices whose “aim was to ensure that London annually received a uniform, legible, and combined set of accounts revealing the nature of the Indian trade” (Ogborn 2007, 86). The company eventually waged a public campaign in order to defend both foreign trade and its continued role within it (Ogborn 2007, chap. 4). The regular publication of its stock value by the end of the seventeenth century, moreover, “made possible a reliable depiction, for subscribers anywhere in the country, of the standing of markets in other places and, over time, their rise or fall” (Ogborn 2007, 188). Lastly, the vast sums of money the Company and its stockholders accumulated became particularly important sources of loans to the state. Ogborn notes that the Company and other joint-stock companies like it were “the greatest source of loans to the state before 1720” (2007, 166).

The primary institutions for making England’s commercial wealth available to the state were created in the last decade of the seventeenth century: the Bank of England, the National Debt, a market for public securities, and a system of long-term credit enabling the state to borrow large sums of money to supplement its tax revenue. This credit system included selling of annuities, public lotteries, and stock in government chartered corporations such as the East India and South Sea Companies (Braddick 1996; Brewer 1990; Dickson 1967; Roseveare 1969). By the time the English financial system had been established, the French and the Dutch had already implemented long-term borrowing schemes, and the English were anxious to catch up (Appleby 1978; Dickson 1967). And as Pocock notes, “in what has been called the ‘financial revolution’ that began in the nineties, means were found of associating the national prosperity directly with the stability of the regime, the expanding activities of government and—most significantly of these—the prosecution of war” (1975, 425; see also Poovey 1998, 151). The new system of public credit “enabled England to spend on war out of all proportion to its tax revenue” (Dickson 1967, 9). Managing the public debt was thus a constant concern for eighteenth-century British politicians, especially Walpole and Pitt. Qualified mass participation in the new financial revolution, however, helped institutionalize the linkages between the state’s ability to wage wars and its reliance on commercial wealth. The state benefited from its access to new sums of money, and those with money benefited from “a whole range of securities in which mercantile and financial houses could safely invest, and from which they could easily disinvest” (Dickson 1967, 11). The money accumulating in London could now be safely put to use. The credit system created a feedback loop between the financing of the state, the waging of war, and the generation of new wealth for those who lent that money to the state.

Before there was a market system or an economy to study, there was simply commerce in its sundry manifestations of agriculture, trade, manufacture, etc. Until these activities were deemed legitimate, moral, and virtuous, they were not examined as objects governed by any sort of law. The pre-history of the economy, then, begins with the neo-Machiavellian re-evaluation of commerce that closed the seventeenth century and inaugurated the British empire.

The Excise, Political Arithmetic, and the Visibility of Production

During the same period in which the English system of public credit was developed, the other means of revenue collection—especially the Excise tax—were also expanded. The Excise was levied on certain staple goods at the point of production and paid by the producer. The success of the Excise, moreover, required a vast system for both observing and standardizing the production of staple commodities in England (Ashworth 2003; Brewer 1990; Ogborn 1998). The kinds of records gathered by the Excise office, along with other revenue departments like the Customs and the Treasury, helped to constitute a visible domain of production and exchange that could later be re-imagined as a market system.

After the Restoration, the Stuarts abandoned the traditional practice of tax farming in favor of the direct collection of taxes by state agents (Ashworth 2003; Brewer 1990; Roseveare 1969). This switch ensured that the crown had a steadier flow of income but required the development of a much larger bureaucracy for revenue collection. The new source of regular income, importantly, gave the state new potential revenue streams which could be used as promised collateral for larger and larger public debts.

The most significant change in the tax system, however, was the growth of the Excise administration. Brewer notes that “Excises became the largest category of taxes, employing the biggest body of officials, and the Excise Office a byword for administrative efficiency” (1990, 67–68). In fact, “the customs and excise taxes, the chief source of ‘ordinary’ royal income before the Glorious Revolution, continued to provide almost all indirect tax revenue for most of the eighteenth century” (Brewer 1990, 95). Charles Davenant, commissioner of the Excise during the 1680s and largely responsible for the reorganization and growth of the office, explicitly acknowledged the function of the new taxes and affirmed in 1695 that “excises seem the most proper Ways and Means to support the government in a long war” (1771a [1695], 62).

The excise administration, moreover, was perhaps the first institution to see a system of production governed by predictable or natural laws. As William Ashworth notes, “not only did the excise officer have knowledge of the mysteries of trade and production, but he was also a key component in defining and making them visible” (Ashworth 2003, 211). Davenant, for example, professed not only that “the excise, and number of houses and hearths, are no ill measures to form a judgment by, of the trade, wealth, and abilities of a country” (1771a [1695], 40) but also that “the excise is a measure by which we may judge, not only of what the people consume, but, in some sort, it lets us into a knowledge how their numbers increase or diminish” (1771b [1698], 136). The figures produced by the excise, Davenant claimed, generated new kinds of knowledge about production, trade, consumption, and the population; all were considered desiderata in a time when the sovereign’s wealth and power was said to be directly dependent on the size of the population. He notes that before 1674, the excise farmers did not have to hand over their accounts, and thus such knowledge was unavailable to the crown. Davenant clearly saw the epistemological implications of his new Excise administration; it generated the knowledge

necessary to assess and evaluate the size and wealth of a population.⁹

To make the system of production in England visible, measurable, and therefore taxable, the Excise Office undertook a massive campaign to record and categorize the economic activities of the nation. The Excise commissioners walked the English countryside and assessed the tax on producers of the relevant commodities: “the Excise was a highly centralized system of revenue collection...The officers who gauged excisable commodities in the countryside—beer, malt, hops, salt, candles, and leather—numbered between 1000 in 1690 and some 2800 in 1780” (Brewer 1990, 102). Miles Ogborn argues that

Davenant’s circuits—and the work he performed through them—constructed, adjusted and carefully maintained a network of people (gaugers, supervisors, collectors, magistrates, brewers), instruments (seal measures, casks, tuns, the semicircular rule), and documents (running stock books, brewers’ ledgers, scribbled calculations, legal decisions, and his own diaries). (1998, 305)

The Excise Office created schemes for observing a vast chunk of the nascent English system of commodity production. To represent this system, however, the Excise officers first attempted to see it on the ground, so to speak, and thus they went on their daily and weekly rides. Davenant was therefore dismayed that “as to the excise, all who know that revenue must grant that, in the north and west, the country in many parts is so wild, and the houses lie so dispersed, that the retailers cannot be so well watched as in the home counties” (1771a [1695], 45). Direct, physical observation of the entirety of the nation’s economic activity was the goal of Davenant’s project. The expansion of the Excise, however, met with considerable resistance from producers who attempted to escape the gaze of the officers and from the general population upset with price increases (Ashworth 2003; Thompson 1971). Almost a century later, a market system could appear to the political economists only because of this vast, institutional, data-gathering mission which for Davenant was intended to raise revenue efficiently, not to describe a system governed by natural laws. The supposed discovery of those laws was almost a by-product of Davenant’s efforts; he did not set to create or to find an economy.

The excise officers surveyed and made visible the activities of the various producers who were taxed, and their supervisors surveyed and made visible the work of the riding officers. Consequently, “in recasting trust and objectivity in this way, the excise pursued a rigorous method of reflexive endeavor and practice. The whole process involved in the production of a taxed good had to be visible to the excise officer, while the excise officer’s own activities and method had to be visible to his watchful superiors, and indeed to the manufacturer” (Ashworth 2003, 118). As a result of the various operations of the Excise designed to render visible the production in the English territory, “the phantasms of a commercial world in motion characterized by trade, mobile property, and credit could be mapped (bookkeeping) and thus ostensibly grounded in fact—or at least a language that sounded like fact” (Ashworth 2003, 90). In short, it was the appearance of regularity in the Excise revenue that helped convince the English state that the world of commerce was governed by laws rather than the whims of fortune.

The Excise, moreover, did more than make visible the English system of production; the

⁹ Foucault has demonstrated that the emergence of the concept of population enabled the discipline of political *æconomy* to abandon the study of the household as the unit of production. As Foucault writes, “the perspective of population, the reality of phenomena specific to population, makes it possible to eliminate the model of the family and to re-focus the notion of economy on something else” (Foucault 2009, 104). Defining this something else, however, became the central occupation of the first theorists of political *æconomy*. Further aiding this transformation was the general disregard for Aristotelianism promoted by Royal Society (Poovey 1998, 110). The rejection of teleology opened up new possibilities for the activities long confined to the domain of ethics.

need for such visibility also helped to standardize the instruments and processes for producing excised commodities. In more general terms, “the excise, especially, was instrumental in defining the method, materials, and architecture of production” (Ashworth 2003, 6). The success of the Excise in collecting the tax efficiently “ultimately required an attempt to regulate its qualities and for the site of production to be reconfigured to meet the excise’s process of measurement” (Ashworth 2003, 6). In order to open a brewery, for example, the prospective brewer has to give notice to the local Excise officer who had to approve the brewery’s design, lest brewers hide pipes in the floor in order to siphon off beer before it could be gauged by the officer (Ashworth 2003, 212; Ogborn 1998). The containers used for brewing, moreover, were standardized so that the Excise officers’ gauging instruments could measure accurately. The excise taxes thus helped constitute a market system in a second sense. They not only made the domain of production visible, but also made that domain into a system by standardizing the common methods of production.

Davenant, importantly, understood his project of measuring and estimating domestic production as an example of what was known as the time as Political Arithmetic, named such by its inventor William Petty. Simply put, political arithmetic was a method designed to measure and then alter a population. Petty developed it from the 1650s through the 1680s in the form of two published treatises and numerous privately circulated pamphlets (McCormick 2009). Petty’s particular goal was to estimate the size of the Irish and English populations in order to “transmute” the Irish into English by means of a specific number of intermarriages (McCormick 2009, 10, 305). In order to explain how this transmutation would be accomplished, Petty relied on the survey of Ireland he conducted for Oliver Cromwell and the statistical techniques he developed with his colleague John Graunt; political arithmetic was consequently associated with the development of mathematics and other forms of numerical representation (McCormick 2009, 291). Petty’s disciples, Davenant included, effected “a real change in the meaning of political arithmetic: once explicitly an art of government, it was now, its practitioners stressed, an art of reasoning” (McCormick 2009, 298). Whereas Petty thought of political arithmetic as an art to be used by the sovereign and circulated his ideas primarily as pamphlets distributed privately to political elites, his disciples sought to expand its reach considerably.

Davenant played an important role, for he “worked to reinvent political arithmetic as a putatively apolitical tool of quantitative analysis suitable for an expanding fiscal-military bureaucracy (of which he was himself an agent) and available, via the printing press, for use in parliamentary and public debate” (McCormick 2009, 299; see also Ogborn 1998, 293; Buck 1982). Davenant, as previously mentioned, endorsed the use of political arithmetic to help Britain finance its continental wars after the Glorious Revolution. For Davenant, restoring England’s financial situation required restoring its “Balance of Trade” so that wealth would again flow into the country. Advancing the art of political arithmetic required knowledge of what was produced in “every county and place” and in addition which commodities were imported and which exported (1771a [1695], 40). By means of this knowledge, Davenant claimed, it would be possible to understand the workings of a country’s commerce, but more importantly, the systematic nature of that commerce: “this art alone can shew the links and chains by which one business hangs upon another, and the dependence which all our various dealings have upon the other” (1771b [1698], 147). The links and chains Davenant mentions span the entire domain of commercial activity. Davenant therefore emphasizes that the computations he wishes to perform would require one to have knowledge about the “wealth, stock, product, consumption, shipping, exportations and importations of his country” (1771b [1698], 147). Davenant lists

together the activities that later theorists would unify as “the market” or “the economy” and even remarks on their inter-dependence, but he does not cordon them off as a distinct, autonomous, or independent domain. He refers to them merely as “all our various dealings.”

The data collected by the Excise quickly became important to the rest of the government: “the steady flow of information meant that the excise commissioners could deal quickly and effectively with inquires from other branches of government. When the Treasury wanted statistics on candlemakers or the War Office figures on the number of innkeepers who might be pressed into billeting, the Excise could provide the requisite data promptly” (Brewer 1990, 112). The Excise was aided in data collection when the Office of the Inspector-General of Imports and Exports was created in 1696 (Brewer 1990; Poovey 1998). Davenant was so faithful in the knowledge produced by the Excise that he claimed “the books of hearth-money, and the late polls, have likewise given us such an insight into the number of people, and the abilities of the respective families, that it would not be difficult to make some computation, what the excise upon any commodity would produce” (1771a [1695], 69). The consolidation of this knowledge was aided by newly established supremacy of the Treasury. In the 1680s, the Treasury successfully monopolized authority over public finances and “as the Treasury gained control over spending, so it acquired a monopoly of comprehensive fiscal knowledge” (Brewer 1990, 92; see also Roseveare 1969). The centralization of knowledge about finance—and later domestic production—helped make visible to specific individuals an aggregate of activities that had begun to look more alike than different. The clerks of the Treasury became gatekeepers of economic knowledge.

Petty and Davenant, then, campaigned for and defended the collection of the kinds of records that would make the newly invented concept of the population visible to certain experts, just as double-entry bookkeeping and other forms of accounting made the world of commerce visible to merchants and financiers. The Excise relied on a system of direct, standardized observation, although as the records were passed up the bureaucratic chain, the system of production was represented more and more abstractly. This mode of representation is in contrast to what will come next; rather than attempting to see the totality of the market system in the flesh and measure its size, political economists work with supposedly rational abstractions from step one.

Classical Political Economy and the Constitution of The Market

The histories of economics that do not ideologically begin with Adam Smith tend to trace the discipline’s origins either to Petty’s *Political Arithmetic* or to Francois Quesnay’s *Physiocracy* (Myrdal 1990; Dumont 1977; Hirschman 1977; Buck-Morss 1995; Foucault 2009, 2010; Harcourt 2011). Quesnay’s famous *Tableau Economique* depicted in 1758 what is often treated as the first representation of an economic system. As the previous section has demonstrated, however, the notion that commerce is ordered and systematic was prominent in the late-seventeenth century, well before Quesnay. Two other recent studies, in particular, support this claim. Margaret Schabas points to natural philosophy and its concept of the *œconomy* of nature as an inspiration for the classical political economists’ idea of a market system (2005). Mary Poovey, however, argues that experimental moral philosophy, rather than political arithmetic or physiocracy, was the direct source of Smith’s concept of the market system (1998). When the concept of the market was finally enshrined as the central abstraction of the discourse of political economy, it was visualized and represented as a system governed by rational, inexorable laws. Discovering and articulating these laws took precedence over measuring and accounting. The

classical political economists therefore established a rigid distinction between their discipline and statistics. They discovered and created not “the economy” but rather “the market.” I will begin with the accounts of Schabas and Poovey before turning to the classical political economists directly.

Schabas argues that the natural philosophers, beginning with Linnaeus, developed the first idea of an economic system with their concept of an “*œconomy of nature*.” “Until the mid-nineteenth century,” she notes, “economic theorists regarded the phenomena of their discourse as part of the same natural world studied by natural philosophers. Not only were economic phenomena understood mostly by drawing analogies to natural phenomena, but they were also viewed as contiguous with physical nature” (2005, 2). To support her argument, Schabas points out that “many of the contributors to political economy in the period were also engaged in natural philosophy. Some of the names that stand out are William Petty, John Locke, Carl Linnaeus, Adam Smith, Thomas Reid, François Quesnay, Antoine Lavoisier, and A. R. J. Turgot” (Schabas 2005, 6). Natural philosophy, the antecedent to mechanical philosophy, sought to uncover and discern the nature of things, i.e. their Aristotelian *telos*. The most important natural philosopher in Schabas’ account is Linnaeus, who not only worked as a biologist but was also instrumental in establishing the disciplines of political economy and cameralism in Sweden (Schabas 2005, 40). Schabas demonstrates, furthermore, that Quesnay conceived of his economic system both as part of nature and governed by the same laws that governed everything else (Schabas 2005; see also Polanyi 2001, 141–142). In other words, this system was not autonomous and independent; it was ordered, but only because it was part of a larger universe defined by order. Quesnay thus analogizes the economic system to the human body, understanding both as organic bodies rather than abstract systems.

For Schabas, Linnaeus’ “popular tract *Oeconomia Naturae* (1749)” provides “the first picture of an economy, that is, of a complex set of relations sewn together by supply and demand, with substitutability and mobility of resources” (2005, 29, 30). According to Schabas, as long as the economy was understood to be a part of nature, it was neither autonomous nor governed by its own set of laws. She thus credits J.S. Mill rather than Adam Smith with the “de-naturalization” of the economy insofar as the former emphasizes the human and social origins of the market. I contend, however, that Schabas errs in describing this idea as the first picture of an economy. Even though the word *oekonomia* is used, it denotes a state or system of scarcity, not an index or representation of the totality of economic activity of the sort that Davenant and later, Keynes, desired. An economy conceived as a harmoniously balanced system is not quite the same as “the economy” conceived of as a unitary entity capable of growth, as the next sections will explain.

Poovey, however, has argued that eighteenth-century experimental moral philosophy, “not political arithmetic, was the disciplinary antecedent to political economy” (1998, 19). It was moral philosophy, she insists, that provided the crucial notion of an abstract system that organizes the world behind the scenes. Experimental moral philosophy, developed during the eighteenth-century Scottish Enlightenment by figures such as Francis Hutcheson and David Hume, was concerned with discovering the universal principles of human subjectivity as well as “the origins of modern society and especially how ‘rude’ societies became ‘civilized’” (Poovey 1998, 215). Because this history of the transition from savagery to civilization had to be constructed without physical observation of the event described, “the Scottish historians used the experimentalist’s assumptions that some system organizes the phenomenal world and that human nature is universal to ‘conjecture’ what they could not document” (Poovey 1998, 215). Where

physical observation was impossible, imagined observation would have to suffice. These assumptions were necessary to solve the problem of induction from observed particulars that Hume had revealed; the assumed system governing the world therefore ensured that future events would resemble past ones. This process of conjecture and abstraction was expanded and as a result “abstractions like ‘the human mind’ were *produced by the method of conjectural history itself* in order to make something that exceeded any individual incarnation available to intellectual contemplation” (Poovey 1998, 224). Poovey maintains that Smith’s concept of a market system was inspired by Hutcheson and Hume’s conjectural abstractions, rather than Petty’s population measurements, Linnaeus’ *Oeconomia*, or Quesnay’s *Tableau*.

Schabas and Poovey demonstrate, then, that numerous discourses during the eighteenth century relied upon and proffered strong concepts of ordered systems in order to explain the world around them. Whether in natural or moral philosophy, eighteenth-century thinkers insisted that their objects of study could be understood as abstract systems governed by rational laws. The break that Smith, Ricardo, and Mill would collectively accomplish thus stemmed from their attempt to describe the laws of ordered markets as different from the laws governing other natural domains. The market would become not just ordered, but independent and autonomous.

The word of choice for the classical political economists in describing their object of study was the market. They wrote about the importance of the market price, of the means by which goods went to market, of the markets in labor, grain, and other commodities, and even about the market *sans phrase*. The word market initially referred to legally delimited spaces for commercial exchange, but by the sixteenth century the meaning expanded to encompass an abstract space or process constituted wherever exchange was possible (Agnew 1988, 41). The new meaning of the word, moreover, was linked with the erosion of feudal restrictions on the places where commercial exchange could occur (Agnew 1988, chap. 1).

In the texts of the political economists, the word still ambiguously refers both to places and processes, but there is a heavy presumption favoring the latter meaning. Smith notes, for example, “as it is the power of exchanging that gives occasion to the division of labour, so the extent of this division must always be limited by the extent of that power, or, in other words, by the extent of the market. When the market is very small...” (1904, I.3.1). Smith equates “the market” with “the power of exchanging,” but nonetheless refers to it in spatial terms with adjectives like “limited” and “small.” In another telling instance, Smith writes that “fluctuations affect both the value and the rate either of wages or of profit, according as the market happens to be either over-stocked or under-stocked with commodities or with labour” (1904, I.7.19). Here the market refers to the sum total of commodities that can be exchanged, labor included. Occasionally, he refers to the market of a specific country. But in each case he refers to the market as an abstract entity that is nonetheless spatially bounded, materially or metaphorically.

According to the political economists, the market grows by means of geographical or physical expansion, through either foreign or colonial trade, and by means of sustained capital accumulation. Ricardo therefore writes of “the extension of the market” in his chapter on foreign trade and states in his chapter on taxes that “when the annual productions of a country more than replace its annual consumption, it is said to increase its capital” (1821, 7.6, 8.2). J.S. Mill notes, similarly, that societies which experience progress “increase gradually in production and in population” (1909, IV.1.2). Neither writer seems interested, however, in calculating precisely just how production is growing. Commenting on the lack of “composite indices routinely published and circulated in the public or industry press,” Poovey argues that “it was not possible in the early nineteenth century to mistake a particular index or average for the market as a

whole...nor was it possible even to conceptualize ‘the market’ as a unified and animated social agent” (2001, 406). For the nineteenth-century political economists, a market can grow and develop, remain stationary, or shrink and devolve, but no institutional effort attempted to measure that movement as whole.

The political economists claimed to know and represent the market by describing the laws regulating it. The emphasis on discovering these laws united the projects of Smith, Ricardo, and Mill. All three stressed the rational, largely *a priori*, description of the laws which govern the system of market exchanges. In other words, the political economists abandoned the aims of political arithmetic and political economy as both were understood in the early-eighteenth century. Petty and Davenant sought the collection of records for production and trade and stressed that only through the study of such records could knowledge be produced about commerce. Smith, however, professed to “have no great faith in political arithmetic” (1904, IV.5.69). In the early-nineteenth century, the influential popularizer of Smith and Ricardo J.R. McCulloch insisted on the separation of political economy and statistics (Poovey 1998, 305; Kalpagam 2014, 139). J.S. Mill was perhaps the most emphatic. He characterizes political economy “as essentially an *abstract* science, and its method as the method *à priori*. Such is undoubtedly its character as it has been understood and taught by all its most distinguished teachers. It reasons, and, as we contend, must necessarily reason, from assumptions, not from facts” (Mill 1874, V.46). The political economists, like the political arithmeticians, used numbers and were no strangers to mathematics, but unlike the latter they were not interested a numerical representation of the market as a whole but of the rules which govern that market.

The forms of vision they relied on, then, were above all else abstract in character. They saw the market at work by imagining its pure, ideal, and rational form. Although the market of which they spoke could supposedly be experienced in the flesh, it could never be seen in such a fashion. It could only be observed imaginatively and ideally through abstract reasoning from established or supposedly self-evident premises. This vision of the market, then, did not produce institutional efforts to represent the state of the economy. Rather, it promoted the now connected doctrines of “free trade” and “free markets.”

From the Market to the Economy: Colonies and Railroads

The transition from speaking of the market to speaking of the economy did not conclude until the decades after World War I when the Western nations institutionalized systems of national income accounting, but it began in the mid-nineteenth century primarily because of two factors: colonies and railroads (and, of course, colonial railroads). Both of these large-scale projects involved not only the mapping and transformation of vast amounts of space but also the development of accounting practices that were necessary for representing and managing increasingly large and complex commercial exchanges. The protagonists of this story, however, are not rationality, logic and grand market forces, but more humble materials: iron and steel tracks, wires, clocks, and accounting books. Humans figure prominently, but primarily as record-keepers and manual laborers. I will start with colonies and continue with the railroads.

Colonial administrators helped make an economic domain visible in their efforts to document and represent colonial trade for their superiors in the metropole. For Mitchell, “twentieth-century economics also has a colonial genealogy” (2002, 7). Not just economics, but “the realization of the economy belongs to the history of colonialism” (Mitchell 2002, 83), and in particular, the history of British colonialism in Egypt. Kalpagam’s of British India concurs and

maintains that “colonial governmentality as a knowledge-producing activity generated numbers, classifications, and measurement in vast quantities in the nineteenth century” (2014, 140). As important as the numbers themselves, however, was the manner in which they were presented and conveyed back to England. As I mentioned in an earlier section, the East India Company began sending yearly reports to company administrators from the time of its founding in 1600. Beginning in 1817, however, the “Colonial Office in London required the colonies to produce an annual statistical and informational Blue Book” (Kalpagam 2014, 61). Now the government agents and the company managers wished to see the reports. These Blue Books were intended to keep politicians informed of the goings-on in each colony, but they were often incomplete and arrived back in London years after they were first sent out. Nonetheless, the Blue Book “was by 1840 the most extensive, regular, and standardized imperial inquiry conducted annually of the colonies and territories of the empire” (Kalpagam 2014, 61). By the 1860s, yearly reports and balance sheets were required of all joint-stock companies in Britain (Kalpagam 2014, 153). While the political economists were imagining a perfect market, in the Colonial and India Offices their contemporaries were establishing a precedent and expectation for the regular publication of aggregated, quantitative information about commerce.

Equally important in this transformation were the railroads, which began to develop in both the United States and Britain just after 1830. Initially, the railroad companies helped establish the abstract space in which the national economy came to exist.¹⁰ In both countries, the extent of the rail networks established the boundaries and limits of the national market. This massive expansion required not just material, but massive amounts of human labor, most of which was performed by recent immigrants to the US or by slaves. Where the lines were extended, the bounds of national economy followed. Thus Richard White’s important revision to the standard, triumphant accounts of the railways: “railroads, so the cliché goes, annihilated space and time, and they obviously did cut the time and cost of travel. They made the far near. But they did so unevenly and chaotically” (2012, xxix). In the United States, the expansion of Western rail lines out of Chicago—and only Chicago—prefigured and made possible the rapid Westward expansion of the nineteenth century (Cronon 1991). Towns connected to the growing rail network had access to Eastern markets for the first time, allowing farmers both to sell their crops and to buy other commodities in return (Cronon 1991). In Britain, the regionalization of production was supported by the regional near-monopolies of the largest railroad companies, each reflected in its name: the Great Western, the Great Eastern, the London and North Western, the Midlands, the London and North Eastern, etc. (Freeman 1999, 155). It seems more than coincidence but less than fate that British railways were nationalized only a few years before Keynes ramped up his efforts to measure the British economy. Finally, in India, “the trains themselves were to represent the creation of a new collective identity that would cut across ethnic, religious, linguistic, and cultural differences” (Aguilar 2011, 9). The trains furthered the British purpose of uniting the extraordinarily diverse peoples of the region into the unified India.

The railroads, moreover, did not just establish the abstract space of the national economy, but its abstract time as well. It was the railroads that ended the era of local times determined by the sun and established the hegemony of standardized time zones (Cronon 1991, 79; Freeman 1999, 46; White 2012, 160). Much as newspapers helped establish a sense of national togetherness among those who read the same headlines on the same days (Anderson 1991), living on the same time helped establish the notion that all of the production in a nation occurred simultaneously and on the same clock. The railroads further altered the experience of time in

¹⁰ For a discussion of the “material” impacts of railroads see Schley (2013), especially note 2.

cooperation with invention of the telegraph (Freeman 1999, 59; Joyce 2013, 9); train tracks and telegraph wires developed “in tandem, often following the same routes, and together they shrank the whole perceptual universe of North America” (Cronon 1991, 76). By enabling nearly instantaneous communication across large distances, the wires enabled geographically distant actors to learn about and react to events anywhere on earth without delay. The railroads helped create the abstract space, and the telegraph wires the abstract time, of the national economy.

Furthermore, the railroads helped to compile and distribute statistical information of the sort that governments would collect in the early twentieth century. For Alfred Chandler, the railroads “contributed substantially to the emergence of accounting out of bookkeeping” (1977, 109) and “by 1860 the railroads probably employed more accountants and auditors than the federal or any state government” (1977, 110). Cronon notes, similarly, that “the railroads faced as much of a challenge in processing data as in moving people or freight” (Cronon 1991, 81). White concurs and argues that the railroad companies were instrumental in developing “one of the nineteenth-century’s great fictional genres: the annual stockholder’s report” (2012, 69). Like double-entry bookkeeping, and as with the reports prepared by the East India Company, these annual documents were designed more to prove and substantiate the virtue—i.e. profitability—of the railroad companies, than to represent accurately the company’s accounts. One significant mechanism for advancing this agenda has become known as capital accounting, or separating capital from revenue accounts (Chandler 1977, 111). In short, by classifying the massive debts accrued to construct the rails as capital rather than revenue expenses, this technique allowed the corporations to claim that they made an annual profit even with large debt (Chandler 1977, 111).¹¹

Richard White has recently challenged Chandler’s narrative of the triumph of organizational rationality by emphasizing the drastic failures of most railroad companies. More importantly for my purposes, however, he claims that “substituting time for distance made space political, but only to the extent that politics determined which places got railroads and which did not” (2012, 141). White further argues that the railroads brought about not the annihilation of space by time, but the annihilation of space by *cost*; “measuring space by cost rendered it radically unstable. It changed every time a freight rate changed” (2012, 141). This instability of space was magnified by the sheer complexity of setting rates. The vast majority of the time, White notes, “even the railroads had very little knowledge of their true costs and thus the profit on any particular item” (2012, 160). Behind the creation of a national market in the United States, then, it is difficult to find the logic of the mysterious and magical powers often bestowed on so-called “market forces.”

The intersection of the needs of a vast empire and the revolution in communication enabled by railways produced another important institution for constituting a national economy: a post office. The newly acquired speed, efficiency, and regularity of the mail depended on the speed, efficiency, and regularity of the railroads transporting that mail. Patrick Joyce has further argued that the “idea and in considerable measure the material achievement of the Post Office was that it would create subjects capable of relating to others they had never met, so engaging in

¹¹ A very simplified version of capital accounting would work like this: say a company raised and spent one million dollars to construct a railroad via bonds, but that year it also spent one-hundred thousand dollars on all its other costs and earned two-hundred thousand dollars in ticket revenues. If the company has just one account, it looks as if it has a net loss of nine hundred thousand dollars (1.1 million in debits, .2 in credits). By classifying the investment in construction as “capital”—as something which is supposed to return its value (and hopefully more) to the company over a long time frame—and separating the capital account from the revenue account, the company makes it appear as if it made an annual profit of a hundred thousand.

action at a distance with others, action both economic and social” (2013, 102). Over the course of the nineteenth century, the British Post Office introduced the Penny Post, allowing for mail to be sent cheaply anywhere on the island; the Money Order and the Postal Order, enabling the speedy transfer of small sums of money (Joyce 2013, 115); the Parcel Post, which “completely transformed the possibilities for commercial postage, especially in the shape of the mail-order business,” (Joyce 2013, 117); and the Post Office Savings Bank, which brought a significant amount of otherwise resistant Britons into the credit system (Joyce 2013, 116). In addition, the Post Office created and published maps that depicted the flow of the mail within Ireland and England, and these maps “made it possible to envisage the character of the whole network at a glance, as a system in fact, enabling rapid calculations and increasingly sophisticated understandings of the network’s operations” (Joyce 2013, 127). These maps depicting the density of postal flows represented the workings of the British market, but required, like Davenant’s Excise calculations, a vast material network of observation. Davenant, however, mapped the workings of an already existing commercial world, whereas the Post Office mapped flows that its existence made possible.

In short, the railroads—along with the empires, corporations, and communication networks that were reliant on them to operate—established the foundations for the emergence of the economy as a new discursive object. The many markets within a national territory could become a single economy once they were understood to exist in the same space and in the same time, but this understanding required the famous “annihilation of space by time” that the railways ushered in. The markets of New York-Chicago-California, or London-Birmingham-Manchester, could become a single market in the minds of producers and consumers only when the ease, speed, and cost of distribution made the location of production largely irrelevant. Although the conditions were in place for the emergence of the economy by the end of the nineteenth century, the actual process was not finished until it was necessitated by the World Wars of the twentieth century and their economic bridge: the Great Depression.

Constituting the Economy: Institutionalizing National Income Accounting

The economy became an object of measurement and representation largely during the 1930s.¹² There are a few, scattered references to “the economy” in economics journals from 1933-1934 (see, e.g. Neisser 1934; Petricsko 1932; Rogin 1933), but the use of the term takes off in 1934 in the works of Keynes and his American contemporary Simon Kuznets, the director of national income accounting at the National Bureau of Economic Research. Kuznets and Keynes, respectively, developed different methods for estimating national income.¹³ As I have already mentioned, accounting techniques—from double-entry bookkeeping, to capital accounting, to national income accounting—should not be understood as accurate or inaccurate mirrors of reality, but “as constituting economic practice through modes of inscription and analysis, enabling new forms of intervention that would not otherwise be possible” (Ogborn 2007, 84). And as James Scott has pointed out, “there is, then, no single, all-purpose, correct answer to a question implying measurement unless we specify the relevant local concerns that give rise to the

¹² The term is not used by a President in a State of the Union Address until 1944, perhaps, and 1945, definitively. In 1944, Roosevelt expressed his goal “to maintain a fair and stable economy at home” and to be cautious “as our industrial economy expanded.” In 1945, he announced that “the war will leave deep disturbances in the world economy, in our national economy.”

¹³ Efforts to measure and estimate national income, however, had been proposed as early as 1869 (Horváth 1990).

question. Particular customs of measurement are thus situationally, temporally, and geographically bound” (1998, 26). In the particular case of national income accounting, differing indices for representing the economy engender different solutions to the problem of economic change.

This new enterprise for regularly publishing national income statistics, along with the language that accompanied it, relied heavily on what has become known as the marginal revolution in economics, or the theory of marginal utility that was developed by Jevons, Walras, and Marshall. This school of economics, soon to be called neo-classical, emphasized the psychological evaluation of utility as well as the concept of general equilibrium (Myrdal 1990; Schumpeter 1996). The theorists of marginal utility, moreover, relied much more heavily on the numerical and statistical techniques than their “classical” predecessors. And relevant to the discussion here, it was Jevons’ encounter with a text analyzing railroads that spurred him to use mathematical analysis for economic activities (Ekelund and Price 1979, n. 2).

American national income accounting took off during 1932 when Congress requested that the Secretary of Commerce compile the relevant data, although the agency quickly brought in the NBER, under the direction of Kuznets, to perform the task (Perlman 1987, 137; see also Patinkin 1976). The result of his team’s initial effort was published in 1934 as a report on the national income from 1929-1932. Kuznets begins the report by acknowledging the economic turmoil of the time period and frames his analysis as a response to the need for quantifying the effect of the Depression on national production. He admits that more data need to be collected but insists that a partial representation of economic activity will suffice: “national income measurements represent such an attempt to describe the total activity of the national economy under one aspect, *viz.* the size of the final net product” (1934, 1). Significantly, Kuznets acknowledges that his measurements are partial, but insists that they nonetheless represent the sum total of economic activity. He defines “net product” as the total value of “all commodities produced and all the direct services rendered during the year” once “the value of that part of the nation’s stock of goods that was expended” has been subtracted (1934, 1). He paraphrases this concept of net product as “that part of the economy’s end product that results from the efforts of the individuals who comprise a nation” (1934, 1). National income, he explains, is the total amount of money individuals were paid in order to produce that net product, and this aggregate income is theoretically equivalent to the value of the net product. By looking at income tax records to see how much income was taken home by Americans, Kuznets claimed to be able to create an accurate indicator of the entire economic system’s condition.

Several years later, Kuznets followed up with a monograph measuring national income from 1919-1938 and adopting the same definition he previously used (1941). This time, however, he devotes considerable space to an excursus on the concept of national income itself. The phrase “the economy” appears in the first paragraph, as it did in the earlier article, but Kuznets quickly acknowledges some epistemological doubt. He notes that “a national total facilitates the ascription of independent significance to that vague entity called the national economy and may induce neglect of the patent fact that this entity comprises millions of individuals and firms, and scores of industries, economic groups, and regions” (1941, xxvi). He begins the formal text with a comment on the value-laden, subjective character of any national income assessment, insisting that “all income estimates are appraisals of the end products of the economic system rather than colorless statements of fact” (1941, 3). Some selection criteria, he stresses, must be used to determine what to measure. This argument becomes significant in the conclusion to the first chapter, when Kuznets questions the utility of measuring income with the

nation as the unit of analysis. He asks: “why choose state units at all? Since they do not always constitute self-contained economic systems, the unit chosen is not necessarily a natural one...A great deal of arbitrariness and historical accident...may characterize the territorial composition of any given sovereign state” (1941, 51). Kuznets ultimately concludes in favor of the national unit, however, for pragmatic and political reasons; “since national income estimates...are indispensable guides to [economic] policy,” he writes, “they should be for units corresponding to the areas within which state power can be exercised” (1941, 52). Kuznets acknowledges the arbitrariness with which one nation’s economy is cordoned off from another’s, but insists that “the estimates serve directly as guide posts in both scientific and everyday treatment of economic problems” (1941, 59). The choice of one particular indicator over another to measure and represent the economic domain was therefore a political one, and will always be so; it will alter and re-configure a social formation in which it becomes a significant, real abstraction.

In Britain, moreover, a similar consolidation and institutionalization of national income accounting was taking place under the direction of J.M. Keynes, who, it is worth noting, spent two years at the India Office reading and composing financial and other reports (Skidelsky 2005, 105). First published in 1936, Keynes’ *General Theory* prefers the construction “the economic system,” but nonetheless refers, in a crucial passage, to an object known simply as “the economy”; early in the text, Keynes’ announces his plan to show how all of classical economics is based on a “fundamental misunderstanding of how in this respect the economy in which we live actually works” (1964, 13). Classical economics, Keynes famously argues, falsely assumes that markets will naturally achieve full employment. More importantly for my purposes, however, is Keynes’ less-famous objection to the method by which his predecessors—namely Marshall and Pigou—visualized and represented the economic system as a whole. Keynes insists, along these lines, that one of his key innovations is the correct “choice of units of quantity appropriate to the problems of the economic system as a whole” (1964, 37). The choice of units common at the time, Keynes notes, were “the concepts of the National Dividend, the stock of real capital, and the general price-level” (1964, 37). The concept of national dividend as defined by Marshall and Pigou, however, is essentially the same that Kuznets later adopted; it defines national dividend or income as the net value of all goods produced during a certain period.

Keynes objects to these definitions on two grounds. First, he claims “the community’s output of goods and services is a non-homogeneous complex which cannot be measured, strictly speaking” (1964, 38); and second, he insists that “the proper place for such things as net real output and the general level of prices lies within the field of historical and statistical description, and their purpose should be to satisfy historical or social curiosity” (1964, 40). For Keynes, a measurement of more practical—more political—utility is needed, especially one that can predict how individuals “will respond to a shift in the aggregate demand function” (1964, 44). He therefore argues that that “unnecessary perplexity can be avoided if we limit ourselves strictly to the two units, [the quantity of] money and [the quantity of] labor, when we are dealing with the behavior of the economic system as a whole” (1964, 43). In other words, for Keynes the economy as a whole is best represented by the amount of money in circulation and the level of employment, even if these two indicators do not give a comprehensive picture. As with Kuznets’, Keynes’ concept of the economy is a political one; it is designed and used in order to alter the social formation rather than simply describe it. Keynes picks his units because of their potential use by the state in its attempt to re-form a social formation not because of their comprehensiveness. These different methods of representation, however, prefigure and privilege

specific policy responses to pauses or reversals of economic growth. The Keynesian indicators—money and unemployment—inherently focus policy on interest rates, the money supply, and public sector employment.

Keynes harbors substantially more skepticism about the existence of the object “the economy.” He therefore seeks to measure not the size or growth of this economy, but “to discover what determines at any time the national income of a given economic system and (which is almost the same thing) the amount of its employment” (1964, 247). Nevertheless, he does feel comfortable enough about the reality of an economic system. He argues, for instance, that “it is an outstanding characteristic of the economic system in which we live that, whilst it is subject to severe fluctuations in respect of output and employment, it is not violently unstable” (1964, 249). Although the measurement of an economic system’s total or net output is impossible, it is possible for Keynes to formulate general claims about its character or nature.

While Kuznets’ and Keynes’ respective methods for measuring national income were soon replaced by the calculation of GNP and later GDP (Perlman 1987), they established the parameters for those later measurements. Both economists insisted on the political necessity of regular measurements and estimations of the economy’s performance so that the state could respond accordingly and ensure that the economy both grew and functioned smoothly. And both were satisfied with partial figures that indexed the much larger, unobservable “economic system as a whole.” What they could not see directly in the flesh, they could see on the page by means of advanced numerical calculations.

The creation of “the economy” in the interwar period by the Western powers was thus political in the conventional, state-centric sense and in the more expansive sense developed by this dissertation. The regular measurement of something called the national economy was not just promoted but legally mandated in both the United States and Britain for reasons primarily related to warfare and statecraft. Much like Davenant’s representation of the balance of trade, Keynes’ and Kuznets’ representation of the national economy was developed to aid in the waging of war. After the relevant wars concluded, however, the objects that the state called into existence would acquire a life of their own and eventually come to dictate the content of state policies.

The Political Constitution of Economic Knowledge

As Steven Shapin and Simon Schaffer have noted, “solutions to the problem of knowledge are solutions to the problem of social order” (1985, 332). This is as true of economic knowledge in the twenty-first century as it was for scientific knowledge in the seventeenth. But the problem of economic knowledge has at least two components. There is of course the familiar and conventional problem of deciding with what means one will measure economic activity. But there is also the more fundamental problem of deciding what it is that will be measured and thereby represented in the first place. I have described this second problem as one of vision and sight and it is here that the more interesting work of representation gets done. Accounts of economic activity and performance constitute and create rather than reflect or depict the economy as an object of knowledge—a real abstraction. The great imaginative leaps of Davenant, colonial administrators, railroad managers, and the two Ks each required the cordoning off and isolation of a new object of knowledge discerned by means of a distinct accounting technique for seeing and counting across large distances and times. In this chapter I have explored three such technologies of sight. Davenant’s balance of trade calculations required on-the-ground observation and measurement of every staple commodity produced in England.

This knowledge secured the early modern English social order by ensuring that the war with France could be won. The classical political economists, by contrast, saw primarily with the mind's eye. They envisioned abstract, rational systems that ordered the process of exchange behind the backs of the individual exchangers. Their knowledge of the market system could therefore only identify problems able to be solved by the removal of obstructions to market flows. In Karl Polanyi's magnificent turn of phrase, "laissez-faire was planned, planning was not" (2001, 147). It took another war—this time to control imperial colonies—to re-boot efforts to measure and represent economic production on a national or colonial scale in the mid-nineteenth century. National income calculations, when they became institutionalized in the 1930s, were needed to recover from one world war and very soon to wage a second. These calculations, however, necessarily make use of and extrapolate from statistical samples. The resulting representations of the condition of the economy are thus inherently partial. The choice of a particular indicator for a nation's economic performance creates a "policy problem" that only a select few interventions can solve. Keynes' employment and inflation statistics, for example, prioritized the creation of public sector jobs and interest rate management to stabilize the money supply.

In Ranciere's terms, a representation of the economy is necessarily an act of policing. Calculations of national income partition a grid of activities into economy and non-economic, rendering some visible and therefore productive while keeping others invisible. Most famously, the national income calculations exclude any work done in the home.¹⁴ Kuznets stresses this point, aware of the value-laden character of the exclusion but seemingly unaware of his own role in maintaining and reproducing the denigration of the so-called private sphere. He argues that "limiting national income to results of economic and productive pursuits forced us to exclude many satisfaction-yielding activities, primarily those conducted within the family, that may be considered part of life in general rather than economic activity proper" (1941, 55). Housework, however, was not the only object excluded from the calculations. Also left out was the "compensation of robbers, murderers, drug peddlers, and smugglers" (1941, 4). Calculations performed to measure economic performance are not innocent reproductions of reality, but themselves partition the sensible into visible and valued, invisible and irrelevant.

Equally significantly, the contemporary proliferation of quantitative indicators of overall economic performance—now encompassing stock market indices, unemployment statistics, consumer or business confidence levels, retail sales, housing prices, the number of new construction projects, interest rates, inflation and deflation rates, currency exchange rates, and changes in GDP and GNP—represents the economy as complex object which can only be tinkered with rather than fundamentally restructured. The impossibility of producing a general and comprehensive rather than partial and indirect representation of economic performance resonates with the notion that that general and comprehensive reform of the economic system is impossible. If the economy is so complex that it can only be known through indicators, then it is too complex for rational management. Furthermore, because it is always possible to point to an alternative indicator or to create a new one, knowledge about the economy as a whole is inherently *contestable*. Disputes over the more accurate or more significant indicators are keyed to different visions for improving a social order.

Bibliography

¹⁴ For a thorough survey of the Marxist and Feminist critiques of this exclusion, see Weeks (2011).

- Agnew, Jean-Christophe. 1988. *Worlds Apart the Market and the Theater in Anglo-American Thought, 1550 - 1750*. 1. paperback ed. Cambridge [u.a.]: Cambridge Univ. Press.
- Aguiar, Marian. 2011. *Tracking Modernity: India's Railway and the Culture of Mobility*. Univ Of Minnesota Press.
- Anderson, Benedict R. O'G. 1991. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Rev. and extended ed. London ; New York: Verso.
- Appleby, Joyce Oldham. 1978. *Economic Thought and Ideology in Seventeenth-Century England*. Princeton: Princeton University Press.
- Ashworth, William. 2003. *Customs and Excise: Trade, Production and Consumption in England 1640-1845*. Oxford: Oxford University Press.
- Braddick, Michael J. 1996. *The Nerves of State: Taxation and the Financing of the English State, 1558-1714*. Manchester ; New York : New York: Manchester Univ Pr.
- Brewer, John. 1990. *The Sinews of Power: War, Money and the English State, 1688-1783*. Cambridge, Mass: Harvard University Press.
- Buck-Morss, Susan. 1995. "Envisioning Capital: Political Economy on Display." *Critical Inquiry* 21(2): 434–67.
- Buck, Peter. 1982. "People Who Counted: Political Arithmetic in the Eighteenth Century." *Isis* 73(1): 28–45.
- Burgin, Angus. 2012. *The Great Persuasion: Reinventing Free Markets since the Depression*. Cambridge, Mass: Harvard University Press.
- Chandler, Alfred D. (Alfred Dupont) 1918-2007. 1977. *The Visible Hand: The Managerial Revolution in American Business*. Cambridge, Mass: Belknap Press.
https://catalyst.library.jhu.edu/catalog/bib_1418396.
- Cronon, William. 1991. *Nature's Metropolis: Chicago and the Great West*. 1st ed. New York: W. W. Norton.
- Davenant, Charles. 1771a. "An Essay on Ways and Means of Supplying the War." In *The Political and Commercial Works of That Celebrated Writer Charles D'Avenant: Relating to the Trade and Revenue of England, the Plantation Trade, the East-India Trade and African Trade*, ed. Charles Whitworth. London; T. Becket and P.A. de Hondt, and T. CA dell; and T. Evans: Printed for R. Horsfield, 1–83.
- . 1771b. "Of the Use of Political Arithmetic in All Considerations about the Revenues and Trade." In *The Political and Commercial Works of That Celebrated Writer Charles D'Avenant: Relating to the Trade and Revenue of England, the Plantation Trade, the East-India Trade and African Trade*, ed. Charles Whitworth. London; T. Becket and P.A. de Hondt, and T. CA dell; and T. Evans: Printed for R. Horsfield ;, 127–49.

- Dickson, P.G.M. 1967. *The Financial Revolution in England: A Study of the Development of Public Credit, 1688-1756*. London: Macmillan.
- Dumont, Louis. 1977. *From Mandeville to Marx: The Genesis and Triumph of Economic Ideology*. Chicago: University of Chicago Press.
- Ekelund, Robert B., and Edward O. Price. 1979. "Sir Edwin Chadwick on Competition and the Social Control of Industry: Railroads." *History of Political Economy* 11(2): 213–39.
- Firth, Ann. 1998. "From Oeconomy to 'the Economy': Population and Self-Interest in Discourses on Government." *History of the Human Sciences* 11(3): 19–35.
- Foucault, Michel. 2009. *Security, Territory, Population: Lectures at the Collège de France 1977-1978*. New York: Picador.
- . 2010. *The Birth of Biopolitics: Lectures at the Collège de France, 1978-1979*. New York: Picador.
- Freeman, Michael J. 1999. *Railways and the Victorian Imagination*. New Haven, Conn: Yale University Press.
- Habermas, Jürgen. 1975. *Legitimation Crisis*. Boston: Beacon Press.
- . 1985. *The Theory of Communicative Action, Volume 2: Lifeworld and System: A Critique of Functionalist Reason*. Boston: Beacon Press.
- Harcourt, Bernard E. 2011. *The Illusion of Free Markets: Punishment and the Myth of Natural Order*. Cambridge, Mass: Harvard University Press.
- Hirschman, Albert O. 1977. *The Passions and the Interests: Political Arguments for Capitalism before Its Triumph*. Princeton, N.J: Princeton University Press.
- Hont, Istvan. 1990. "Free Trade and the Economic Limits to National Politics: Neo-Machiavellian Political Economy Reconsidered." In *The Economic Limits to Modern Politics*, Murphy Institute studies in political economy, ed. John Dunn. Cambridge [England] ; New York: Cambridge University Press.
- Horváth, Robert A. 1990. "The Rise of Macroeconomic Calculations in Economic Statistics." In *The Probabilistic Revolution, Ideas in the sciences*, ed. Lorenz Krüger. Cambridge, Mass.: MIT Press, 147–70.
- Joyce, Patrick. 2013. *The State of Freedom: A Social History of the British State since 1800*. https://catalyst.library.jhu.edu/catalog/bib_4672173.
- Kalpagam, U. 2014. *Rule by Numbers: Governmentality in Colonial India*. Lanham: Lexington Books.

- Keynes, John Maynard. 1964. *The General Theory of Employment, Interest, and Money*. 1st Harvest/HBJ ed. San Diego: Harcourt, Brace, Jovanovich.
- Kuznets, Simon. 1934. *National Income, 1929-1932*. New York: National Bureau of Economic Research.
- . 1941. *National Income and Its Composition*. New York: National Bureau of Economic Research.
- McCormick, Ted. 2009. *William Petty and the Ambitions of Political Arithmetic*. Oxford ; New York: Oxford University Press.
- Mill, John Stuart. 1874. *Essays on Some Unsettled Questions of Political Economy*. 2nd ed. London: Longmans, Green, Reader, and Dyer.
- . 1909. *Principles of Political Economy with Some of Their Applications to Social Philosophy*. 7th ed. London: Longmans, Green and Co.
<http://www.econlib.org/library/Mill/mlPCover.html>.
- Mitchell, Timothy. 1998. "Fixing the Economy." *Cultural Studies* 12(1): 82–101.
- . 2002. *Rule of Experts Egypt, Techno-Politics, Modernity*. Berkeley: University of California Press.
- Myrdal, Gunnar. 1990. *The Political Element in the Development of Economic Theory*. Transaction.
- Neisser, Hans. 1934. "General Overproduction: A Study of Say's Law of Markets." *Journal of Political Economy* 42(4): 433–65.
- Ogborn, Miles. 1998. "The Capacities of the State: Charles Davenant and the Management of the Excise, 1683–1698." *Journal of Historical Geography* 24(3): 289–312.
- . 2007. *Indian Ink: Script and Print in the Making of the English East India Company*. Chicago: University of Chicago Press.
- Patinkin, Don. 1976. "Keynes and Econometrics: On the Interaction between the Macroeconomic Revolutions of the Interwar Period." *Econometrica* 44(6): 1091–1123.
- Perlman, Mark. 1987. "Political Purpose and National Accounts." In *The Politics of Numbers, The Population of the United States in the 1980s*, eds. William Alonso and Paul Starr. New York: Russell Sage Foundation, 133–252.
- Petricisko, Nikolaus. 1932. "A Theory of Prices." *Journal of Political Economy* 40(6): 808–13.
- Pocock, J. G. A. 1975. *The Machiavellian Moment: Florentine Political Thought and the Atlantic Republican Tradition*. Princeton, N.J.: Princeton University Press.

- . 1990. “The Political Limits to Premodern Economics.” In *The Economic Limits to Modern Politics*, Murphy Institute studies in political economy, ed. John Dunn. Cambridge [England] ; New York: Cambridge University Press.
- Polanyi, Karl. 2001. *The Great Transformation: The Political and Economic Origins of Our Time*. 2nd Beacon Paperback ed. Boston, MA: Beacon Press.
- Poovey, Mary. 1998. *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society*. Chicago: University of Chicago Press.
- . 2001. “For Everything Else, There’s...” *Social Research* 68(2): 397–426.
- Ricardo, David. 1821. *On the Principles of Political Economy and Taxation*. 3rd ed. London: John Murray. <http://www.econlib.org/library/Ricardo/ricP1.html>.
- Rogin, Leo. 1933. “Werner Sombart and the ‘Natural Science Method’ in Economics.” *Journal of Political Economy* 41(2): 222–36.
- Rose, Nikolas S. 1999. *Powers of Freedom Reframing Political Thought*. Cambridge, UK: Cambridge University Press.
- Roseveare, Henry. 1969. *The Treasury: The Evolution of a British Institution*. London: Allen Lane.
- Rousseau, Jean-Jacques. 1997. *Rousseau: “The Social Contract” and Other Later Political Writings (Cambridge Texts in the History of Political Thought)*. ed. Victor Gourevitch. Cambridge University Press.
- Say, Jean-Baptiste. 1803. *Traité D’économie Politique Ou Simple Exposition de La Manière Dont Se Forment, Se Distribuent et Se Consomment Les Richesses*. Paris: Deterville.
- Schabas, Margaret. 2005. *The Natural Origins of Economics*. Chicago: University of Chicago Press.
- Schley, D. 2013. “Tracks in the Streets: Railroads, Infrastructure, and Urban Space in Baltimore, 1828-1840.” *Journal of Urban History* 39(6): 1062–84.
- Schumpeter, Joseph A. 1996. *History of Economic Analysis: With a New Introduction*. Revised edition. ed. Mark Perlman. Oxford University Press, USA.
- Scott, James C. 1998. *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press.
- Shapin, Steven, and Simon Schaffer. 1985. *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life : Including a Translation of Thomas Hobbes, Dialogus Physicus de Natura Aeris by Simon Schaffer*. Princeton, N.J: Princeton University Press. https://catalyst.library.jhu.edu/catalog/bib_941067.

- Skidelsky, Robert. 2005. *John Maynard Keynes*: New York: Penguin Books.
- Smith, Adam. 1904. *An Inquiry into the Nature and Causes of the Wealth of Nations*. 5th ed. London: Methuen & Co. <http://www.econlib.org/library/Smith/smWN.html>.
- Thompson, E. P. 1971. "The Moral Economy of the English Crowd in the Eighteenth Century." *Past & Present* (50): 76–136.
- Tribe, Keith. 1978. *Land, Labour, and Economic Discourse*. London ; Boston: Routledge & K. Paul.
- . 1981. *Genealogies of Capitalism*. Atlantic Highlands, N.J: Humanities Press.
- . 2015. *The Economy of the Word: Language, History, and Economics*. OUP USA.
- Unger, Roberto Mangabeira. 2004. *False Necessity : Anti-Necessitarian Social Theory in the Service of Radical Democracy*. London [u.a.]: Verso.
- Weber, Max. 1978. *Economy and Society: An Outline of Interpretive Sociology*. Fourth edition. eds. Guenther Roth and Claus Wittich. University of California Press.
- . 1981. "Science as a Vocation." In *From Max Weber: Essays in Sociology*, New York: Oxford Univ. Press, 129–56.
- . 2001. *The Protestant ethic and the spirit of capitalism*. London; New York: Routledge.
- Weeks, Kathi. 2011. *The Problem with Work: Feminism, Marxism, Antiwork Politics, and Postwork Imaginaries*. Durham: Duke University Press.
- White, Richard. 2012. *Railroaded: The Transcontinentals and the Making of Modern America*. 1 edition. New York: W. W. Norton & Company.